UNIVERSITY OF IDAHO

CATALOG 2014 - 2015



University of Idaho

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ACADEMIC CALENDAR FOR 2014-2015

Dates in this calendar are subject to change without notice; dates appearing in admission and registration instructions take precedence over those listed below.

Summer 2014

Monday, May 19	Beginning of Session I
Monday, May 26	Memorial Day – classes DO NOT meet
Monday, June 16	Beginning of Session II
Monday, June 30	Beginning of Session III – 6 Weeks
Friday, July 4	Independence Day – classes DO NOT meet
Monday, July 14	Beginning of Session III – 4 Weeks
Friday, Aug. 8	Last day of Classes
Tuesday, Aug. 12	Final Grades due by 12:00pm

Fall Semester 2014

Thur-Sat, Aug. 7-9	WWAMI orientation
Monday, Aug.13	WWAMI classes begin
Monday, Aug. 25	Classes begin
	Cooperatively Offered Courses at Washington State University begin
Monday, Sept. 1	Labor Day – classes DO NOT meet
Tuesday, Sept. 2	Last day to add course or change course section on-line
Monday, Sept. 8	Last day to drop a course without having a grade of 'W' recorded
	Last day to add a course with instructor permission
Friday, Oct. 31	Last day to withdraw from a course or from the university
Mon-Fri, Nov. 24-28	Fall recess
Mon-Fri, Dec. 8-12	No-examination week
	WWAMI final examinations
Mon-Fri, Dec. 8-19	College of Law finals examinations
Saturday, Dec. 13	Commencement
Mon-Fri, Dec. 15-19	Final examinations
Saturday, Dec. 20	Final examinations for online classes which have in-person finals
	Close of Fall semester
Tuesday, Dec.23	Final Grades due by 12:00pm

Intersession 2014-2015

Note: Scheduled breaks for the observance of holidays vary by class.

Saturday, Dec. 20	Classes begin
Tuesday, Jan. 13	Close of Intersession
Friday, Jan. 16	Final Grades due by 12:00pm

Spring Semester 2015

Thursday, Jan 5	WWAMI classes begin
Monday, Jan. 12	Law classes begin
	Cooperatively offered courses at Washington State University begin
Wednesday, Jan. 14	Classes begin
Monday, Jan. 19	Martin Luther King/Human Rights Day – Classes DO NOT meet
Wednesday, Jan. 22	Last day to add course or change course section on-line
Wednesday Jan. 28	Last day to drop a course without having a grade of 'W' recorded
	Last day to add a course with instructor permission
Monday, Feb. 16	Presidents' Day – classes DO NOT meet
Mon-Fri, March 16-20	Spring recess
Friday, April 3	Last day to withdraw from a course or from the university
Mon-Fri, May 4-8	No-examination week
	WWAMI final examinations
Mon-Fri, May 4-15	College of Law final examinations
Mon-Fri, May 11-15	Final examinations
Saturday, May 16	Commencement
Tuesday, May 19	Final Grades due by 12:00pm

THE UNIVERSITY

The University of Idaho is the first choice for student success and statewide leadership. We are the premier land-grant research university and the flagship institution in our state. We lead in teaching and engaged student learning in our undergraduate, graduate, and professional programs. We excel at interdisciplinary research, service to businesses and communities, and in advancing diversity, citizenship, and global outreach. Through our growing residential and networked university and strong alumni connections, we develop leaders who will guide Idaho to global economic success, create a sustainable American West, and address our nation's most challenging problems.

As Idaho's land-grant institution, our students, faculty, and staff are engaged in a vast network of powerful partnerships through statewide locations, laboratories, research and extension centers, outreach programs, and a base of loyal alumni worldwide. These resources provide connections to individuals, businesses, and communities that strive to improve the quality of life of all Idaho citizens and secure the economic progress of the world.

We are committed to a student-centered, engaged learning environment. Our unique geography, intimate setting, residential campus, and dedicated faculty provide aspiring leaders with the skills and abilities to challenge themselves and learn by doing.

Our leadership position in research and creative activity presents opportunities to interact and innovate with world-class faculty. Our students gain firsthand experience addressing global challenges, and bring contemporary knowledge and experience into their careers and lives.

Students, faculty, and staff at the University of Idaho are dedicated to advancing a purposeful and just community that respects individuality and provides access and inclusion for all cultures to create a climate that is civil and respectful. Innovative, productive collaborations that foster community and build morale are encouraged.

Over the past five years, the university community has implemented a strategic plan to further the vision and mission of the university. This 2011-2015 Strategic Plan fulfills the promise of a 21st century land-grant institution to lead and inspire Idaho, the nation, and the world. To achieve this, all units will develop strategic actions that advance the overall strategic direction, vision, and values of the institution.

The University of Idaho was created in 1889 by a statute of the 15th territorial legislature. Commonly known as the university charter, that act became part of the state constitution when Idaho was admitted to the Union in 1890.

The university is a publicly supported comprehensive land-grant institution with principal responsibility in Idaho for performing research and granting the Doctor of Philosophy (PhD) degree. The liberal arts and sciences, offered through the College of Letters, Arts and Social Science and the College of Science, are the heart of the university's educational programs. The primary areas of statewide responsibility of the university are agriculture, natural resources, and engineering; as well as medical and veterinary medical education, architecture, and law with programs in liberal arts, sciences, education, business and economics, all of which shape the core curriculum and give meaning to the concept of a flagship university.

To assist with its statewide mission, the university maintains resident instruction centers in Coeur d'Alene, Boise, and Idaho Falls, extension offices in 42 of Idaho's 44 counties, research and extension centers in Aberdeen, Caldwell, Dubois, Idaho Falls, Kimberly, Moscow, Parma, Salmon, Sandpoint, Tetonia, and Twin Falls, and field stations at McCall, Point Springs, and the Taylor Ranch in central Idaho. Through its international programs, the university extends its services to many other countries.

Nearly 12,000 students from all states and more than 90 foreign countries choose programs from a vast array of disciplines. Strong undergraduate programs are coupled with nationally recognized research and scholarly achievements. The university has granted more than 100,000 degrees since its founding. Student and research success comes through the efforts of more than 920 faculty members in teaching and research, and 2,200 staff and professional personnel who work at more than 70 locations covering more than 10,000 acres.

In addition, the University Library and the Law Library contain over two million items of books, bound periodicals, microforms, and U.S. government publications. These resources, together with the libraries at Washington State University (eight miles to the west), equal those of major metropolitan areas.

The university is proud of its friendly campus atmosphere and sense of community. The feeling of camaraderie that pervades the campus extends to Moscow, the university's "hometown." It is a thriving community of nearly 24,000 located in the northern part of the state about 90 miles southeast of Spokane, Washington.

Moscow is the gateway to a natural wonderland. The surrounding Palouse hills and the mountains and lakes of northern Idaho provide a scenic background for university facilities. Skiing, boating, and other outdoor recreation resources are available within easy driving distance. They include the Sawtooth and Hells Canyon national recreation areas, Frank Church River of No Return Wilderness, and scenic rivers such as the Snake, Clearwater, Salmon, Lochsa, and Selway.

The university is a member of the National Association of State Universities and Land-Grant Colleges and is accredited by the Northwest Commission on Colleges and Universities. Additional approval or accreditation for specific programs has been granted by the following organizations: Accrediting Council on Education in Journalism and Mass Communications, American Association of Collegiate Schools of Business, American Bar Association, American Chemical Society, American Dietetics Association, Association of American Law Schools, Accreditation Board for Engineering and Technology, Commission on Accreditation of Allied Health Education Programs, Computer Science Accreditation Commission of the Computing Sciences Accreditation Board (bachelor's degree in computer science), Council on Rehabilitation Education, National Association of Schools of Art and Design, National Architectural Accrediting Board, American Society of Landscape Architects, National Association of Schools of Music, National Council for Accreditation of Teacher Education, Society of American Foresters, Society for Wood Science and Technology, Society for Range Management, National Association of School Psychologists, the Council for the Accreditation of Counseling and Related Educational Programs, National Recreation and Park Association Council on Accreditation, Liaison Committee on Medical Education, National Association for Education of Young Children, and the PGA Professional Golfers Association of America.

SBOE Mission Statement - University of Idaho

The University of Idaho is the state's land-grant research university. From this distinctive origin and identity comes our commitment to enhance the scientific, economic, social, legal, and cultural assets of our state, and to develop solutions for complex problems facing society. We deliver on this commitment through focused excellence in teaching, research, outreach, and engagement in a collaborative environment at our residential main campus, regional centers, extension offices, and research facilities throughout the state. Consistent with the land-grant ideal, our outreach activities serve the state at the same time they strengthen our teaching as well as scholarly and creative capacities.

Our teaching and learning includes undergraduate, graduate, professional, and continuing education offered through both resident instruction and extended delivery. Our educational programs are enriched by the knowledge, collaboration, diversity, and creativity of our faculty, students, and staff.

Our scholarly and creative activities promote human and economic development, global understanding, and progress in professional practice by expanding knowledge and its applications in the natural and applied sciences, social sciences, arts, humanities, and the professions.

Vision

We will be a leader among land-grant and flagship institutions in the 21st century by promoting an entrepreneurial spirit; embracing the contributions of multiple cultures, identities, and perspectives; and bringing together the talents and enthusiasm of faculty, staff, and students. We will be widely recognized as a creative university that is both environmentally and fiscally sustainable and is an engaged partner in addressing the changing needs of our stakeholders in Idaho, the nation, and the world.

Principles and Values

Learn, create, and innovate
Preserve and transmit knowledge
Act with integrity
Treat others with respect
Celebrate excellence
Change lives
Welcome and include everyone
Take responsibility for the future

Regents and Administration

(April 2014)

Board of Regents

Don Soltman, *President,* Twin Lakes
Emma Atchley, *Vice-President,* Ashton
Rod Lewis, *Secretary,* Boise
Bill Goesling, Moscow
Milford Terrell, Boise
Richard Westerberg, Preston
Tom Luna, *State Superintendent of Public Instruction*, Boise

University Administration

Charles A. Staben, Ph.D., *President*
Katherine G. Aiken, *Interim Provost and Executive Vice President*
Christopher D. Murray, *M.B.A., Vice President for University Advancement*
John K. McIver, Jr, *Ph.D., Vice President for Research*
Ronald E. Smith, *Ph.D., Vice President for Finance and Administration*
Jeanne M. Stevenson, *Ph.D., Vice Provost for Academic Affairs*
Bruce Pitman, *Ph.D., Vice Provost for Student Affairs and Dean of Students*
Charles R. Buck, *Ph.D.*, Interim *Associate Vice President and Center Executive Officer, Coeur d'Alene*
Lee Dillion, *J.D., Interim Center Executive Officer, Boise*
Robert W. Smith, *Ph.D., Associate Vice President and Center Executive Officer, Idaho Falls*
Carmen Suarez, *Ph.D., Assistant to the President for Diversity, Equity and Community; and Interim Associate Vice Provost for Student Affairs*
Lynn N. Baird, *Ph.D., Dean – University Library*
Heather A. Chermak, *M.S., Interim University Registrar*
Daniel D. Davenport, *Ph.D., Director of Student Financial Aid*
Cezar Mesquita, *M.A., Director of Admissions*

Colleges

Agricultural and Life Sciences – John C. Foltz, *Ph.D., Term Dean*
Art and Architecture – Mark E. Hoversten, M.F.A., *Dean*
Business and Economics – Mario Reyes, *Ph.D., Dean*
Education – Cori Mantle-Bromley, *Ph.D., Dean*
Engineering – Larry A. Stauffer, *Ph.D., Dean*
Graduate Studies – Jie Chen, *Ph.D. Dean*
Law – Donald L. Burnett, Jr., *LL.M., Dean*
Letters, Arts, and Social Sciences – John A. Mihelich, *Ph.D., Interim Dean*
Natural Resources – Kurt Pregitzer, *Ph.D., Dean*
Science – Paul Joyce, *Ph.D., Dean*

Strategic Action Plan 2011-2015

Goal 1: Teaching and Learning Goal: Enable student success in a rapidly changing world.

Context: Our graduates live, work, compete, and prosper in a constantly changing environment. Consequently, curricula, co-curricular activities, pedagogy, and assessment must be quickly adaptable as the environment changes. Learning experiences drawn from our disciplinary and interdisciplinary strengths will help students develop the ability to identify and address complex problems and opportunities.

Objective A: Build adaptable, integrative curricula and pedagogies.

Strategies:

1. Streamline policies and practices to enable creative program revision and course scheduling.
2. Implement general education requirements that emphasize integrative learning throughout the undergraduate experience.
3. Use external and internal assessments to keep teaching and learning vital.
4. Build curricula to support timely degree completion.
5. Expand opportunities for professional education.
6. Apply emerging technologies to increase access and respond to the needs of local and global learners.
7. Develop increased learning opportunities for underserved or underrepresented communities.
8. Employ active learning pedagogies to enhance student learning where appropriate.

Objective B: Develop integrative learning activities that span students' entire university experience.

Strategies:

1. Increase educational experiences within the living and learning environments.
2. Engage alumni and stakeholders as partners in student mentoring.
3. Increase student participation in co-curricular activities.
4. Integrate curricular and co-curricular activities.
5. Increase opportunities for student interaction and interdisciplinary collaboration.

Goal 2: Scholarly and Creative Activity Goal: Promote excellence in scholarship and creative activity to enhance life today and prepare us for tomorrow.

Context: Our quality of life today and in the future depends on the merit of our scholarship and creative endeavors. Many of the most pressing issues facing society cut across disciplines and require solutions that do the same. At the University of Idaho we are committed to helping address society's pressing issues by continuing to support strong disciplinary and interdisciplinary activities that emphasize quality, innovation, critical thinking, and collaboration. We intend to improve the quality of life of all Idaho citizens and secure the economic progress of our world.

Objective A: Strengthen all scholarly and creative activities consistent with the University's strategic missions and signature areas.

Strategies:

1. Engage accomplished scholars to provide mentoring and leadership for key research and creative initiatives.
2. Increase the number of endowed faculty positions and postdoctoral, graduate, and undergraduate fellowships.
3. Support faculty, student, and staff entrepreneurial activity to develop new areas of excellence.
4. Implement university-wide mechanisms to provide attractive start-up packages for faculty and reward systems that recruit and retain world class faculty and staff.
5. Leverage the skills of non-tenure track faculty to promote research growth.
6. Increase the application of and public access to the results of scholarly and creative activities.

Objective B: Enable faculty, student, and staff engagement in interdisciplinary scholarship and creative activity.

Strategies:

1. Expand opportunities for ongoing interactions among faculty, students, and staff to identify areas of common interest.
2. Increase support for graduate and undergraduate interdisciplinary research and creative activity.
3. Develop clear criteria for evaluating engaged scholarship.
4. Increase the national and international visibility of the University's contributions to interdisciplinary activities.
5. Partner with other educational institutions, industry, not-for-profits, and public agencies to expand resources and expertise.
6. Facilitate the submission of large, interdisciplinary proposals to obtain funding and to sustain successful projects.

Goal 3: Outreach and Engagement Goal: Meet society's critical needs by engaging in mutually beneficial partnerships.

Context: As the state's land-grant institution, the University of Idaho is uniquely positioned to expand its impact in Idaho and beyond. We seek to achieve that end through engagement–working across disciplines; integrating teaching, research, and outreach; and partnering with constituents for the mutually beneficial exchange of knowledge and resources.

Objective A: Develop processes, systems, and rewards that foster faculty, staff, and student outreach and engagement.

Strategies:

1. Increase the internal visibility of our outreach and engagement activities to facilitate interaction and develop synergies across the university.
2. Develop clear criteria for evaluating outreach and engagement.
3. Recognize and reward engagement with communities, businesses, non-profits, and agencies.
4. Develop an infrastructure and streamline administrative processes to coordinate outreach and engagement efforts.
5. Communicate best practices for development and implementation of outreach and engagement projects.

Objective B: Strengthen and expand mutually beneficial partnerships with stakeholders in Idaho and beyond.

Strategies:

1. Increase opportunities for faculty and students to connect with external constituents. Develop new partnerships with others who are addressing high priority issues.
2. Increase student participation in defining and delivering experiential learning opportunities.
3. Increase the external visibility of our outreach and engagement activities.
4. Coordinate plans to increase external funding for outreach and engagement.

Goal 4: Community and Culture Goal: Be a purposeful, ethical, vibrant, and open community.

Context: Our community is characterized by openness, trust, and respect. We value all members for their unique contributions, innovation, and individuality. Our community and culture must adapt to change, seek multiple perspectives, and seize opportunity. We are committed to a culture of service, internally and externally. We value a diverse community for enhanced creativity, cultural richness, and an opportunity to apply our full intellectual capacity to the challenges facing Idaho, the nation, and the world.

Objective A: Be a community committed to access and inclusion.

Strategies

1. Recruit and retain a diverse student body.
2. Recruit and retain diverse faculty and staff.
3. Expand opportunities for cultural competency training.
4. Build extended community partnerships to enhance an environment that values diversity.

Objective B: Be a community committed to civility and respect.

Strategies

1. Promote civil and respectful dialogue and debate both in and out of the classroom.
2. Increase systematic, consistent, and productive responses to behaviors that are destructive to the community.
3. Promote a sense of concern for and accountability to others.

Objective C: Be a community committed to productivity, sustainability, and innovation.

Strategies

1. Reward individuals and units that aim high, work across boundaries, and capitalize on strengths to advance the overall strategic direction, vision, and values of the institution.
2. Develop and promote activities to increase collaboration with new and unique partners.
3. Energize the community and foster commitment to university-wide endeavors by communicating our successes.
4. Create efficiencies through innovative collaboration, shared goals, and common experiences.
5. Invigorate the community by promoting attitudes of leadership and excellence.
6. Steward our financial assets, infrastructure, and human resources to optimize performance.

Student/Program Assessment

The University of Idaho, along with all other public institutions of higher education in Idaho, is required by policy of the State Board of Education to assess student learning in general education and in the academic majors. In late 1991, the Northwest Commission on Colleges and Universities, which provides institution-wide accreditation for the university, issued similar guidelines requiring assessment.

Effective teaching and learning are essential to meeting our long-held goal of producing responsible, well-prepared citizens and leaders in their professions. Our program of student outcomes assessment has been implemented to ensure that we continually improve the teaching and learning process and the programs that support that process.

Information vital to effective assessment includes student performance as well as student opinions on the quality of university academic programs and services. Students are an integral part of course and program assessment and are asked to participate in assessment activities; these include, but are not limited to, examinations, performance assessments, interviews, surveys, focus groups, and follow-up surveys after graduation.

University Learning Outcomes

University learning outcomes broadly describe expected and desired consequences of learning through integrated curricular and co-curricular experiences. The outcomes become an expression of the desired attributes of an educated person and guide coherent, integrated and intentional educational experiences. They provide us with a basis for ongoing assessment to continuously improve teaching and learning.

1. Learn and integrate - Through independent learning and collaborative study, attain, use, and develop knowledge in the arts, humanities, sciences, and social sciences, with disciplinary specialization and the ability to integrate information across disciplines.
2. Think and create - Use multiple thinking strategies to examine real-world issues, explore creative avenues of expression, solve problems, and make consequential decisions.
3. Communicate - Acquire, articulate, create and convey intended meaning using verbal and non-verbal methods of communication that demonstrate respect and understanding in a complex society.
4. Clarify purpose and perspective - Explore one's life purpose and meaning through transformational experiences that foster an understanding of self, relationships, and diverse global perspectives.
5. Practice citizenship - Apply principles of ethical leadership, collaborative engagement, socially responsible behavior, respect for diversity in an interdependent world, and a service-oriented commitment to advance and sustain local and global communities.

These learning outcomes are further developed at the program and course level. Learning outcomes for undergraduate and graduate degree and approved certificate programs can be reviewed at www.uihome.uidaho.edu/uihome/provost/learningoutcomes/default.aspx.

General Honorary Societies

The university has long possessed nationally recognized marks of excellence, including chapters of national honorary and scholarship societies in practically every specialized field and chapters of the following general honorary societies: Phi Beta Kappa (since 1926), Phi Kappa Phi (since 1960), Sigma Xi (since 1922), and Golden Key (since 1990).

Phi Beta Kappa. To qualify for nomination to Phi Beta Kappa, a candidate must have a major in the College of Letters, Arts & Social Sciences or the College of Science. Juniors must have achieved a 3.90 UI cumulative GPA; have completed one full semester of the junior year, and have been in residence at least five semesters. All PBK requirements must be completed prior to the semester in which they are elected. Seniors must have achieved a 3.80 UI cumulative GPA and be in residence at least 4 semesters at graduation or must have achieved a 3.70 UI cumulative GPA and be in residence at least 7 semesters at graduation. Nominees must have fulfilled the following distribution requirements: humanities and social sciences (16 total semester credits of humanities and social sciences, with no fewer than 7 semester credits of humanities and no fewer than 7 semester credits of social sciences); laboratory sciences

and/or mathematics (10 semester credits); foreign language (16 credits of a single foreign language through the intermediate level, or 4 full years of high school language). Double majors (CLASS or Science, plus another college) must complete a minimum of 90 liberal arts credits. In addition to these minimum requirements, candidates will be determined by other factors such as citizenship and scholastic rigor.

Phi Kappa Phi. To qualify for nomination by the local chapter of Phi Kappa Phi, a candidate must be (1) registered at UI for at least one year and (2) enrolled in the final period of his or her junior year and rank scholastically in the upper 5 percent of the class or a senior enrolled in a course of study leading to a baccalaureate degree and rank scholastically in the upper 10 percent of his or her class.

Sigma Xi. To qualify for nomination to associate membership in Sigma Xi, a student must have shown marked aptitude for research in some field of pure or applied science. An associate member must have shown noteworthy achievement as an original investigator in some field of pure or applied science to qualify for nomination to full membership.

Golden Key National Honor Society. To qualify for membership in Golden Key, a student must have junior or senior standing and must have a cumulative grade-point average that falls in the top 15 percent of the junior and senior classes. Transfer students who have completed at least 25 semester credits at the University of Idaho and meet the grade-point average requirements also qualify for membership.

Libraries

The University Library and the Law Library hold over two million items. The libraries receive 65,000 serials in over 210 databases, provide access to approximately 11,000 electronic books and reference tools, and add over 20,000 physical items annually to their collections. There are subscriptions to all Idaho newspapers and representative papers from around the U.S. The library is a regional depository for U.S. and Idaho state government documents, serves as the statewide clearinghouse for geospatial data, and is a designated Earth Science Information Center.

The libraries' collections emphasize the land-grant traditions of the basic sciences, agriculture, and the natural resources while maintaining supporting collections in the humanities and social sciences. Special Collections and Archives is rich in collections of Pacific Northwest and Idaho state history, including books, photographs, and historical maps. The archives contain personal papers and records of families, politicians, educators, authors, and business records of lumber companies, mines, and railroads. It is also home to the International Jazz Collections which contains papers, photos, and recordings of jazz musicians and critics. The library has created and is developing digital images of many important resources, providing electronic access to such archives as the International Jazz Collections, the Barnard Stockbridge photographic collection, Idaho Waters Digital Library, historic aerial photographs, and the Kooskia internment camp scrapbook.

The Law Library operates as the laboratory for the College of Law, housing materials that are used to support the academic program of the college and the research interests of law faculty and students. Numbering over 250,000 volumes and volume equivalents, the collection has primary materials, in the form of statutes and court reporters, for the federal system and all 50 states. Secondary materials, consisting of treatises, law reviews, and loose-leaf services, round out the American law collection. There is a working collection of United Kingdom and Canadian primary and secondary materials, and a growing international law collection. The Law Library is also a selective federal documents depository. A variety of electronic legal databases are available for use by the University community and the general public.

The law library's special collections include records and briefs submitted to the Idaho Supreme Court and Court of Appeals, an historical collection of Idaho legislative and administrative legal materials, and the Clagett Collection, which consists of materials collected by Fred and Dorothy Clagett to support their research on the life and times of William H. Clagett, the president of Idaho's Constitutional Convention in 1889.

The library building was expanded and remodeled in 1993, providing structural opportunities to expand collections in the current facility. The library facility is open from 8 a.m. to midnight daily during the school terms, with a 24-hour study area. The library is home to the largest student computing lab on campus, with nearly 200 computers available to students, faculty, and staff. The emphasis on building electronic collections enables the library to offer services to all students and faculty at all times, regardless of location.

There is a reciprocal use agreement between the University of Idaho Libraries and the Washington State University Libraries located in Pullman, eight miles away, giving students immediate access to the equivalent of library resources in many urban areas. Similar agreements exist with the Lewis Clark State College Library, located in Lewiston, North Idaho College Library, located in Coeur d'Alene, Whitworth University Library and Gonzaga University Libraries, located in Spokane. The library cooperates with institutions throughout the Pacific Northwest and beyond. Electronic delivery services coupled with courier systems ensure rapid delivery of items held throughout the area.

Art Galleries

The galleries serve the university, community, state, and region and are the principal facilities emphasizing the visual arts in northern Idaho. The University Gallery occupies the main floor of Ridenbaugh Hall on campus (corner of Blake Street and Campus Drive) and the work of University Undergraduate and Graduate students studying in the disciplines of Art & Design, Architecture, and Landscape Architecture is exhibited here during the academic year. The Prichard Art Gallery is located at 414/416 South Main Street in downtown Moscow; it is open throughout the year. All gallery programs and exhibitions are open to the public and no admission is charged.

Through the galleries' rotation of exhibits, visitors may see examples of the full range of visual arts, including traditional and experimental art media, as well as decorative and applied design. The objectives of these galleries are to provide opportunities for local, regional, and national artists and students to exhibit their work, and a means by which visitors' awareness and appreciation of the arts is heightened. The galleries also serve as an excellent teaching device. Ties between the university and local and regional communities are strengthened by the outreach efforts of the Prichard Art Gallery.

In addition to exhibitions of work by artists of international, national, and regional repute, exhibitions mounted each year at the Prichard Art Gallery traditionally include those by faculty members and graduate students from the College of Letters, Arts & Social Sciences. Public receptions held in connection with some exhibitions, occasional musical performances presented at the galleries, seminars with guest artists and lecturers, and the A.R.T. Gallery Connections Docent Program (K-12), are ways in which the gallery serves the university and the community.

The gallery facilities and programs are administered through the College of Letters, Arts & Social Sciences.

Information Technology Services (ITS)

ITS provides the university community with information technologies and support to complement its teaching, learning, research, telecommunications, and outreach activities, as well as serve administrative operations. The ITS main office is located in the Administration Building, Room 140, phone 208-885-6721.

Some services provided by ITS include:

- **Help Desk Services** – provides technical assistance through telephone, e-mail, and walk-in support. The Help Desk can be visited at The Teaching and Learning Center (TLC) room 128 or reached at 208/885- HELP (208/885-4357) or helpdesk@uidaho.edu.
- **Student Computer Labs** – located throughout the Moscow campus with a mix of 400 PC and Macintosh computers, includes computer access for individuals with disabilities. Some labs are open 23 hours a day. Also located throughout campus are 80 walk-up kiosks. A virtual, but limited, version of the lab's software menu can be accessed by any computer with a broadband connection by pointing your browser to www.vlab.uidaho.edu
- **Campus Wireless Network** – available throughout the Moscow, Coeur d'Alene, and Boise campuses, including UI Residences. Faculty, staff and Students are encouraged to use "AirVandalGold". Guests are invited to use "AirVandalGuest"
- **Technology Enhanced Classrooms** – provides support and training for the university's media-enhanced classrooms.
- **Media Center** – provides media presentation equipment to campus and off-campus users.
- **Telephone Services** – provides complete telephony communication service and infrastructure support.
- **Video Communication Services** – provides general videoconferencing services including scheduling, operations, bridging, maintenance, and troubleshooting for videoconferencing equipment at University of Idaho locations throughout the state.

- **Enterprise Applications** – provides database administration and development services for the University's ERP application and web site content management systems; as well as custom development for web-based administrative applications.
- **Network and Systems** – provides network and server-based services including: Internet access; high-speed campus data network; wide-area network connecting university sites across Idaho; server-based personal and shared file space; Virtual Private Network (VPN); print queues.
- **Document Imaging** – provides an infrastructure for the scanning, retention, and management of documents relative to the operations of the university.
- **Vandal Card** – the Vandal Card is the official UI identification card, uses include access to university meal plans, as a commerce card for personal on-campus transactions at enabled locations, as a UI library card, to access the Student Recreation Center, and for building access to some UI facilities.
- **Records Management** – provides physical storage along with guidance, training, and policy regarding the management and disposal of university records.
- **E-Commerce (Marketplace)** – provides managed e-commerce services to the university community, including providing payment capabilities for UI developed web applications and third-party payment integration. E-Commerce also provides banner-integrated on-line stores (UI Marketplace) for use by university colleges and departments for web-based commerce.
- The ITS web page can be found on-line at www.uidaho.edu/its. The web site has a complete service catalog which provides detailed descriptions and contact information for all the services offered by ITS.

University of Idaho Nondiscrimination Policy

It is UI policy to prohibit and eliminate discrimination on the basis of race, color, national origin, religion, sex, sexual orientation and gender identity/expression, age, disability, or status as a Vietnam-era veteran. This policy applies to all programs, services, and facilities, and includes, but is not limited to, applications, admissions, access to programs and services, and employment. Such discrimination is prohibited by titles VI and VII of the Civil Rights Act of 1964, title IX of the Educational Amendments of 1972, sections 503 and 504 of the Rehabilitation Act of 1973, the Vietnam Era Veterans' Readjustment Assistance Act of 1974, the Age Discrimination Act of 1975, the Age Discrimination in Employment Act Amendments of 1978, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, other federal and state statutes and regulations, and university commitments (see Faculty Staff Handbook (FSH) 3060). Sexual harassment violates state and federal law and policies of the Board of Regents, and is expressly prohibited, as stated in FSH 3220. The University of Idaho also prohibits discrimination on the basis of sexual orientation, as stated in FSH 3215. The entire FSH can be accessed online at www.webs.uidaho.edu/fsh. Questions or concerns about the content and application of these laws, regulations or University policy may be directed to: the Office of Human Rights, Access & Inclusion (208-885-4285); Regional Office for Civil Rights, U.S. Department of Education in Seattle (206-220-7900); Equal Employment Opportunity Commission, Seattle District Office (206-220-6883); or Pacific Regional Office of Federal Contract Compliance Programs, U.S. Department of Labor in San Francisco (415-848-6969). Complaints about discrimination or harassment should be brought to the attention of the Office of Human Rights, Access & Inclusion (885-4285). Retaliation for bringing forward a complaint is prohibited by FSH 3810.

Research

Research is a primary function of the University of Idaho and is closely related to teaching for both students and faculty members, especially at the graduate level. Research and teaching are intimately associated and mutually complementary. Hence, most classroom teaching faculty members are also actively engaged in research.

Office of Research and Economic Development

The mission of the Office of Research and Economic Development is to provide academic and administrative leadership to: (1) foster, support and inspire scholarly activity; (2) oversee ethical, managerial and regulatory compliance of scholarly activities; and (3) ensure dissemination and application of scholarly activities. At the University of Idaho, scholarly and creative activity aspires to generate knowledge that strengthens the scientific, economic, cultural, social, and legal foundations of an open, diverse, and democratic society. Our goal is to achieve excellence in scholarship and creative activity through an institutional culture that values and promotes strong academic areas and interdisciplinary collaboration among them.

The Office of Research and Economic Development focuses on promoting research university-wide and on providing assistance in writing multidisciplinary proposals and in obtaining research funds. This is accomplished by organizing and promoting research activities such as special grant programs and research awards; providing to individuals and departments information on grant opportunities from federal agencies, state and private sector groups and foundations; and processing and recording all grant and contract proposals through the Office of Sponsored Programs to ensure that policies and procedures are recognized and followed. The Office strives to increase UI's research competitiveness by offering assistance to faculty, staff, and students.

The Research Council, the faculty's standing committee involved with the development and oversight of research policy, works closely with the vice president for research and economic development to resolve differences in interpretation and implementation of these policies. Additionally, the council acts as the peer review board in the university's internal competitive grants programs.

Idaho Research Foundation

The Idaho Research Foundation, Inc. (IRF) is a private nonprofit corporation organized for the purpose of supporting research at the university. Its principal activity is licensing technologies resulting from academic research to the private sector. The IRF identifies and protects the intellectual property developed at the University of Idaho and transfers it to the private sector through licensing agreements in order to secure support for and further develop the university's academic, research, and service responsibilities. The IRF also disseminates scientific knowledge and technical information and encourages and assists researchers and inventors by providing the means by which their scientific discoveries may be patented, copyrighted, developed, and applied. The transfer of technology generated through UI research turns society's investment into new products and industrial processes, thus increasing Idaho's competitiveness as well as the nations.

Research Units

Research activities are many and varied, and are unique for each department and college. Certain administrative units provide an additional research function and emphasis that are, in many cases, related to the research program of the departments. Some of these units are:

Aquaculture Research Institute. The Aquaculture Research Institute (ARI), University Research Office, conducts, facilitates, supports, directs, and coordinates aquaculture research activities at the University of Idaho, at the Hagerman Fish Culture Experiment Station, and throughout the state. Through the institute, UI scientists from various disciplines conduct research in both commercial and conservation aquaculture sciences and technologies such as fish culture and production efficiency, fish breeding and genetics, fish nutrition and growth physiology, fish diseases and pathology, fish waste management and water quality assessment, aquaculture marketing and economics, and recovery efforts for endangered fish species. The ARI does not offer degrees. Rather, the ARI assists academic departments in the training of graduate-level students by providing resources and opportunities for research.

Caine Veterinary Teaching Center. The Caine Veterinary Teaching Center facility, Department of Animal and Veterinary Science, College of Agricultural and Life Sciences, is located at Caldwell, Idaho, and is staffed with scientists involved with research, extension, service, and instruction in the animal and veterinary science graduate program. It provides clinical training for WI students in veterinary medicine and is also a satellite clinical laboratory specializing in the identification, study, and control of diseases of animals used for human food.

Center for ETHICS* (Ethical Theory and Honor in Competition and Sport). The Center for ETHICS*, Department of Movement Sciences, College of Education, believes in "teaching the tradition of competitive integrity to inspire leaders of character." The goal of the center is to improve moral development and character education through intervention, consultation, and leadership in advancing moral education.

Center for Educational Research and Public Service. The Center for Educational Research and Public Service was established to conduct and support research and evaluation, to facilitate research by College of Education faculty members and graduate students, and to be of assistance to local school districts and to other educational institutions. The center publishes a monthly newsletter providing information on grant opportunities.

Center for Forest Nursery and Seedling Research. The Center for Forest Nursery and Seedling Research develops and demonstrates cost and environmentally effective processes for propagation, growth, and subsequent survival of forest seedlings. Processes are tested and demonstrated in a production scale nursery operation, with subsequent transfer of technology to the forest nursery industry of the region.

Center for International Training and Outreach. The Center for International Training and Outreach (CITO) functions as the College of Natural Resource's international outreach center. Its central long-term goal is the development of a self-sufficient program of worldwide training, technical assistance and research activities focused on three related substantive areas: (1) nature-based tourism, (2) environmental interpretation, and (3) protected area management and sustainable development. Key within CITO's functions is the cultivation of strategic linkages within organizations that can help facilitate a greater role for the UI and the College of Natural Resources in international training and outreach. Paramount in this vision is the establishment of strategic linkages and institutional partnerships with government, private firms, and international institutions of higher education.

Center for Research on Invasive Species and Small Populations. The Center for Research on Invasive Species and Small Populations (CRISSP) combines advanced techniques in molecular biology with traditional approaches to biological and ecological management, in order to maintain and enhance the integrity of our nation's native plant and animal populations. The goal of the center is to address the challenges and inform policy on invasive species and small or threatened populations. This will be accomplished by taking an integrated approach that coordinates resources and expertise for scientific research on these problems. The Center's mission also incorporates public education and outreach on invasive species and conservation biology issues. The Center contains state-of-the-art instrumentation for molecular biology and a dedicated computer laboratory, to facilitate data acquisition and analysis. Stipends for graduate study and undergraduate internships are available through the Center to students with an interest in invasive species and/or conservation biology issues.

Center for Secure and Dependable Systems. The Center for Secure and Dependable Systems (CSDS) operates as a center in the Microelectronics Research and Communications Institute (MRCI), University Research Office. This board-approved center concentrates on computer-related security education and research. The National Security Agency designated the University of Idaho in 1999 as one of the initial seven Centers of Excellence in Information Assurance Education, partly in recognition of CSDS's efforts in promoting information security education and research. This status was reapproved in 2005. The CSDS faculty conducts research in the areas of system defense, intrusion detection, critical infrastructure protection, secure protocols, network security, evolutionary algorithms, computer forensics, reliability, and fault tolerance.

Electron Microscopy Center. A campus-wide facility, including scanning and transmission electron microscopes and energy-dispersive x-ray microanalysis, is available for use in teaching, research, and service. Located in McClure Hall, this facility is available to students and faculty members. Information concerning use of the EM Center may be secured directly from the facility or through the University Research Office.

Forest, Wildlife and Range Experiment Station. The Forest, Wildlife and Range (FWR) Experiment Station is the research arm of the College of Natural Resources. Its staff includes all members of the college faculty, full-time research associates and technicians, and graduate students. The station staff conducts research on a wide variety of natural resource

management problems in the areas of forestry, forest products, range, wildland recreation, wildlife, and fisheries. Because many of the graduate students enrolled in the college are on assistantships associated with station projects, the programs of the experiment station are closely connected with the college's graduate education mission.

Hagerman Fish Culture Experiment Station. The Hagerman Fish Culture Experiment Station is located in the heart of Idaho's aquaculture industry in the Magic Valley and its focus is on rainbow trout. Most of Idaho's large commercial aquaculture operations are located nearby and the close proximity of the research facility provide opportunities for industry partnerships in aquaculture research.

The Hagerman Station is a field laboratory of the College of Agricultural and Life Sciences, and is a part of the Aquaculture Research Institute. UI scientists from various disciplines conduct research at the station in both commercial and conservation aquaculture sciences and technologies. The Hagerman Station has both exceptional water resources supporting its wet laboratories and outdoor fish culture systems and leading edge analytical resources supporting functional genomics in association with nutrition, immune function, growth, reproduction, and marker-based breeding programs for rainbow trout. The Hagerman Station also hosts USDA Agriculture Research Service scientists who contribute to UI research, educational and extension programs. Idaho Springs, a nearby commercial-scale trout farm, is operated by the Hagerman Station as a research farm where large-scale trials and long-term broodstock holding can be conducted. Scientists at the station are deeply involved in recovery efforts for Idaho's endangered fish species, and in assessment of threatened stocks and species. These efforts are often done in partnership with state and federal agencies, and with the Columbia River Inter-Tribal Fish Commission, and other tribal entities.

The Hagerman Station works closely with Idaho's aquaculture extension educator, who is nearby in Idaho's Magic Valley. Through this collaboration and that with other UI faculty and staff throughout the state, a variety of outreach activities designed to educate the public and support and promote aquaculture are pursued.

Idaho Agricultural Experiment Station. The Idaho Agricultural Experiment Station is the research arm of the College of Agricultural and Life Sciences. Applied and fundamental research programs provide a technological base to assist the agricultural industries and rural development in the state and region. Graduate education at the M.S. and Ph.D. levels is an integral part of most research projects. Research Centers located at Aberdeen, Boise, Caldwell, Dubois, Kimberly, Moscow, Parma, Sandpoint, Salmon/Carmen, Tetonia, Post Falls, and Twin Falls provide opportunities to conduct locally-relevant applied and basic research. Off-campus research centers represent a significant component of the college's and university's research capacity in terms of personnel, facilities and experimental land resources. Over 40 of the college's research faculty and over 100 research support staff are stationed at these centers. Facilities have an experiment land resource exceeding 4,000 acres. Cooperative research programs involving a number of USDA Agricultural Research Service scientists and Federal laboratory facilities exist at Aberdeen, Dubois, Kimberly, Moscow, and Parma.

Idaho Cooperative Fish and Wildlife Research Unit. The cooperative program involving UI, College of Natural Resources, the U.S. Geological Survey, and the Wildlife Management Institute in Washington, D.C., conducts research to find answers to a broad spectrum of questions relating to the management and viability of fish and wildlife resources. Issues addressed are of local, national, and international interest. Graduate students are trained at both the master's and doctoral levels. The unit provides in-service training for new and established conservation agency employees and provides technical assistance and information to the public and to federal and state organizations.

Idaho Cooperative Park Studies Unit. The UI Cooperative Park Studies Unit in the College of Natural Resources applies the results of sociological and biological research to the management of parks, preserves, and recreation areas. Because major funding comes from the National Park Service, the unit has a primary responsibility to conduct research related to the mission of the NPS and the management of the national park system. An important responsibility of the unit is technical assistance to park staffs, working directly with resource managers to help solve management problems.

Idaho Forest, Wildlife and Range Policy Analysis Group. The Idaho Forest, Wildlife and Range Policy Analysis Group is a research program of the Idaho Forest, Wildlife and Range Experiment Station, College of Natural Resources, created by the Idaho legislature to provide timely and objective analyses of natural resource issues of importance to the citizens of Idaho. Graduate students are involved in specific short-term tasks to support policy analysis projects.

Idaho Geological Survey. Established in 1919, the Idaho Geological Survey is the state's lead agency for collecting, interpreting, and disseminating all scientific information on the geology and mineral resources of Idaho. As a research unit of the University of Idaho, the Idaho Geological Survey's main office is at the Moscow campus. The Survey also has branch offices in Pocatello at Idaho State University and in Boise at Boise State University and the Idaho Water Center. A staff of geologists conducts applied research with a strong emphasis on producing geologic maps and providing technical and general information to the public.

Cooperative projects between the Survey, state universities, and other academic, state, and federal institutions, including the U.S. Geological Survey, enhance research productivity and educational outreach. The Survey addresses public inquiries through an expert staff, reference collections, comprehensive Web site (www.idahogeology.org), and sales of its books and maps. The Survey directs its activities at the broad interests of the state's citizens, teachers and students of earth science, the mineral industry, land developers, land-use planners, scientific researchers, and city, county, state, and federal agencies.

Idaho Water Resources Research Institute. The Idaho Water Resources Research Institute, University Research Office, was established at UI by the regents on October 24, 1963. The national institute program is administered by the United States Geological Survey of the U.S. Department of the Interior to stimulate, sponsor, coordinate, and supplement research, education, and outreach programs in the field of water resources. The institute serves the state by developing and coordinating water research programs intended to assure the state, region, and nation adequate supplies of high-quality water.

The area of water resources planning, development, and management is a composite of many disciplines. Consequently, the Idaho Water Resources Research Institute believes that professional needs in these areas are best achieved by individuals with strong basic education in a traditional academic department enhanced by programs of study in water resources problems and professional practice. The university has developed procedures that encourage existing schools and departments to strengthen their programs in light of the special needs for water resources. The Idaho Water Resources Research Institute has coordinated masters and doctoral programs in several disciplines and specializations through various participating divisional programs.

The objectives of the institute are to: (1) promote water resources research and coordinate the efforts of the various university divisions and departments involved in water resources research; (2) strengthen and coordinate water-related undergraduate and graduate programs and course offerings so that the university can supply well-trained professionals and leaders; (3) develop, gather, and disseminate research findings within the state universities and to various federal, state, local, and civic organizations interested in water resources; and (4) promote water education for both the youth and adult community within Idaho.

Inland Empire Tree Improvement Cooperative. The Inland Empire Tree Improvement Cooperative in the College of Natural Resources includes all of the major commercial timber holding agencies in the Inland Northwest. The cooperative's main function is genetic improvement of five forest tree species. Substantial research opportunities are available in the delineation of genetic patterns and prediction of genetic gains in the five programs. Results of such research have the potential for immediate application in operation programs.

Institute for Bioinformatics and Evolutionary Studies (IBEST). The Institute for Bioinformatics and Evolutionary Studies (IBEST) is an interdisciplinary research group at the University of Idaho focused on understanding the patterns and processes of evolution that occur over comparatively short periods of time. The hallmarks of IBEST research are the coupling of empirical and theoretical research, and a strong orientation toward rigorous testing of hypotheses. They place a high value on interdisciplinary collaborations that blend the expertise of biologists, biochemists, ecologists, evolutionary biologists, mathematicians, statisticians, and computer scientists to examine the underpinnings of evolutionary biology.

Intermountain Forest Tree Nutrition Cooperative. The Intermountain Tree Forest Nutrition Cooperative in the College of Natural Resources includes the major state, federal, and private forest management organizations throughout the Inland Northwest. The cooperative's main function is the support of research dealing with the nutritional management of forests. Results of such research have the potential for application in forest management programs.

James A. and Louise McClure Center for Public Policy Research. The Bureau of Public Affairs Research has been renamed the James A and Louise McClure Center for Public Policy Research. Building on almost fifty years of public policy research and outreach, the McClure Center is dedicated to enhancing public policy development and decision-making through research and analysis, public programming, and leadership training.

Laboratory Animal Research Facility. A centrally located facility for housing and maintaining small animals for use in teaching and research is available to faculty members and students. Information concerning space availability, use, and services provided is available through the facility itself.

Laboratory of Anthropology. The Alfred W. Bowers Laboratory of Anthropology serves as a research unit within the Department of Sociology & Anthropology, College of Letters, Arts, and Social Sciences. The three primary objectives are research, cultural resource management, and public outreach and education. Research facilities include the Pacific Northwest Anthropological Archives, the Asian American Comparative Collection, and the Crabtree Lithic Collection. As the Archaeological Survey of Idaho, Northern Repository, the Laboratory of Anthropology houses site forms and archaeological collections for the ten northern counties of Idaho. Public education projects include interactive presentations at area schools.

Lionel Hampton Center. The mission of the Lionel Hampton Center, Academic Affairs, is to ensure the future of the American art form jazz, through unique educational, research, and performance opportunities. The center is a unique partnership between the UI Lionel Hampton Jazz Festival and the Lionel Hampton School of Music. Each year, in late February, the UI Lionel Hampton Jazz Festival brings thousands of students from all over the U.S., Canada, and as far away as Japan to the UI campus to perform for judges and peers, enjoy world class concerts, and learn from jazz masters in workshop settings. The School of Music supports scholarships, visiting professorships, and courses in jazz studies. Together the UI Lionel Hampton Jazz Festival and School of Music service significant jazz archives including original scores, recordings, film/video, letters, photographs, and other documents, a terrific research base for jazz studies.

Martin Institute. The Martin Institute for Peace Studies and Conflict Resolution is an interdisciplinary teaching, outreach, and research center at the University of Idaho that considers the causes of war and the conditions for peace in a broad context. The Institute's strategic plan for 2006-2010 centers on providing transformational educational experiences for UI undergraduates, both within "traditional" global studies fields and across the curriculum, through administration of the undergraduate major in international studies and the Martin School of International Studies. Funded research support on projects related to the Institute's mission is awarded annually to teams of undergraduate students and faculty selected to participate in the Martin Scholar program.

National Institute for Advanced Transportation Technology. The mission of the National Institute for Advanced Transportation Technology (NIATT), University Research Office, is to develop engineering solutions (knowledge and technology) to transportation problems for the state of Idaho, the Pacific Northwest, and the United states, and to prepare our students to be leaders in the design, deployment and operation of our nation's complex transportation systems. NIATT is a university-based center of excellence established by US Department of Transportation to advance technology and expertise in the many disciplines comprising transportation through education, research and technology transfer. Three centers currently operate as part of NIATT, each with a unique mission related to transportation. The Center for Clean Vehicle Technology focuses on research to protect the natural and built environment by improving the quality and economic viability of alternative fuels and reducing the environmental impacts and improving the fuel economy and safety of motorized vehicles (including passenger cars, transit vehicles and recreational vehicles). The Center for Traffic Operations and Control conducts research concerning traffic detection, control, surveillance, simulation and optimization with the goal of reducing energy consumption, reducing congestion, and improving safety. Erosion control, bridge construction, and pavement design, as well as planning methods, design practices, and software development fall under the auspices of the Center for Transportation Infrastructure. NIATT provides opportunities for graduate and undergraduate students to participate in research supported by the University Transportation Centers program, the Idaho Transportation Department, the Federal Highway Administration, and others.

Potato Center of Distinction. The Center encompasses research programs on development of new cultivars in concert with USDA-ARS potato germplasm program; development and refinement of production methods; development on insect, disease, and weed germplasm program; development and refinement of storage methods; and utilization of potato products. The Center's education program includes extension programming focusing on variety choice, crop production, pest management, storage, and processing. The Center also includes utilization and pesticide residue testing, research on genetic manipulation of the potato, and economic research.

Rangelands Center. The Rangelands Center strives to create insight and foster understanding for the stewardship of rangelands. Rangelands cover half of Idaho, half the West, and half the earth's land surface. Therefore, rangelands affect the ecological health and economic livelihood of our state and region. The innovative design of the Rangeland Center promotes active partnerships with individuals, organizations and communities who work and live on the vast landscapes known as rangelands. The Rangeland Center is a group of 23 researchers and outreach specialists with expertise in disciplines that affect rangeland management and conservation including grazing, rangeland ecology, entomology, soil science, economics, rural sociology, fish and wildlife resources, invasive plants, forage production, animal science, wildland fire, restoration and the use of spatial technologies to understand rangelands. Center research and outreach efforts are aimed at creating science and solutions for the range.

Reveley Geospatial Learning Center. The Reveley Geospatial Learning Center, College of Natural Resources, was formed to encourage, facilitate, and coordinate, on an interdisciplinary basis, remote sensing and geographic information system (GIS) research at UI. The unit maintains "state of the art" computing hardware, software, and field equipment for project support. Research funding comes from a variety of sources including NASA, USFS, and commercial forest industries, among others. Most research projects utilize graduate students as essential elements in both data acquisition and interpretation. These projects often form the basis of either a thesis or dissertation.

Rocky Mountain Cooperative Ecosystem Studies Unit. The Rocky Mountain Cooperative Ecosystem Studies Unit, College of Natural Resources, is a university-federal agency partnership involving the University of Idaho, University of Montana, Montana State University, Salish Kootenai College, Utah State University, Washington State University, and federal land management agencies. The mission of this unit is to improve the scientific base for managing ecosystems in the rapidly changing social, cultural, and environmental landscape of the Rocky Mountain Region. The unit provides research, technical assistance, and training programs for federal partners and provides support for faculty and graduate student ecosystem studies programs.

Rocky Mountain Forest Experiment Station. The Rocky Mountain Forest Experiment Station, College of Natural Resources, with facilities on the UI campus, is a research branch of the USDA Forest Service. It conducts research in silviculture, forest health, forest genetics, and watershed management. The station provides funding to UI faculty and graduate students to pursue forestry and watershed management sciences.

Snake River Conservation Research Center. The Snake River Conservation Research Center at Kimberly, Idaho, has been developed as a cooperative facility between UI and the U.S. Department of Agriculture. USDA scientists specialize in research to improve soil and water management practices and to contribute to a better understanding of basic soil processes. Programs are focused on systems and practices that improve irrigation uniformity, efficiency, and crop yields; decrease costs and energy; and reduce soil erosion. Collaborative research projects between the USDA and UI specialists provide graduate students the opportunity to work closely with experts in both agencies and to utilize expanded facilities. USDA scientists hold affiliate faculty rank and may assist in directing student research projects and serve on graduate committees.

Statistics Consulting Center. The Statistics Consulting Center, College of Science, provides assistance in the design of experiments and sample surveys, advice on statistical analyses, and expertise on recent developments in statistical research. Proper statistical design and analysis play a key role in producing quality research within the university. The optimal time to seek statistical consulting is during the earliest stages of the research project, and certainly before any data collection stage. Faculty members and graduate students from any discipline are welcome. The center is located on the fourth floor of Brink Hall and operates a free walk-in clinic. Faculty are also available by appointment.

Degrees Granted

On completion of specific courses of study and recommendation of the faculty, the degrees listed below are granted by the Regents of the University of Idaho.

Baccalaureate Degrees

Bachelor of Arts, B.A.
Bachelor of Fine Arts, B.F.A.
Bachelor of General Studies, B.G.S.
Bachelor of Interior Design, B.I.D.
Bachelor of Music, B.Mus.
Bachelor of Science, B.S.
Bachelor of Science in
- Agricultural and Life Sciences, B.S.Ag.L.S.
- Agricultural Economics, B.S.Ag.Econ.
- Agricultural Education, B.S.Ag.Ed.
- Animal and Veterinary Science, B.S.A.V.S.
- Architecture, B.S.Arch.
- Art Education, B.S.Art Ed.
- Biochemistry, B.S.Biochem.
- Biological and Agricultural Engineering, B.S.B.A.E.
- Business, B.S.Bus.
- Chemical Engineering, B.S.Ch.E.
- Civil Engineering, B.S.C.E.
- Computer Engineering, B.S.Comp.E.
- Computer Science, B.S.C.S.
- Dance, B.S.Dan.
- Early Childhood Development and Education, B.S.Erly.Chldhd.Dev.Ed.
- Ecology and Conservation Biology, B.S.Ecol.-Cons.Biol.
- Education, B.S.Ed.
- Electrical Engineering, B.S.E.E.
- Environmental Science, B.S.Env.S.
- Exercise Science and Health, B.S.E.S.H.
- Family and Consumer Sciences, B.S.F.C.S.
- Fire Ecology and Management, B.S.Fire.Ecol.Mgmt.
- Fishery Resources, B.S.Fish.Res.
- Food Science, B.S.F.S.
- Forest Resources, B.S.For.Res.
- Landscape Architecture, B.S.L.A.
- Materials Science and Engineering, B.S.M.S.E.
- Mechanical Engineering, B.S.M.E.
- Microbiology, B.S.Microbiol.
- Molecular Biology and Biotechnology, B.S.M.B.B.
- Natural Resource Conservation, B.S.Nat.Resc.Consv.
- Rangeland Ecology and Management, B.S.Rangeland Ecol.-Mgt.
- Recreation, B.S.Rec.
- Renewable Materials, B.S.Renew.Mat.
- Technology, B.S.Tech.
- Wildlife Resources, B.S.Wildl.Res.

Master's Degrees

Master of Accountancy, M.Acct.
Master of Architecture, M.Arch.
Master of Arts, M.A.
Master of Arts in Teaching, M.A.T.
Master of Business Administration, M.B.A.
Master of Education, M.Ed.
Master of Engineering, M.Engr.
Master of Fine Arts, M.F.A.
Master of Landscape Architecture, M.L.A.
Master of Music, M.Mus.
Master of Natural Resources, M.N.R.
Master of Public Administration, M.P.A.
Master of Science, M.S.
Master of Science in Athletic Training, M.S.A.T.
Professional Science Master, P.S.M.

Education Specialist Degrees

Education Specialist, Ed.S.
Education Specialist in Adult/Organizational Learning and Leadership, Ed.S.AO.L.L.
Education Specialist in Educational Leadership, Ed.S.Ed.Ldrshp.
Education Specialist in School Psychology, Ed.S.Sch.Psych.

Professional Degree in Law

Juris Doctor, J.D.

Doctoral Degrees

Doctor of Athletic Training, D.A.T.
Doctor of Education, Ed.D.
Doctor of Philosophy, Ph.D.

ACADEMIC OFFERINGS AT THE UNIVERSITY OF IDAHO

Programs offered by the university are shown in the list below. After a student has completed the requirements for a degree, the degree name and, if not already a part of the degree name, the major curriculum as shown in this list are printed on the student's diploma. (Options listed under some curricula are areas of concentration within the major. Options, emphases, academic minors, and academic certificates are recorded only on the student's final transcript.)

Program	Bachelor	Master	Education Specialist	Doctoral	Academic Minor	Academic Certificate	Offered Online
Accountancy		M.Acct.					
Accounting	B.S.Bus.				Minor		
Addictions					Minor		
Advanced Materials Technology						Certificate	
Adult Basic Education/GED Instructor						Certificate	
Adult/Organizational Learning and Leadership		M.S.	Ed.S.AO.L.L.				M.S.
Advertising	B.A. B.S.				Minor		
Aerospace Studies					Minor		
Aging Studies					Minor		
Agribusiness	B.S.Ag.Econ.				Minor		
Agricultural Economics	B.S.Ag.Econ.						
Agricultural Education	B.S.Ag.Ed.	M.S.					
Agricultural Extension Education					Minor		
Agricultural Science, Communication and Leadership	B.S.Ag.L.S.						
Agricultural Systems Management	B.S.Ag.L.S.				Minor		
American Government/Public Law					Minor		
American Indian Studies					Minor		
American Studies	B.A. B.S.				Minor		
Analog Integrated Circuit Design						Certificate	Certificate
Animal Physiology				Ph.D.			
Animal Science		M.S.			Minor		
Animal and Veterinary Science	B.S.A.V.S.						
Anthropology	B.A. B.S.	M.A.			Minor		
Applied Economics		M.S.					
Applied Geotechnics						Certificate	Certificate
Aquaculture					Minor		
Archaeological Technician						Certificate	
Architecture	B.S.Arch.	M.Arch.			Minor		
Art	B.A.	M.F.A. M.A.T.			Minor		M.A.T.
Art Education	B.S.Art Ed.						
Asian Studies					Minor		
Athletic Training		M.S.A.T.		D.A.T.			

Biochemistry	B.S.Biochem.				Minor		
Bioethics					Minor		
Bioinformatics and Computational Biology		M.S.		Ph.D.			
Biological and Agricultural Engineering	B.S.B.A.E.	M.Engr. M.S.		Ph.D.			
Biology	B.A. B.S.	M.S.		Ph.D.	Minor		
Bioregional Planning and Community Design		M.S.				Certificate	
Broadcasting and Digital Media	B.A. B.S.				Minor		
Business					Minor		
Business Economics	B.S.Bus.						
Career and Technical Education	B.S.Ed.						
Chemical Engineering	B.S.Ch.E.	M.Engr. M.S.		Ph.D.			
Chemistry	B.S.	M.S.		Ph.D.	Minor		
Child, Family, and Consumer Studies	B.S.F.C.S.						
Civil Engineering	B.S.C.E.	M.Engr. M.S.		Ph.D.			M.S.
Climate Change					Minor		
Clothing, Textiles and Design	B.S.F.C.S.						
Coaching					Minor		
Communication and Control for Power Transmission and Distribution						Certificate	Certificate
Communication Studies					Minor		
Comparative/International Politics					Minor		
Computer Engineering	B.S.Comp.E.	M.Engr. M.S.					M.Engr. M.S.
Computer Science	B.S.C.S.	M.S.		Ph.D.	Minor		M.S.
Conservation Social Sciences					Minor		
Creative Writing		M.F.A.					
Crop Science					Minor		
Curriculum and Instruction		M.Ed.	Ed.S.				M.Ed.
Dance	B.S.Dan.				Minor		
Diversity and Stratification						Certificate	
Early Childhood Development and Education	B.S.Erly.Chldhd.Dev.Ed.						
Ecology and Conservation Biology	B.S.Ecol.-Cons.Biol.						
Economics	B.A. B.S.				Minor		
Education				Ed.D. Ph.D.			
Educational Leadership		M.Ed.	Ed.S.Ed.Ldrshp.				M.Ed. Ed.S.Ed.Ldrshp.
Electrical Engineering	B.S.E.E.	M.Engr. M.S.		Ph.D.			M.Engr. M.S.
Electrical Machines and Drives						Certificate	Certificate
Elementary Education	B.S.Ed.						
Emergency Planning and Management						Certificate	

Engineering Management		M.Engr.					M.Engr.
English	B.A.	M.A. M.A.T.			Minor		
Entomology		M.S.		Ph.D.	Minor		
Entrepreneurship						Certificate	
Environmental Communication					Minor		
Environmental Containment Assessment						Certificate	
Environmental Education						Certificate	Certificate
Environmental Engineering		M.Engr. M.S.					
Environmental Science	B.S.Env.S.	M.S.		Ph.D.			
Environmental Water Science						Certificate	
Exercise Science and Health	B.S.E.S.H.						
Experimental Psychology				Ph.D.			
Family and Consumer Sciences		M.S.					
Finance	B.S.Bus.						
Fire Ecology and Management	B.S.Fire.Ecol.Mgmt.				Minor		
Fire Ecology, Management, and Technology						Certificate	Certificate
Fishery Resources	B.S.Fish.Res.				Minor		
Food and Nutrition	B.S.F.C.S.						
Food Science	B.S.F.S.	M.S.		Ph.D.	Minor		
Forest Operations					Minor		
Forest Resources	B.S.For.Res.				Minor		
French	B.A.				Minor		
General Management		M.B.A.					
General Studies	B.G.S.						
Geographical Information Systems						Certificate	
Geography	B.S.	M.S.		Ph.D.			
Geological Engineering		M.S.			Minor		M.S.
Geological Sciences	B.S.						
Geology		M.S.		Ph.D.	Minor		
German					Minor		
Global Justice						Certificate	
Heating, Ventilation, and Air Conditioning (HVAC) Systems						Certificate	
History	B.A. B.S.	M.A.		Ph.D.	Minor		
Horticulture					Minor		
Human Resource Development						Certificate	
Human Safety Performance						Certificate	
Hydrology		M.S.					
Industrial Technology	B.S.Tech.						
Information Systems	B.S.Bus.						
Integrated Architecture and Design		M.S.					

Interdisciplinary Studies	B.A. B.S.	M.A. M.S.			Minor		
Interior Design	B.I.D.				Minor		
International Business					Minor		
International Political Economy					Minor		
International Studies	B.A.				Minor		
Journalism	B.A. B.S.				Minor		
Justice Studies					Minor		
Landscape Architecture	B.S.L.A.	M.L.A.			Minor		
Latin-American Studies	B.A.						
Law				J.D.			
Leadership						Certificate	
Management and Human Resources	B.S.Bus.						
Manufacturing Engineering					Minor		
Marketing	B.S.Bus.				Minor		
Materials Science and Engineering	B.S.M.S.E.	M.S.		Ph.D.	Minor		
Mathematics	B.S.	M.A.T. M.S.		Ph.D.	Minor		M.A.T.
Mechanical Engineering	B.S.M.E.	M.Engr. M.S.		Ph.D.	Minor		M.Engr.
Medical Education (WWAMI)							
Medical Technology	B.S.						
Metallurgical Engineering		M.S.			Minor		
Metallurgy		M.S.					
Microbiology	B.S.Microbiol.				Minor		
Microbiology, Molecular Biology and Biochemistry		M.S.		Ph.D.			
Military Science					Minor		
Modern Language Business	B.A.						
Molecular Biology and Biochemistry					Minor		
Molecular Biology and Biotechnology	B.S.M.B.B.						
Movement and Leisure Sciences		M.S.					
Music		M.A. M.Mus.			Minor		
Music: Applied Music	B.A. B.S.						
Music: Business	B.Mus.						
Music: Composition	B.Mus.						
Music: History and Literature	B.A. B.S.						
Music: Instrumental Performance	B.Mus.						
Music: Theory	B.A. B.S.						
Music: Vocal Performance	B.Mus.						
Music Education: Instrumental	B.Mus.						
Music Education: Vocal	B.Mus.						

Music Education: Vocal-Instrumental	B.Mus.						
Musical Theatre	B.F.A.						
Natural Resources		M.N.R M.S.		Ph.D.	Minor		M.N.R.
Natural Resources and Environmental Science		P.S.M.					
Natural Resource Conservation	B.S.Nat.Resc.Consv.						
Natural Resource Economics					Minor		
Naval Science					Minor		
Neuroscience		M.S.		Ph.D.			
Nuclear Criticality Safety						Certificate	
Nuclear Engineering		M.Engr. M.S.		Ph.D.			
Operations Management	B.S.Bus.						
Organizational Dynamics						Certificate	
Organizational Sciences	B.A. B.S.						
Outdoor Recreation Leadership					Minor		
Parks, Protected Areas, and Wilderness Conservation					Minor		
Philosophy	B.A. B.S.	M.A.			Minor		
Physical Education	B.S.Ed.	M.Ed.					M.Ed.
Physics	B.A. B.S.	M.S.		Ph.D.	Minor		
Plant Protection					Minor		
Plant Science		M.S.		Ph.D.			
Political Science	B.A. B.S.	M.A.		Ph.D.	Minor		
Power System Protection and Relaying						Certificate	Certificate
Process & Performance Excellence						Certificate	Certificate
Professional Ethics						Certificate	
Psychology	B.A. B.S.	M.S.			Minor		M.S.
Public Administration		M.P.A.					
Public Administration and Policy					Minor		
Public Relations	B.A. B.S.				Minor		
Rangeland Ecology and Management	B.S.Rangeland Ecol.-Mgt.				Minor		
Recreation	B.S.Rec.						
Rehabilitation Counseling Category R						Certificate	
Rehabilitation Counseling and Human Services		M.Ed. M.S.					
Religious Studies					Minor		
Renewable Materials	B.S.Renew.Mat.				Minor		
Reproductive Biology						Certificate	
Restoration Ecology						Certificate	Certificate
Secondary Education	B.S.Ed.						
Secure and Dependable Computing Systems						Certificate	Certificate

Semiconductor Theory and Devices						Certificate	
Sociology	B.A. B.S.				Minor		
Soil and Land Resources		M.S.		Ph.D.			
Soil Science					Minor		
Spanish	B.A.				Minor		
Special Education		M.Ed.					M.Ed.
Sport Science					Minor		
Statistical Science		M.S.					M.S.
Statistics					Minor	Certificate	
Structural Engineering						Certificate	Certificate
Studio Art and Design	B.F.A.						
Sustainable Crop and Landscape Systems	B.S.Ag.L.S.						
Sustainable Tourism and Leisure Enterprises					Minor		
Teaching English as a Second Language		M.A.			Minor		
Technical Theatre					Minor		
Technical Workforce Training						Certificate	
Technology Management		M.S.					M.S.
Theatre Arts	B.A. B.F.A. B.S.	M.F.A.			Minor		
Virtual Technology and Design	B.S.						
Water Resources		M.S.		Ph.D.			
Water Resources Engineering						Certificate	
Wildlife Resources	B.S.Wildl.Res.				Minor		
Women's and Gender Studies					Minor		
Writing					Minor		

STUDENT SERVICES

Admission to the University

Information about the undergraduate admission process and application forms are available from the Office of Admissions or online at www.uidaho.edu/admissions. Applicants for admission to the university must present satisfactory evidence of good character.

Application Procedures

All applicants for admission are required to submit:

1. The appropriate, completed application form (i.e., undergraduate, non-degree, or international). Failure to list all institutions attended or submission of inaccurate transcripts or other supporting documents as specified on the application form is considered fraud and subjects the applicant to immediate cancellation of his or her registration and/or dismissal from the university.
2. Official transcripts from the last high school and all colleges or universities attended. (See sections on first-year, transfer, non-degree, or international admission requirements for further details.) **Transcripts submitted in support of an application must be official and must be sent directly to the Office of Admissions by the issuing institution. Transcripts received become the property of the university and cannot be returned, copied, or forwarded.** Official transcripts must be signed by the registrar, superintendent, principal, or other authorized official of the school.
3. Applicants who are still in high school should apply during their senior year and should ask their high school counselor to send a copy of their current transcript and ACT or SAT scores to the Office of Admissions. If qualified, the applicant will be given an early notice of acceptance based on this record. Final acceptance will be granted when the university receives a final transcript mailed directly from the high school verifying that the applicant has graduated from a regionally accredited high school and has satisfied all admission requirements.
4. Scores from the College Board (SAT) or the American College Testing Program (ACT) if applying for admission to the freshman class. This includes transfer applicants with fewer than 14 transferable semester credits. International applicants are not required to submit ACT or SAT scores.
5. A non-refundable application fee of $60 for domestic applicants, $70 for international applicants, and $30 for applicants seeking readmission. Review of the application will be delayed until this fee is received. This fee is not charged to students applying for non-degree admission.

Application Deadlines. To provide time for evaluation and for notice of acceptance to reach the applicant, applications and credentials should be submitted to the Office of Admissions at least three weeks prior to the beginning of classes. International applicants have different deadlines (see "International Admission Requirements").

Notification of Admission. When all of an applicant's credentials have been received and he or she has been found eligible, a letter of acceptance will be sent. Acceptance is granted for a specified semester or summer session. If an applicant does not register for the term for which he or she applied and was accepted, it will be necessary to file a new application if entrance at a later time is desired.

First-Year Admission Requirements

First-year applicants graduating from high school prior to 1995 must meet the requirements in effect for their graduation year. A degree-seeking applicant applying directly from high school or with fewer than 14 semester credits of transferable college work earned after high school graduation must:

1. Submit ACT or SAT scores.
2. Graduate from a regionally accredited high school with a combination of cumulative GPA* and test scores** as defined in the following table:

High School GPA		ACT Composite		SAT Verbal + Math
3.00 - 4.00	And	Any test score	Or	Any test score
2.60 - 2.99	And	15 - 36	Or	740 - 1600
2.50 - 2.59	And	17 - 36	Or	830 - 1600
2.40 - 2.49	And	19 - 36	Or	910 - 1600
2.30 - 2.39	And	21 - 36	Or	990 - 1600
2.20 - 2.29	And	23 - 36	Or	1070 - 1600

** Unweighted*

*** Written sections of the test not required for admission.*

3. Complete specified high school courses with a minimum 2.00 GPA as listed below. A credit is defined as a course taken with a minimum of 70 hours of classroom instruction. A high school credit can be counted in only one category.
   a. **English**: A minimum of 8 credits (4 years), selected from composition and literature courses or courses that integrate composition, language, and literature.
   b. **Mathematics**: A minimum of 6 credits (3 years) including algebra I or applied math I, geometry or applied math II, and algebra II. An additional 2 credits are strongly recommended. Other courses may include probability, discrete math, analytic geometry, calculus, statistics, and trigonometry. **Four of the required mathematics credits must be taken in the 10th, 11th, and 12th grades.**
   c. **Social Science**: A minimum of 5 credits (2 ½ years), selected from American government (state and local), geography, U.S. history, world history, psychology, sociology, and economics (consumer economics courses approved by the Idaho State Board of Education may be counted toward this requirement).
   d. **Natural Science**: A minimum of 6 credits (3 years), selected from anatomy, biology, chemistry, geology, earth science, physical science, physiology, physics, zoology, and applied science courses jointly approved by the State Department of Education (SDOE) and the State Department of Professional-Technical Education (DSPTE) (maximum of two credits in this category). Ecology will count if SDOE approved. At least two credits must involve laboratory science experience. Note: A laboratory science course is defined as one in which at least one class period each week is devoted to providing students the opportunity to manipulate equipment, materials, or specimens; develop skills in observation and analysis; and discover, demonstrate, illustrate, or test scientific principles or concepts.
   e. **Humanities/Foreign Language**: A minimum of 2 credits (1 year), selected from literature, history, philosophy, foreign language, fine arts, and interdisciplinary humanities (related study of two or more of the traditional humanities disciplines). These courses should emphasize history, appreciation, theory, analysis, and/or critique. History courses beyond those required for state high school graduation may be counted. Foreign language study is strongly recommended. Native American language (five Idaho tribes) may meet this requirement if taught by certified high school faculty.
   f. **Other College Preparation**: A minimum of 3 credits (1 ½ years), of which no more than one credit may be in speech or debate (debate must be taught by a certified teacher). Other courses may include studio/performing arts (art, dance, drama, and music) or foreign language (beyond any foreign language credit applied in the humanities/foreign language category). May include no more than two credits in SDPTE-approved classes in agricultural science and technology, business and office education, health occupations education, family and consumer sciences education, occupational family and consumer science education, trade, industrial, and technical education, and individualized occupational training.

Applicants with fewer than 14 semester hours of transfer credit completed after high school graduation must meet both first-year and transfer admission requirements, including submission of the required test scores. (See "First-Year Admission Requirements" above.)

Students who have participated in running start, dual credit or accelerated learning programs who concurrently enroll in college credit courses while still in high school need to meet first-year requirements for admission and submit all of the appropriate high school documentation regardless of the number of transferable credits completed. See First-Year Admission Requirements.

If a first-year applicant does not qualify for regular admission or satisfies one of the criteria below, he or she may apply to the Admissions Committee for consideration (see Applying to the Admissions Committee).

1. Graduates from a non-accredited high school,
2. Is home schooled,
3. Obtains a General Educational Development (GED) certificate,
4. Deserves consideration because of special circumstances (i.e. disadvantaged or minority status, delayed entry, returning veteran, a talented student wishing to enter college early, and/or similar situations).

Transfer Admission Requirements

Applicants who have been enrolled in other colleges or universities accredited by one of the regional accrediting agencies, such as the Northwest Commission on Colleges and Universities, and who have satisfactorily accumulated 14 or more transferable credits after high school graduation may be admitted with advance standing as transfer students.

In addition to a completed undergraduate admission application form, transfer applicants must submit the following credentials to the Undergraduate Admissions Office:

1. Official transcripts from each college or university previously attended. To be considered official transcripts must be mailed directly to the University of Idaho Undergraduate Admissions Office by the issuing institution. **Transcripts received become the property of the university and cannot be returned, copied or forwarded.**
2. Applicants with fewer than 14 semester hours of transfer credit since high school graduation must meet both first-year and transfer admission requirements, including submission of the required test scores. (See "First-Year Admission Requirements," above.)
3. Students participating in running start, dual credit or accelerated learning programs who are concurrently enrolled in college credit courses while still attending high school need to meet first-year requirements for admission and submit all the appropriate high school documentation regardless of the number of transferable credits completed. See First-Year Admission Requirements.

Transfer students are selected from those applicants who present a cumulative grade-point average of at least 2.00 (C) for all college-level study attempted in all accredited colleges attended, exclusive of courses for which credits are not allowed. Students transferring from out-of-state schools into the College of Engineering must have a cumulative grade-point average of at least 2.80. Admission of transfer students to the landscape architecture program will be based on GPA (typically limited to 2.5 or above), test scores (ACT/SAT), and a portfolio with a letter of intent submitted to the department.

Students admitted to the University of Idaho from other collegiate educational institutions must have complied with the academic regulations for continuance in the institution(s) that they have attended in addition to the academic regulations that are applied to students enrolled in this institution.

An applicant with previous college work who does not qualify for regular admission may also seek provisional acceptance by applying to the Admissions Committee for consideration (see Applying to the Admissions Committee).

Readmission Requirements

Students returning after two years from last attendance must complete an Application for Readmission and submit a $30 application fee and official transcripts from all colleges or universities attended since last enrolling at UI. (Also see regulation B-1) Application forms are available online at www.uidaho.edu/admissions.

Returning students who were not in good academic standing when they left the university need to submit the above materials and follow the appropriate reinstatement procedures as stated in regulation L-4. Contact the Admissions Office for more information (208/885-6326, admissions@uidaho.edu).

Applying to the Admissions Committee

Applicants who do not qualify for admission to the University of Idaho may petition the Admissions Committee. Such applicants must submit to the Undergraduate Admissions Office an application for admission, the appropriate fee, all required official transcripts and test scores, three signed letters of recommendation, and a signed written statement of the student's objectives. This information should be received in the Undergraduate Admissions Office by August 1 for fall semester and December 1 for spring semester.

Students admitted through the Admissions Committee may be granted regular or provisional admission and will be subject to the regulations on academic probation, disqualification, and reinstatement (see regulation L). The Admissions Committee may assign provisionally admitted students a primary adviser. These students, while on provisional status, will need this adviser's approval before registering and when making any changes to their registration. They may be required to attend pre-academic planning within an office or a program of the University.

Freshmen admitted provisionally may change to regular admission status upon satisfactory completion of 14 credits, 12 of which must be in four different categories of the general education requirements (see regulation J-3). Regular admission status must be attained within three semesters or the student will be dismissed, subject to the Admissions Committee's appeal procedures.

Transfer students admitted provisionally must enroll on probation, meet all conditions imposed by the committee, and complete the first semester with at least a 2.00 grade-point average or they will be dismissed, subject to the Admissions Committee's appeal procedure.

Dual Credit

Dual credit is a program authorized by the Idaho State Legislature that provides qualified high school students with an opportunity to receive both high school and university credit for classes taken at the University of Idaho. High school students are eligible if they are at least 16 years old before the first day of class in any semester OR they have completed at least half the high school graduation requirements (generally high school juniors and seniors).

To apply for the dual credit program, students must complete the UI "Application and Registration for High School Dual Credit" form, available from the Office of Dual Credit (208/885-6237) or online at www.uidaho.edu/dualcredit. The completed application must be signed by the student's parent/guardian and high school principal or counselor. Students under age 16 must also obtain permission from the course instructor. Written notice of acceptance to the dual credit program and confirmation of registration will be provided to the student. Dual credit students are not eligible for federal or state financial aid programs.

Non-degree Admission Requirements

This category is for applicants who wish to enroll in courses pertaining to their personal interest and who do not want to work toward a formal degree at the University of Idaho. Application forms are available on-line at www.uidaho.edu/admissions.

A person admitted as a non-degree student who wants to take undergraduate courses must (1) be a high school graduate or have completed the GED; (2) understand that acceptance in this category does not constitute acceptance to a degree-granting program; (3) have sufficient educational background to qualify for the course or courses in which enrollment is sought; (4) accept personal responsibility for the applicability of credits earned while registered in this category; and (5) understand that students in this non-degree category cannot be considered for federal or state financial aid.

A student who has not yet graduated from high school or obtained a GED may be admitted as a non-degree student based on the dual credit policies of the University of Idaho (see Dual Credit).

A person admitted as a non-degree student who wants to take graduate-level courses must have an undergraduate degree from an accredited institution with a GPA of 3.00 or higher. Strict limitations exist for use of non-degree credits toward a graduate degree. Please refer to the College of Graduate Studies section.

Applicants whose native language is not English must provide proof of English proficiency.

A non-degree student may register for no more than 7 credits each semester and may complete a maximum of 32 semester credits. Students on official UI exchange programs and those in the dual credit program are not limited to 7 credits each semester. International exchange stu-

dents must take 12 or more credits. Upon completion of 32 semester credits, the student must either be admitted as a degree-seeking student at the University of Idaho or submit a letter of appeal to continue as a non-degree student. Permission of the instructor is required to enroll in courses numbered 500-600. Permission of the dean of the College of Law is required to enroll in courses numbered 800-999.

A non-degree student seeking admission as an undergraduate student or as a graduate student will remain classified as a non-degree student and will not be admitted to a program until all admission requirements have been met. Total credits and the UI GPA will be considered when applying for admission. Credit earned as a non-degree student will be moved to the undergraduate transcript upon admission as an undergraduate student unless the student specifically requests in writing to the Registrar's Office that all credits earned remain on the non-degree transcript.

Any deviations to the admission policy or credit limits will be acted on by the Director of Admissions and/or the Admissions Committee if the student wishes to enroll for undergraduate credit. Any deviations to the admission policy or credit limits will be acted on by the associate dean of the College of Graduate Studies and director of graduate admissions and/or the Graduate Petitions Committee if the student wishes to enroll for graduate credit.

International Admission Requirements

The University of Idaho encourages the application of qualified students from other nations to join its student community. Admission is dependent upon credentials which demonstrate a capacity to succeed academically at the university level. Application forms are available on-line at www.uidaho.edu/admissions.

In some instances, individual departmental requirements may be more rigorous than the general UI admission requirements. In those situations, final admission is based on the department's decision.

All international students who hold nonresident alien visas and who are pursuing a degree (i.e., matriculated) must hold a valid visa status which allows them to study full-time. Some of these visa categories include but are not limited to F-1, J-1, or H-4. The immigration status of international students must comply with the Department of Homeland Security (DHS) regulations. Individuals holding a U.S. tourist visa (VWP, B1, B2) cannot engage in a course of study in the U.S.

Deadlines for international applicants are as follows:

May 1:	If applying for fall semester
October 1:	If applying for spring semester
March 1:	If applying for summer term
Application Fee:	$70.00 (non-refundable)

International student applicants must submit:

A. Official transcripts or certified copies of certificate(s), diploma(s), or government examination report(s) received from any educational institution (high school, college, or university). These documents must be translated into English and must be sent by the certifying agency directly to the Undergraduate Admissions Office. Please note: If you are applying after the above deadlines, a professional credential evaluation of your academic transcript(s) is required. Please contact the Admissions Office or visit our website at www.uidaho.edu/admissions for a list of approved credential evaluation agencies.

B. Proof of English language proficiency. UI requires all applicants whose primary language is not English to demonstrate proficiency in the English language. Because most applicants report the test of English as a Foreign Language (TOEFL) score, UI bases its minimum English language proficiency requirements on the TOEFL. UI requires a minimum TOEFL score of 525 (paper test), or 70 (internet test). Equivalent measures of proficiency acceptable to UI include: SAT critical reading with a minimum score of 500; Cambridge International English Language Testing System (IELTS) with a minimum score of 6.0; Cambridge Certificate in Advanced English (CAE) with a pass; Cambridge Certificate of Proficiency in English (CPE) with a pass; Cambridge International "O" Levels with a pass; Michigan English Language Assessment Battery (MELAB) with a minimum score of 74. Exceptions to the minimum TOEFL requirement are made for (a) those from official English-speaking countries (b) those who have earned a degree from either a U.S. institution or an institution in another official English-speaking country (c) those who successfully complete the American Language and Culture Program at the University of Idaho or (d) based on the judgment of the Undergraduate Admissions Office, those who have successfully completed English courses at U.S. institutions. If required, the TOEFL score or an approved equivalent must be on file before the application for admission will be processed. UI does not accept scores that are more than two years old. Applicants wishing to take the MELAB on campus should contact the Counseling and Testing Center.

C. A completed "Certificate of Financial Responsibility" and all required supporting documentation as required by the Department of Homeland Security (DHS). International students must present to the Undergraduate Admissions Office satisfactory statements of finances and adequate proof of financial responsibility or sponsorship for all financial obligations while attending the university.

D. If the student is transferring to the University of Idaho from another U.S. college or university, the student must request that their SEVIS record be transferred to the University of Idaho before an I-20 or DS-2019 can be issued.

Undergraduate applicants who have had no previous work at the post-secondary level must have at least a 2.50 grade-point average (on a 4.0 scale) from secondary school and must also meet the criteria for being admitted to a university level institution in the applicant's home country in order to be considered for admission to the University of Idaho.

Undergraduate applicants who have attended a post-secondary-level institution must have completed at least 14 transferable semester credits at an accredited/recognized institution and must present a minimum grade-point average of 2.00 for all post-secondary work attempted. For admission into the College of Engineering, transfer students must have a cumulative grade-point average of at least 2.80. Other departments have additional requirements.

Students who have completed fewer than 14 transferable semester credits (post-secondary) must meet the secondary school GPA requirements in addition to the post-secondary transfer requirements.

Applicants who do not meet the minimum university admission requirements may apply to the Admissions Committee. Those applicants must submit an application for admission, the appropriate fee, all required official transcripts and official translations, test scores, three signed letters of recommendation, and a signed written statement of their educational objectives. All materials supporting the applicant's appeal must be submitted in English. This information should be received in the Undergraduate Admissions Office by *May 1* in order to be considered for the fall semester and *October 1* for the spring semester.

International Application Deadlines. To provide time for evaluation, for notice of admission status to reach the applicant, and for DHS requirements to be met for issuance of a student visa, applications and credentials should be received by the Undergraduate Admissions Office no later than the following dates: May 1 for the fall semester, October 1 for the spring semester, and March 1 for the summer session. Please note: If you are applying after the above deadlines, a professional credential evaluation of your academic transcript(s) is required. Please contact the admissions office or visit our website at www.uidaho.edu/admissions for a list of approved credential evaluation agencies.

International Conditional Admission. Conditional admission may be granted to applicants who qualify academically, but have not yet achieved UI's minimum English language proficiency requirement. Students granted conditional admission must enroll in UI's American Language and Culture Program (ALCP) to achieve the University's English language requirement. If the required level of language proficiency is not achieved within a two-year time period, applicants may petition to continue in the ALCP, and will need to submit a new application for admission to the academic department. Those who are granted conditional admission may qualify for concurrent enrollment.

International Student Concurrent Enrollment. Students admitted under conditional status and students enrolled in ALCP Level 5 or Level 6 may, in consultation with the coordinator of ALCP (to determine appropriate courses) and the course instructor, obtain approval to enroll as non-degree students for up to seven credits per semester of academic courses in addition to their ALCP courses. Students whose proficiency levels later prove inadequate for success in the academic courses may be withdrawn at the discretion of the academic course instructor and the ALCP coordinator. Once students achieve the necessary language qualification and pursue full admission to the university, they may apply credits of academic courses completed while in conditional status toward UI degree programs (other university restrictions may apply).

International Student Health and Accident Insurance. Supplemental health and accident insurance is mandatory for international students who hold nonresident alien visas and all accompanying dependents. Students must purchase and maintain the UI Student Health Insurance policy (SHIP) or document coverage of an equivalent policy with the Inter-

national Programs Office before classes begin. Failure to obtain and maintain the required insurance may subject students to sanctions, up to and including disenrollment. See information on insurance in the Student Services section.

Status. In order to pursue a degree, international students must be authorized in their current visa status. Immigration regulations require that international students holding F-1 (non-sponsored student) or J-1 (exchange visitor, student classification) visas be certified as full-time students during the academic year. Graduate students are thus required to take a minimum of nine credit hours. For all other visa holders, contact the International Programs Office for rules governing taking courses while in the U.S.

International Student Advisors. The international student advisors (ISAs) are involved with an international student's progress at every stage of the educational process. Once a student has been admitted, the ISA's provide general information about cultural adjustment and the educational system, as well as specific details regarding immigration regulations. Interested students may be paired with local host families for cultural activities through the university's International Friendship Association. All matters pertaining to a student's non-immigrant status are handled through the International Programs Office. A mandatory orientation before registration provides new students with assistance on initial questions. After this orientation, students are invited to visit the ISA's at any time with questions or concerns relating to immigration matters, education, finances, and cultural adjustment. The ISA's also serve as official liaisons between students and their consular offices or sponsoring agencies and the Department of Homeland Security.

International Student Fees. The University of Idaho's International Programs Office strives to provide new international students with the greatest assistance possible as they settle into their new homes in Moscow. As such, attendance at the multi-day international student orientation is required for all new students. This orientation will include a complete immigration workshop as well as offer several meals and other activities. There is a one-time cost of $65 for all new international students which will be added to their student account after they have attended this event. Any student who does not attend this orientation will be charged an additional $100 and be required to attend a late orientation session, for a total cost of $165. There will be a $50 per semester program cost to support international student programming at the university. Please note: These costs do not apply to students on UI exchange programs.

Evaluation of Transfer Credits

Upon admission to the University of Idaho and receipt of all official transcripts, college level courses completed at regionally accredited institutions are evaluated by the Registrar's Office. All credits accepted must be from regionally accredited American institutions or from non-US institutions recognized by the appropriate authorities in their respective countries. The UI degree audit web report details the applicability of the transfer courses to the core curriculum and to the student's program of study. The student's major department may further evaluate the applicability of the transfer courses to the student's selected program of study. Transfer credits are not included in the computation of a student's grade point average at the University of Idaho. Students with courses from educational sources that do not have regional accreditation may request to have the courses reviewed by the UI University Curriculum Committee for possible transfer to UI. Transfer credit from non-U.S. institutions is recorded with grades of pass or fail only. Accepted transfer credits are recorded on the student's permanent record after he or she is officially admitted. The UI database of courses transferable from accredited colleges and universities is on the web at www.uidaho.edu/transferguides/transferframes.html.

Credit for Military Service. Credit may be given for military courses according to recommendations in the American Council on Education (ACE) Service Guide. Credit is not awarded for the military occupation specialties or basic training courses. Credits awarded for military service are recorded with grade of pass or fail only and will appear on UI transcripts after the student is officially admitted. Official documentation is necessary and may include official DD214 papers, official certificates showing completion of courses, and/or an official DD295 Form. Official documents should be sent to the Office of the Registrar, PO Box 444260, Moscow, ID 83844-4260. (See regulation J-5-b for credit limitations.)

Vocational-Technical Credit. Credits earned in vocational-technical courses at accredited or state-approved vocational-technical schools may be the basis for waiving requirements or transferring credits to the University of Idaho in accordance with the following regulations:

1. When equivalence has been validated by the academic department and college that offer comparable subject matter, credits may be transferred for specific lower-division courses taken at the other institution.
2. In those cases in which comparable subject matter is not taught at the University of Idaho, the amount and characterization of the credits to be transferred is determined by the department and the dean of the college into which the student is transferring (for example, a block of credits in agriculture).
3. A grade of P (pass) is recorded for vocational-technical credits that are transferred.
4. Credits transferred from vocational-technical schools are included in the 48-credit limitation of extramural and similar credits that may be counted toward a baccalaureate degree (see regulation J-5-b).
5. The department into which the student transfers decides what curricular requirements, if any, will be waived (this determination may be made independently of the transfer of credits).
6. If there are any questions concerning the waiving of distributional requirements in the college into which the student transfers, such questions are to be resolved by the dean of that college.
7. For students seeking a liberal arts degree (i.e. B.A. or B.S.) in the College of Letters, Arts and Social Sciences, except as substitutions for equivalent courses offered by the student's academic department, no credits in vocational-technical courses taken at a vocational-technical school may be counted toward the 128 credit minimum required for a baccalaureate degree.

Transfer Credit Limitations. A maximum of 70 credits earned at junior or community colleges (or one-half of the total credits required for the student's intended baccalaureate degree program, whichever is the higher number) may be used toward the total net credit requirement of the intended baccalaureate degree program.

Credit Based on Test Scores. Credit is granted for specific scores on the following tests: ACT, SAT, COMPASS, AP (College Board Advanced Placement) and CLEP (College Level Examination Program). (See regulation I.)

General Education Requirements for Transfer Students

One of the requirements for a UI baccalaureate degree is fulfillment of the general-education requirements.

Students who transfer from an academic regionally accredited institution with an earned A.A. or A.S. degree have met the UI general-education requirements.

Students who transfer from any academic regionally accredited institution who have completed the equivalent of Idaho's State Board of Education general-education core (but have not completed an A.A. or A.S. degree) are not required to complete additional lower-division general-education core courses. However, these students must obtain certification of such completion from the transferring institution.

Students who enter UI without having completed an A.A. or A.S. or are not certified as having completed the equivalent of Idaho's State Board of Education general-education core have two options for fulfilling the general-education requirement. One option is to satisfy the requirement as outlined in regulation J-3 in this catalog. In this case, transfer credits are evaluated on a course-by-course basis for equivalency to courses specified in J-3, and deficiencies are made up by completing the necessary additional credits in non-duplicating courses listed in J-3.

The second option is to satisfy the general-education requirements established by the State Board of Education as set forth immediately below. In this case, transfer credits are evaluated by subject matter, rather than on a course-by-course basis, and deficiencies are made up by completing the necessary additional credits in non-duplicating courses listed in J-3. Courses that are approved to satisfy a core requirement can be used to satisfy those requirements even if the course is completed prior to being approved as a core course.

Alternative General Education Requirements for Transfer Students. A minimum of 36 credits is required from the following categories.

1. **Communications**: 1 course (2 credits). Coursework in this area enhances students' ability to communicate clearly, correctly, logically, and persuasively in spoken English. *Disciplines*: Speech, Rhetoric, and Debate
2. **English Composition**: 1 course (3-6 credits, depending on initial placement results). In meeting this goal, students must be able to express themselves in clear, logical, and grammatically correct writ-

ten English. Up to six (6) credits may be exempt by ACT, SAT, CLEP or other institution accepted testing procedure.

3. **Behavioral and Social Science**: 2 courses (6 credits). Coursework in this area provides instruction in: (1) the history and culture of civilization; (2) the ways political and/or economic organizations, structures and institutions function and influence thought and behavior; and (3) the scientific method as it applies to social science research. *Disciplines*: Anthropology, Economics, Geography, History, Political Science, Psychology and Sociology. Note: Courses must be distributed over two (2) different disciplines.
4. **Humanities, Fine Arts, and Foreign Language**: 2 courses (6 credits). Coursework in this area provides instruction in: (1) the creative process; (2) history and aesthetic principles of the fine arts; (3) philosophy and the arts as media for exploring the human condition and examining values; and (4) communication skills in a foreign language. *Disciplines*: Art, Philosophy, Literature, Music, Drama/Theater, and Foreign Languages.
5. **Natural Science**: 2 courses (7 credits). Coursework in this area: (1) provides an understanding of how the biological and physical sciences explain the natural world and (2) introduces the basic concepts and terminology of the natural sciences. *Disciplines*: Biology, Chemistry, Physical Geography, Geology, and Physics. Note: Courses may be distributed over two (2) different disciplines and must have at least one (1) accompanying laboratory experience.
6. **Mathematics**: 1 course (3 credits). Coursework in this area is intended to develop logical reasoning processes; skills in the use of space, numbers, symbols, and formulas; and the ability to apply mathematical skills to solve problems. *Disciplines*: College Algebra, Calculus, Finite Mathematics, and Statistics.

Graduate Admission to the University

The University of Idaho offers 31 doctoral programs, 5 specialist programs, and 87 master's programs. Graduate students are able to pursue degrees full- or part-time.

Graduate programs are offered through one or more of the following locations: Moscow, the UI's Centers in Boise, Coeur d'Alene, or Idaho Falls, as well as Engineering Outreach or other distance learning opportunities.

More than 600 faculty members participate in teaching and research. In addition to the accreditation of individual programs, the University is accredited by the Northwest Commission on Colleges and Universities.

Academic Requirements

Students who satisfy all criteria listed below will be considered for graduate admission to the University of Idaho:

1. Have a bachelor's degree from a college or university accredited by a regional accrediting association. If the degree is from a recognized but not regionally accredited institution, the application will be reviewed by the department and by the College of Graduate Studies.

   Or

   Have completed three years of undergraduate study in an international accredited institution which has a Memorandum of Understanding in place with the University of Idaho for a cooperative 3+2 program leading to a graduate degree. Cooperative 3+2 programs may have higher entrance requirements. (see COGS website for a list of 3+2 programs).
2. Have an undergraduate cumulative grade-point average of 3.00 or higher or an undergraduate grade-point average of 3.00 or higher for the last 60 semester credits (or 90 quarter credits),
3. Have maintained at least a 3.00 grade-point average in subsequent academic work if any, and
4. Have been reviewed and recommended for acceptance by the academic unit administering the program in which the student seeks to enroll. For individual academic unit admission requirements, please refer to individual department sections of this catalog or consult the Graduate Admissions website at www.uidaho.edu/gradadmissions.

The College of Graduate Studies requires all applicants to submit three letters of recommendation, a one to two page Statement of Career Objectives and a one to two page resume/curriculum vitae.

Students planning to apply for work leading to a graduate degree should contact the academic unit in which they wish to major **before** submitting the application for graduate admission. All admission recommendations are made at the academic until level with final admission decision made by the College of Graduate Studies. Admission is granted **only** to a specific degree and program and initial admission is granted for a specific semester.

Admission application files will be sent to the academic unit for review once all required documents have been received by the Graduate Admissions Office and the application fee has been paid. Students currently enrolled in a college or university need to submit a current transcript that shows all work completed thus far.

Priority Deadlines and Application Fees

Domestic Applicants	International Applicants
Fall- February 1	Fall-February 1
Spring-September 1	Spring-September 1
Summer-February 1	Summer-February 1
Non-refundable application fee	Non-refundable application fee
$60.00	$60.00

Priority consideration for awarding College of Graduate Studies tuition waivers will be given to applicants who meet the above deadlines. Individual academic units may have earlier admission deadlines especially for applicants seeking financial assistance or assistantships.

Some academic units do not admit graduate students for the spring and summer terms.

Applications received after the above deadlines but before the official start of the semester for which the applicant is seeking entry will be accepted only if additional students can be accommodated.

Please consult the graduate admissions website at www.uidaho.edu/gradadmissions for more information regarding academic departments' requirements and deadlines.

The Graduate Admissions Office is not authorized to release application information to anyone other than the applicant without written authorization. Please submit a Student Consent for Release Form (available on the admissions website) if you want someone specific to be given information regarding your admission status.

Graduate Record Examination

The Graduate Record Examination (GRE) is not a College of Graduate Studies requirement, but is required by some academic units. Official copies of GRE results must come from the Educational Testing Service. In rare cases, if the examination is many years out of date, students may be able to provide unofficial results of the examination with their admission application to facilitate evaluation and acceptance. GRE scores are retained by the student's academic unit.

Transcripts and Application for Graduate Admission

Students wishing to enter the College of Graduate Studies must submit a University of Idaho application for admission, three letters of recommendation from professional/academic references, a statement of career objectives, a vitae/resume, and have official transcripts sent directly from each institution attended to the Graduate Admissions Office. Transcripts become the property of the university and cannot be copied, returned, or forwarded.

The Test of English as a Foreign Language (TOEFL) is required for permanent residents and American citizens whose primary language is not English. Primary language is defined as native language or the official language used by the country of the applicants previous university level education.

Acceptance to the College of Graduate Studies

When admitted to the College of Graduate Studies, a graduate applicant will be issued a letter of acceptance. Acceptance is granted for a specified term. If an applicant does not register for the term desired or admitted but wishes to enroll in a future term, the applicant must submit a new application and fee to the Graduate Admissions Office. Application support materials (transcripts, letters of recommendation, resume/vitae, etc.) for applicants who are admitted but do not enroll, applications who are denied, or applicants who do not complete the admission process are retained for up to one year.

Graduate Admission Categories

Regular Enrollment. Regular enrollment for graduate study leading toward an advanced degree may be granted to a student who satisfies all of the following criteria: (1) has a bachelor's degree from a college or university accredited by a regionally accrediting association, (2) has an undergraduate cumulative grade-point average of 3.00 or higher or an

undergraduate grade-point average of 3.00 or higher for the last 60 semester credits (or 90 quarter credits), (3) has maintained at least a 3.00 grade-point average in subsequent academic work if any, and (4) has been reviewed and recommended for acceptance by the department administering the program in which the student seeks to enroll.

Students who are part of a recognized 3+2 program will be considered to be regularly admitted when they have met the specific admission requirements of COGS and any enhanced requirements outlined by the department which is offering the 3+2 program.

Provisional Enrollment. A student who is not eligible for regular enrollment may be considered for provisional enrollment (on the master's level only) if the academic unit administering the program recommends it, and if at least two of the following conditions are met: (1) the student's undergraduate GPA shows steady improvement; (2) the student has taken post-baccalaureate undergraduate level course work with A and/or B grades; (3) the student has achieved the 75th percentile on the relevant GRE or equivalent exam; (4) the student has been out of school for five or more years and has been working for at least one year in the field of the proposed graduate major. The academic unit specifies conditions that the student must fulfill in order to be advanced to regular enrollment. Provisional enrollment may also be granted to a student who is otherwise eligible for regular enrollment but whose prospective academic unit specifies conditions that he or she must first meet (i.e. achievement of specific grades and/or completion of specific course work). **International students who hold nonresident alien visas and students who are to be appointed to assistantships cannot be accepted in provisional enrollment.**

The admissions office notifies the student that he/she has been accepted for provisional enrollment. In the letter of acceptance, the following general and specific terms governing the student's provisional enrollment are stated:

1. A student may not remain in provisional enrollment status for more than 12 consecutive calendar months (a shorter period may be specified). Nor may a student remain in this status after completing nine credits (a lower credit limitation may be specified).
2. A student will be advanced from provisional to regular enrollment provided he or she maintains a GPA of at least 3.00 each semester while in the provisional status (a higher GPA may be specified), fulfills the conditions, if any, that were specified at the time of initial enrollment, and receives no incompletes.
3. A student who does not meet the stated conditions for advancement to regular enrollment within the specified time and credit limitations cannot continue in the College of Graduate Studies or enroll in 500-level courses and is subject to normal disqualification and reinstatement procedures.

It is the student's responsibility to be in touch with the administrative unit regarding his or her progress toward meeting the conditions for advancement.

The conditions specified for a student's advancement to regular enrollment are established at the time of his or her acceptance and must not be changed (i.e., either strengthened or relaxed) thereafter.

Academic units need not require a student to make up ALL of his or her academic deficiencies while in provisional enrollment. Performance on a limited selection of them should suffice to demonstrate whether or not the student has the ability to do satisfactory graduate work. Remaining deficiencies, if any, can be made up after the student is in regular enrollment. The academic unit must be sure that any courses the student is required to take while in provisional enrollment will, in fact, be offered during that period.

Unclassified Enrollment. Unclassified enrollment is for students who do not wish to work for a graduate degree and is not to be used as a probationary category. Admission as an unclassified student does not guarantee subsequent transfer to a degree program. This enrollment category is not open to international students who hold nonresident alien visas or to students who are to be appointed to assistantships. Students on Unclassified enrollment are not eligible for Title IV financial aid.

Non-degree Student. Refer to the "Non-Degree Admission Requirements" section above for a full description of this classification. Non-degree students are not admitted to the College of Graduate Studies. They may, however, take graduate courses with permission of the instructor and the Dean of the College of Graduate Studies provided that they have earned a baccalaureate degree with an overall 3.00 GPA. Non-degree students are not eligible for Title IV financial aid. If a non-degree student receives a grade of C, D, or F in a 500-level course, he/she loses the privilege of taking more 500-level courses.

Concurrent or Multiple Level Curricula for Graduate Students. A graduate student may simultaneously enroll in an undergraduate, graduate or law program. The "Course Level Adjustment" form indicating course use (graduate, undergraduate or law) is available and must be filed each semester or session by the 10th day of classes. Please note that students seeking a degree at more than one level will need to officially apply for admission at the appropriate level. Placing courses from the undergraduate level to the graduate level or graduate level to the undergraduate level, when no degree is sought, does not require admission to the level where the course will be placed. Student fees for the courses are determined by the student's primary level; however, an undergraduate will be charged graduate fees for any courses placed on the graduate transcript.

Seniors in 500-Level Courses. A senior who has a cumulative grade-point average of 3.00 or higher may enroll in 500-level courses. The course(s) may be placed on either the undergraduate or the graduate transcript but will automatically be placed on the undergraduate transcript unless the student completes a "Course Level Adjustment" form indicating the appropriate transcript placement for the course. The placing of courses on a graduate transcript does not admit or guarantee subsequent admission of such students to the Graduate College. The deadline for filing the "Course Level Adjustment" form is the tenth day of the class for that semester or session. All courses placed on a graduate transcript, regardless of the course level, will be assessed graduate fees.

Returning Students. A graduate student who has completed one degree and wishes to enroll in further courses must file a "Change of Curriculum" form with the Graduate Studies Office. A returning graduate student who has not enrolled within two years of the term in which he or she wishes to register must file an Application for Readmission with the Graduate Admissions Office (see B-1). Readmission must be approved by the department in whose degree program the returning graduate student wishes to enroll. If the department denies the readmission, the student will be moved automatically into Unclassified enrollment status.

Graduate Admission of International Students

The College of Graduate Studies welcomes applications from qualified students from other countries. International applicants are expected to have qualifications equivalent to those required of other graduate students.

Credentials. Official transcripts and/or certified copies of the certificate, diploma, or government examination report received on completion of any college or university course work must be delivered directly to the Graduate Admissions Office in a sealed envelope. The credentials must be originals obtained from the certifying agency. The credentials must be translated into English if written in a foreign language.

English Language Proficiency. UI requires all applicants whose primary language is not English to demonstrate proficiency in the English language. Because most applicants report the Test of English as a Foreign Language (TOEFL) score, UI bases its minimum English language proficiency requirements on the TOEFL. UI College of Graduate Studies requires a minimum TOEFL score of 550/79 (paper or internet based test). Equivalent measures of proficiency acceptable to UI include the MELAB (77), the Cambridge IELTS (6.5). It is important to verify the departmental TOEFL score requirement as many departments require a score higher than indicated above. Exceptions to the minimum TOEFL requirement are made for (a) those from official English-speaking countries, (b) those who have earned a degree from either a U.S. institution, or (c) based on the judgment of the Graduate Admissions Office, those who have earned at least 12 credits, with a grade C or better, in university-level English courses from a U.S. institution. UI does not accept scores that are more than two years old.

Deferred Admission. Deferred admission may be granted to applicants who qualify academically, but who have not yet met UI's minimum English language proficiency requirement. In deferred admission status, students enroll in UI's American Language and Culture Program (ALCP) to achieve the academic units English language requirement prior to being granted full admission and commencing their degree programs. Please note that not all academic units grant deferred admission. International students in a 3+2 program are not eligible for deferred admission.

Concurrent Enrollment as an Option of Deferred Admission. Students enrolled in ALCP Level 5 or Level 6 may, in consultation with the coordinator of ALCP and the course instructor, obtain approval to enroll as non-degree students for up to 7 credits per semester of academic courses in addition to their full-time ALCP courses. Students whose proficiency levels later prove inadequate for success in the academic courses may be withdrawn at the discretion of the academic course instructor and the

ALCP coordinator. Once students achieve the necessary language qualification and gain full admission to the university, they may apply the credits of academic courses completed while in deferred admission status toward UI degree programs (other university and College of Graduate Studies restrictions may apply).

Financial Statement. As required by the U.S. Immigration and Customs Enforcement (USICE), all international students who hold or intend to hold nonresident alien visas must present to the Graduate Admissions Office satisfactory statements of finances and adequate proof of financial responsibility or sponsorship to cover all financial obligations while attending the University of Idaho.

Health and Accident Insurance. Supplemental health and accident insurance is mandatory for international students who hold nonresident alien visas and all accompanying dependents. Students must purchase and maintain the UI health insurance (SHIP) policy or document coverage of an equivalent policy with the International Programs Office before they are allowed to register or attend classes. Failure to obtain and maintain the required insurance may subject students to sanctions, up to and including disenrollment. See information on insurance in the Student Services section.

Status. In order to pursue a degree, international students must be authorized in their current visa status. Immigration regulations require that international students holding F-1 or J-1 student visas be certified as full-time students during the academic year. F-1 graduate students are required to be enrolled in 9 credit hours and are allowed to take up to 3 credits of on-line coursework towards this requirement. J-1 visa holders are also required to enroll in 9 credit hours, but are not allowed to take online classes toward the 9-credit requirement. Other visa categories may be eligible to study in the U.S. Students who do not hold an F-1 or J-1 student status should contact the International Programs Office for rules governing enrollment while in the U.S.

Deadline for Application for Admission. To provide time for evaluation, for notice of admission status to reach the applicant, and for USICE requirements to be met for issuance of a student visa, applications and credentials should be received by the Graduate Admissions Office no later than the following dates: for fall semester, May 1; for spring semester, October 1; for summer session, March 15. (Please note: The priority application deadlines are February 1 for fall semester and summer sessions and September 1 for spring semester. Applicants who meet the priority deadline will be given early consideration for College of Graduate Studies and departmental tuition support.)

International Student Advisors. The international student advisors (ISAs) are involved with an international student's progress at every stage of the educational process. Once a student has been admitted, the ISAs provide general information about cultural adjustment and the educational system, as well as specific details about other matters. Community contacts may be arranged, if requested. All matters pertaining to a student's non-immigrant status with Department of Homeland Security (DHS) are handled through the International Programs Office. A mandatory orientation before registration provides new students with assistance on initial questions. After this orientation, students are invited to visit the ISAs at any time with questions or concerns relating to immigration matters, education, finances, and cultural adjustment. The ISAs also serve as official liaisons between students and their consular offices or sponsoring agencies.

Fees and Expenses

The rates and procedures in this section are subject to change without notice.

The Board of Regent's of the University of Idaho approves rate changes each April. For the most current rate information, go to www.uidaho.edu/controller/studentaccounts.

Students are encouraged to register early for classes at the University of Idaho. Information about the registration process is available from the Registrar's Office at www.uidaho.edu/registrar or 208-885-6731. Information regarding fees is available from the Student Accounts Office at www.uidaho.edu/controller/studentaccounts or 208-885-7447.

Annual Expenses

Estimated annual expenses include the cost of undergraduate student fees, nonresident tuition (if applicable), grad/law/architecture fees (if applicable), room and board, books, and miscellaneous costs (clothing, laundry, transportation, incidentals, social/recreational expenses, fraternal affiliations, and personal needs). For an estimated cost of attendance, see the Financial Aid website, www.students.uidaho.edu/finaid.

Students can choose to pay fees in installments. Payment information is shown in the "Deferred Payment of Fees" section further on in this catalog section. Personal checks, bank drafts, money orders, travelers checks, Discover, VISA, and MasterCard are accepted by the university.

Full/Part-Time Registration Fees

Architecture Dedicated Fee. The State Board of Education granted approval to charge a professional fee to all College of Art & Architecture students on a semester basis over and above general tuition and fees. The fee is levied in addition to undergraduate student fees and, if applicable, nonresident tuition. Students carrying 10 or more credits pay the full time Professional fee. Students with 9 credits or less pay the part-time Professional fee. The Professional fee is used to directly support technology and computing for students and faculty, supplement budgets, hire temporary faculty, support the college's visual and design resource centers, cover professional accreditation costs, and partially support student field trips, guest lecturers and student organizations. See the Student Accounts website, www.uidaho.edu/controller/studentaccounts, for current fee rates.

Graduate Tuition Fee. Graduate students pay this fee and, if applicable, nonresident tuition. Students carrying nine or more credits will pay the full-time Graduate Tuition fee; students carrying eight credits or less pay the part-time Graduate Tuition fee. See the Student Accounts website, www.uidaho.edu/controller/studentaccounts, for current fee rates.

Law Fee. Law students pay the graduate fee and the law fee in addition to the undergraduate student fee and, if applicable, nonresident tuition. Students carrying ten or more credits will pay the full-time Law fee; students carrying nine credits or less pay the part-time Law fee. See the Student Accounts website, www.uidaho.edu/controller/studentaccounts, for current fee rates.

Undergraduate Student Fee. Unless exempted, students carrying 10 or more credits and all research/instructional assistants (including faculty-staff spouses) on full appointment pay the full-time undergraduate student fees. Students carrying nine credits or less pay the part-time undergraduate student fees. Undergraduate and non-degree students enrolling in graduate courses must also pay the appropriate graduate fee. In addition, students in certain divisions may need to pay special fees (see "Special Fees" below). See the Student Accounts website, www.uidaho.edu/controller/studentaccounts, for current fee rates.

Payment of full-time fees covers most laboratory and course charges and entitles the student to membership in the Associated Students University of Idaho (ASUI), to a nontransferable student identification card, to the services of the Alumni Office, and to the other services and facilities maintained by the university for the benefit of the students, subject to charges for special services and the payment of the special fees listed below. No reduction in fees can be made for students who may not want to use any part of these services.

WUE Fee. The Western Undergraduate Exchange Program fee is equal to 50 percent of the institution's full-time undergraduate student fee. This fee is in addition to the undergraduate student fees; nonresident tuition is not assessed to WUE students. See the Student Accounts website, www.uidaho.edu/controller/studentaccounts, for current fee rates.

Nonresident Tuition Fee. Students who are classified as nonresidents of the state of Idaho pay this fee in addition to the student tuition and fees. Undergraduate students carrying ten or more credits will pay the full-time nonresident tuition. Graduate students carrying nine or more credits will pay the full-time nonresident tuition. Undergraduate students carrying nine credits or less pay the part-time nonresident fee. Graduate students carrying eight credits or less pay the part-time nonresident fee, see the Student Accounts website, www.uidaho.edu/controller/studentaccounts, for current fee rates. For tuition purposes, a student may be classified as an Idaho resident by meeting one or more of the following qualifications:

A. Any student who has one (1) or more parent or parents or court-appointed guardians who are domiciled in the state of Idaho, and the parent, parents or guardians provide at least fifty percent (50%) of the student's support. Domicile, as used in this section, means that individual's true, fixed and permanent home and place of habitation. It is the place where that individual intends to remain, and to which that individual expects to return when that individual leaves without intending to establish a new domicile elsewhere. To qualify under this section, the parent, parents or guardian must have maintained a bona fide domicile in the state of Idaho for at least twelve (12) months prior to the opening day of the term for which the student matriculates.

B. Any student, who receives less than fifty percent (50%) of the student's support from a parent, parents or legal guardians and who has continuously resided and maintained a bona fide domicile in the state of Idaho primarily for purposes other than education for twelve (12) months next preceding the opening day of the term during which the student proposes to attend the college or university. The term "continuously resided" means physical presence in the state for twelve (12) consecutive months. Absence from the state for normal vacations, family travel, work assignments, short-term military training, and similar occasions totaling not more than thirty (30) days during the twelve (12) month qualifying period, in and of itself, will not be regarded as negating the continuous residence of the individual. "Support" means financial support given to the student during the twelve (12) months preceding the opening date of the term for which resident status is requested.

C. Unless disqualified as a "nonresident student", any student who is a graduate of an accredited secondary school in the state of Idaho, and who matriculates at a college or university in the state of Idaho during the term immediately following such graduation regardless of the residence of the student's parent or guardian.

D. The spouse of a person who is classified, or is eligible for classification, as a resident of the state of Idaho for the purposes of attending a college or university. Proof of marriage, usually by marriage certificate, is required, as is proof of resident status in the form of an affidavit.

E. A member of the armed forces of the United States stationed in the state of Idaho on military orders. "Armed forces" means the United States Army, Navy, Air Force, Marine Corps, and Coast Guard. It does not include National Guard from states other than Idaho and other reserve forces. The University may request a certified copy of the military orders.

F. An officer or enlisted member of the Idaho National Guard.

G. A student whose parent or guardian is a member of the armed forces and stationed in the state of Idaho on military orders and who receives fifty percent (50%) or more of support from parents or legal guardians. The student, while in continuous attendance, shall not lose that residence when the student's parent or guardian is transferred on military orders. "Armed forces" means the United States Army, Navy, Air Force, Marine Corps, and Coast Guard. It does not include National Guard from states other than Idaho and other reserve forces. "Support" means financial support given to the student during the twelve (12) months preceding the opening date of the term for which resident status is requested.

H. The student is separated under honorable conditions from the Armed Forces after at least two years of service and at the time of separation designated the state of Idaho as their intended domicile or indicated Idaho as their home of record of service; and will be entering the university within one year of the date of separation, or who moves to Idaho for the purpose of establishing domicile; provided however, to maintain status as a resident student, such person must actively establish domicile in Idaho within one (1) year of matriculation in a public institution of higher education in Idaho. The dependent of a person who qualifies as a resident student under this paragraph and who receives at least fifty percent (50%) support from such person shall also be a resident student.

I. Any individual who has been domiciled in the state of Idaho, has qualified and would otherwise be qualified under the provisions of this statute and who is away from the state for a period of less than thirty (30) months and has not established legal residence elsewhere provided a twelve (12) month period of continuous residence has been established immediately prior to departure.

J. A student who is a member of any of the following Idaho Native American Indian tribes, regardless of current domicile, shall be considered an Idaho state resident for purposes of tuition at institutions of higher education: members of the following Idaho Native American Indian tribes, whose traditional and customary tribal boundaries included portions of the state of Idaho, or whose Indian tribe was granted reserved lands within the state of Idaho: (i) Coeur d'Alene tribe; (ii) Shoshone-Paiute tribes; (iii) Nez Perce tribe; (iv) Shoshone-Bannock tribes; (v) Kootenai tribe

A "nonresident student" is a student who does not qualify as a "resident student" under the provisions above, and shall include:

1. A student attending an institution in the state with the aid of financial assistance provided by another state or governmental unit or agency thereof, such nonresidency continuing for one year after the completion of the semester for which such assistance is last provided.
2. A person who is not a U.S. citizen, who does not have permanent or temporary resident status or does not hold "refugee-parolee" or "conditional entrant" status with U.S. Citizenship and Immigration Services or is not otherwise permanently residing in the United States under color of the law and who does not also meet and comply with all applicable requirements of the definition of resident status.

For students who apply for special graduate and professional programs including, but not limited to the WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) Regional Medical Program, the WICHE Student Exchange Programs, Creighton University School of Dental Science, the University of Utah College of Medicine, and the Washington, Oregon, Idaho (WOI) Regional Program in Veterinary Medical Education, no applicant shall be certified or otherwise designated as a beneficiary of such special program who has not been a resident of the state of Idaho for at least one (1) calendar year previous to the application date. For purposes of this section, the requirement of "at least one calendar year" means a period of twelve (12) consecutive months of continuous residency consistent with the requirements of Section 33-3717, Idaho Code, immediately prior to the date of application.

Students currently enrolled at UI may obtain information and interpretation of the residency regulations from the Registrar's Office. Students who have not yet enrolled may contact the Admissions Office.

Special Fees

Drop Fee ($5). This fee is charged for each course dropped with a W after the tenth day of the semester, excluding full semester withdrawals.

Admission Application Fee. For information concerning the application fee, see the section headed Application Procedures.

Audit Fee. Students who audit a course pay this fee in addition to any special course fee unless the student has already paid the full-time student fees for that term. This fee is equivalent to the Part-Time Fee. See the Student Accounts website, www.uidaho.edu/controller/studentaccounts, for current fee rates.

Graduation Fee ($25). This fee is payable at the time the student applies for each degree to be awarded by the university. An additional late service charge of $35 is charged for each application filed after the date listed in the registration calendar.

Extramural Credit Application Fee ($35). Extramural Credit Fee ($25 per credit granted). Students seeking extramural credits earned under regulation I-2 must pay the application fee at the time of application. The per-credit fee is charged to the student's account at the time the credit is granted.

Lab and Course Fees. Special fees are charged for certain courses. Examples include the College of Letters, Arts and Social Sciences that charge a general shop fee and the Movement Sciences department that charges special fees for physical education courses. Special Course fees are noted in the Comment section of the course information in the on line Class Schedule.

Late Registration / Late Payment Service Charge ($75). Students who register after the first day of classes or pay after the first day of classes must pay this fee.

Late Payment Fee ($100). Students who register or pay after the tenth day of classes must pay this fee in addition to the Late Registration/Late Payment Service Charge. Students who have not paid by the last day of month in September, October, or November for Fall and February, March, or April for Spring will be charged an additional $100 late payment fee each month the balance is not paid in full.

Music Special Fees. All students who enroll in individual instruction pay a course fee. Additionally, fees are charged for some required courses within the music major curriculum. For current fees, consult the School of Music (208-885-6231) or see the Class Schedule.

Petition Fee ($10). This fee is charged for each petition submitted to the Academic Petitions Committee or Graduate Council.

Publication and Microfilming Fee ($65). At the time the application for the degree is filed, every doctoral candidate pays this fee for the publication of the dissertation abstract and for the microfilming of the dissertation.

Registration Fee for Employee Dependents. Under the Employee Dependent Educational Tuition and Fee Reduction Program (UI *Faculty-Staff Handbook* Section 3780), dependents of eligible employees enrolled in University of Idaho undergraduate or graduate academic credit courses may receive a 50% reduction in residential (in-state) student tuition and

fees. See www.webs.uidaho.edu/fsh/3780.htm for additional information and eligibility requirements.

Registration Fee for Senior Scholars. Idaho residents 60 years of age and older are permitted to enroll in courses, on a space-available basis. The fee is $20 plus $5 per credit. Senior scholars are enrolled after the regular registration days. In addition to this fee, special course fees for specific courses are also assessed (see Lab and Course Fees). Registration under this program entitles the student to instruction and library privileges only, and does not include insurance, student health services, ASUI membership, or free admission to athletic events. Seniors who are graduate or instructional assistants may not use the Senior Scholar waiver.

Registration Fee for Staff. Under the Employee Educational Assistance Program (UI *Faculty-Staff Handbook* Sections 3740 and 3760), salaried UI employees on regular appointment who work at least half time (including those on official leave) may enroll in the university at the reduced rate of $20 plus $5 per credit. The Educational Fee and Tuition Reduction Program is a qualified reduction plan under Section 117 of the *Internal Revenue Code*. Under this program, fees waived for enrollment in undergraduate courses (except graduate students in undergraduate courses) are exempt from federal, state, and social security taxes; fees waived for graduate level courses or for graduate students in any courses are subject to tax. The tax is payable by the employee and deductions are made from the employee's paycheck by semester.

Registration Fee for Staff Spouse. To be eligible for this registration fee, the employee must be on a board appointment at least half time. The fee rate is $20 plus $5 per credit. Spouses who are graduate or instructional assistants may not use a staff spouse waiver. The value of waived fees received for graduate work is taxable income to the employee (refer to information under the staff registration fee regarding the *Internal Revenue Code*).

Student Health Service Fees. Student Health Services provide a broad spectrum of outpatient medical care services. Please visit the Student Health Services website, www.health.uidaho.edu for hours of operation, health insurance plans, scope of services, and fee for services. Student health insurance fees are also available on the Student Accounts website, www.uidaho.edu/controller/studentaccounts.

Thesis/Dissertation Binding Fee ($23.00). At the time the application for the degree is filed, every candidate for an advanced degree who is submitting a thesis or dissertation (including such terminal projects as musical compositions) pays this fee to have two copies of the document bound for the library.

Transcript Fee ($7). Official transcripts may be ordered at a cost of $7 per copy. For instructions on ordering transcripts, see the Registrar's website, www.uidaho.edu/registrar.

WWAMI Fee. First-year students who enroll in the WWAMI Medical Education Program pay this fee in addition to the undergraduate student fee. For the current WWAMI fee, contact the Student Accounts Office (208/885-7447).

Deferred Payment of Fees

The University of Idaho offers payment plans to students. Fees, tuition, on-campus housing, meal plans, and SHIP charges are eligible to be included in a payment plan. Payment plans require an enrollment fee at the time you start the plan. Please contact Student Accounts for additional information at (208) 885-6760 or go to www.uidaho.edu/controller/studentaccounts.

Refund of Fees

Students who withdraw in accordance with the regulations governing withdrawals are entitled to the following refund of tuition and fees. Refunds are calculated on total fees and tuition charged. Refunds are based on the official date of withdrawal, which is considered to be the date the student begins the withdrawal process. Reduced fees paid by individuals using the employee/employee spouse educational benefit or senior citizen waiver benefit are not eligible for refunds. Special lab and course fees are non-refundable after the second week of class unless otherwise specified by the department charging the fee. All requests for refund of fees must be formally initiated in the semester in which the fees (charges) were incurred. Applicable federal Title IV financial aid funds will be returned to the Department of Education based on statutory regulations.

1. When the official date of withdrawal is prior to or on the first day of classes, 100 percent of fee and tuition charges are refunded.
2. When the official date of withdrawal is after the first day of classes but before the close of the second week of classes, 100 percent of fee and tuition charges are refunded.
3. When the official date of withdrawal is after the close of the second week of classes, no refund is given.

University Housing

University Housing at the University of Idaho offers on-campus residence hall and apartment living options for students at all levels. Please visit the University Housing website at www.uidaho.edu/universityhousing for further information.

Residence Halls

University Housing is an approved live on option and offers a variety of living communities for first-year and upper level students. Please visit the University Housing website at www.uidaho.edu/universityhousing for a complete listing of options and instructions on how to apply.

Please note that the University of Idaho has a first-year student live on requirement. For information on this policy please contact the Dean of Students Office at (208) 885-6757.

Living and Learning Communities

The Living and Learning Communities (LLC) are designed for upper division students who want a hybrid of a residence hall and an apartment. The buildings include a full kitchen, community living rooms, dining rooms, dens with a fireplace and study areas, so students can relax or form instant study groups. The suite layout of the rooms houses two to five people per suite. The suite offers a common living area with air conditioning, small kitchenette with sink, refrigerator and microwave, a shared bathroom and single, double, super double or super single rooms. Some unique themed communities in the Residence Halls and the LLC include:

Graduate Student Housing

University Housing offers many living options in both apartments and residence halls for graduate students. Please visit the University Housing website at www.uidaho.edu/universityhousing for more information.

Apartment Housing

For married students, students with children, graduate students, and students over 25 years old, the university offers affordable housing options. For more detailed information about living in on-campus apartment housing please visit the Housing website at www.uidaho.edu/universityhousing.

Elmwood

University Housing offers our Elmwood apartments to full time students who are 19 years of age or older. Please visit the University Housing website at www.uidaho.edu/universityhousing for further information.

Off-Campus Living

Moscow offers a variety of off-campus housing options. Information sources for off-campus housing include: (1) the Off-Campus Housing List, published weekly by ASUI (UI's student government) and available at the Student Union Building, phone 208/885-6331, and (2) Moscow's daily paper, the Moscow-Pullman Daily News, phone 208/882-5561.

Quality Summer Conferences

The university houses numerous summer camps and conferences, bringing many participants to campus each year. Contact Conferences, Events, and Information Services at 208/885-6662 for more information on conference services.

Sororities

Nine national sororities have chapters on the University of Idaho campus. Each chapter owns and operates its own chapter house. These are: Alpha Gamma Delta, Alpha Phi, Delta Delta Delta, Delta Gamma, Gamma Phi Beta, Kappa Alpha Theta, Kappa Delta, Kappa Kappa Gamma, and Pi Beta Phi. The average cost for living in a sorority is $2,860 a semester, which includes charges for room, board, activity fees.

The Panhellenic Council, which is the representative body of the nine sororities, coordinates intersorority activities, formulates policies, and facilitates the Formal and Informal Sorority Recruitment processes.

Arrangements for Sorority Living. Membership in a sorority is done by mutual selection, where sororities extend invitations to potential members who they are interested in asking to join their house. Women who are interested in sorority living visit the Greek Life website at www.uidaho.edu/greeklife. The selection of members in each sorority is made primarily during Formal Sorority Membership Recruitment, which is held in August before the beginning of the fall semester.

The Sorority Recruitment registration deadline is August 1 and the registration form can be found online at www.uidaho.edu/greeklife. Formal Recruitment is not the only opportunity to become a member of a sorority, yet it is the only time when Recruitment is coordinated by Panhellenic Council and all sororities participate. If you are unable to participate in Formal Sorority Membership Recruitment but are interested in sorority membership, contact the Dean of Students Office, 208/885-6757; or greek@uidaho.edu.

Fraternities

Sixteen national fraternities are maintained on the University of Idaho campus. These are: Alpha Gamma Rho, Alpha Kappa Lambda, Alpha Tau Omega, Beta Theta Pi, Delta Chi, Delta Sigma Phi, Delta Tau Delta, FarmHouse, Kappa Sigma, Phi Delta Theta, Phi Gamma Delta, Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Sigma Phi Epsilon and Theta Chi. Each of these groups is represented in the Interfraternity Council, which unites them in common service to the university and promotes a spirit of cooperation and self-government among fraternities.

Membership in a fraternity is done by mutual selection, where the fraternities extend invitations to join and potential members either accept or decline these invitations. The membership selection process is facilitated by the Interfraternity Council. The average cost for living in a fraternity is $2,500 a semester, which includes room, board, and activity fees.

Arrangement for Fraternity Living. Anyone interested in fraternity living should call 800/874-7335 or visit the website at www.uidaho.edu/greeklife. Those who indicate an interest in fraternity living will receive information from the various fraternities during the summer before they arrive at the university. Fraternity Formal Recruitment is held before the beginning of the fall semester. If you are unable to participate in Formal Recruitment but are interested in fraternity membership, contact the Dean of Students Office, 208/885-6757; or greek@uidaho.edu.

Multi-Cultural Fraternities and Sororities

The University of Idaho has three multicultural fraternities and three multicultural sororities. These are: Sigma Lambda Beta, Omega Delta Phi, Gamma Alpha Omega, Lambda Theta Alpha, Lambda Theta Phi, and Sigma Lambda Gamma colony. Multicultural fraternities and sororities at the University of Idaho do have chapter houses and are open to all races and cultural backgrounds.

Membership is by invitation and takes place after school begins in the fall. If you are interested in joining you can call 208-885-6757 or e-mail greek@uidaho.edu.

The Multicultural Greek Council is a representative body of the current multicultural Greek organizations. The council coordinates recruitment activities, formulates policies, and provides community service opportunities. For more information visit our website at www.uidaho.edu/greeklife.

Student Services

Academic Advising Center

Teaching Learning Center 231, 138; 208/885-9831; www.uidaho.edu/advising.

At the University of Idaho, academic advising is performed at the department- or college-level. Students are assigned an advisor by the college or department for the major(s) as a student has declared. The Academic Advising Center (AAC) serves as a clearinghouse for academic advising information and is a point of contact where new and continuing students receive help in finding their way to the appropriate college and department advisors.

The AAC is also a center for delivery of development programs on academic advising for faculty and staff advisors and is the primary site for advising of BGS (Bachelor of General Studies) majors at the freshman and sophomore levels. AAC staff can assist students considering a change of major and consult with advisors and students who have questions regarding general education requirements.

Academic Support & Access Programs (ASAP)

Idaho Commons 306; 208/885-6307;asap@uidaho.edu www.uidaho.edu/studentaffairs/asap

The mission of ASAP is to help students achieve their full potential by providing a seamless array of academic and access services in a student-focused, supportive environment.

Tutoring and College Success tutoring@uidaho.edu Tutoring and College Succes(TCS) provides to all University Students a wide variety of no-cost academic services: small group tutoring created in response to student requests and based on tutor availability, individual learning assistance, two-credit College Success Strategies course(s) through Interdisciplinary Studies (INTR), living group presentations arranged by request, and an array of study skill hand-outs and reference books, and on-line resources.

Student Support Services – a TRIO program. sss@uidaho.edu Student Support Services (SSS), an academic support program, assists 200 participating students each year to (1) identify and pursue their educational goals, (2) establish, maintain, or improve their academic performance, and (3) work through the challenges of university life.

The Student Support Services program offers participants individualized tutoring in most subject areas, educational planning and goal setting, academic advising, and focused learning and study skill development. SSS also provides personal support. This support is particularly helpful for students with specific needs (e.g., delayed entry or re-entry, nontraditional preparation, disabilities which impact learning, academic probation and reinstatement, or provisional admission).

To be eligible for services, a student must be either a U.S. citizen or permanent legal resident, must have a need for academic services, and must be EITHER (1) low income (according to federal guidelines) OR (2) from a first generation family (neither parent/guardian has earned a baccalaureate degree) OR (3) have a documented disability which impacts learning. SSS Merit Scholarships (between $890-$1,000) will be awarded spring semester to each active program participant with freshman or sophomore standing, who is a PELL Grant recipient with financial need, and who makes satisfactory academic progress fall semester. Students are accepted into the program on a first-come, first-served basis and are encouraged to contact the office as early in the semester as possible.

Disability Support Services. dss@uidaho.edu The University of Idaho has established services for students with disabilities in accordance with Section 504 of the Rehabilitation Act of 1973, as amended, and with the Americans with Disabilities Act (ADA) of 1990, as amended.

The mission of Disability Support Services (DSS) is to provide equal and integrated access to students with permanent or temporary disabilities. Students requesting accommodations/services are required to provide the DSS office with appropriate disability documentation to support their request. In order to receive services in a timely manner, students are advised to make requests with adequate advance notice. Services include, but are not limited to, alternate text, note-takers, sign language interpreters,C-Print Captioning, disability parking and campus accessibility information, campus orientation, testing accommodations, and assistance with learning as it relates to disabilities. Additional accessibility information is available on the website of the Office of Human Rights Compliance at www.webs.uidaho.edu/hrco/.

Students are asked to notify DSS as soon as possible to discuss specific disability-related concerns and needs. This voluntary self-identification enables DSS to determine appropriate and reasonable accommodations to make classes, programs, services, and activities accessible to people with disabilities. Information regarding disabilities will be kept in strict confidence and has no effect on admission to the university. Federal law prohibits the Admissions Office from making preadmissions inquiries about disabilities.

Alumni Association

Alumni Center; 208/885-6154; alumni@uidaho.edu; www.uidaho.edu/alumni.

The University of Idaho Alumni Association exists to foster and coordinate the support of alumni and friends of the university in strengthening the academic, research, service, and leadership-building programs of the

institution. It also provides individual alumni services to its non-dues paying members throughout the world.

All former UI students who earned a UI degree or at least 90 credits at UI, and associate and honorary alumni are members of the association. The director of alumni relations and staff, along with an elected board of directors, guide the many programs, services, and activities for the more than 75,000 members.

The Alumni Association strives to keep alumni informed about their alma mater, encourage university loyalty and material support, and apprise the university community of alumni opinion. Through a variety of awards, the association honors outstanding alumni, students, or other individuals who provide exceptional service to the institution or state of Idaho. Scholarships are given by the association to help both entering and continuing students at the university.

Alumni can maintain close ties with the university through Alumni Association services, such as travel tours, and campus, national, and worldwide gatherings for special UI occasions, including reunions and Silver and Gold Events. The association also provides and organizes support for the university through active organizations, such as the Student Alumni Relations Board and the UI Retirees Association.

Areas of recent emphasis for the association include recruiting and informing prospective students about the university, and increasing volunteer support through the development of alumni chapters and constituency groups. The association is also strengthening and expanding its membership services, through use of Internet and lifetime e-mail service.

Career Center

Idaho Commons 334; 208/885-6121;careercenter@uidaho.edu; www.uidaho.edu/careercenter

The university is committed to providing students with a comprehensive set of career exploration and professional development services, including assistance in identifying career and major interests, developing skills and experience through academically-relevant work and experiential learning opportunities, preparing professional job/intern application materials, educating students on job search strategies, and preparing students for interviews. In addition to serving UI students and alumni, the Career Center also provides assistance to academic departments and employers.

Career Decision-Making and Professional Development Services are available to UI students and alumni of all majors. In today's job market, well-educated job candidates with relevant work experience are highly desired. Career Advisors help students prepare for employment by providing career education through workshops, career classes, group presentations, and individual advising sessions. The Career Center serves students at all stages of career development, from making decisions on their major and career interests, to identifying and participating in experiential learning opportunities (internships, co-ops, research experiences, and service-learning courses), to applying for professional careers upon graduation. A strong emphasis is placed upon the value of experiential learning. Students are encouraged to participate in a variety of activities to apply classroom theory in a real-life setting, clarify their educational and career goals, gain practical skills and experiences, and learn more about themselves, their community, and their future professions.

In addition to career guidance provided by Career Advisors, the Career Center also sponsors numerous **events that connect students with potential employers.** Some of these events include on-campus interviews, career fairs, etiquette dinners, and networking nights. These events connect students with hundreds of employers seeking candidates for their full-time, internship, and summer employment opportunities, as well as graduate and professional schools opportunities.

The Career Center also promotes civic engagement and hands-on learning through the **Service Learning Center.** By training faculty on the service-learning pedagogy and providing support for service-learning projects, a growing number of students experience a much deeper level of learning through the participation in service projects within their courses.

For more information, contact the Career Center, Idaho Commons Room 334, 208/885-6121, careercenter@uidaho.edu. Additional program information is available on the web at www.uidaho.edu/careercenter.

Child Care Services

UI Children's Center, 421 Sweet Ave; www.students.uidaho.edu/uikids

The UI Children's Center offers childcare, early schooling, and after school programs for children from 6 weeks through 8 years of age. Accredited by the National Academy of Early Childhood Programs, the UI Children's Center offers a safe and nurturing environment as well as programs which promote the physical, social, emotional, and intellectual development of young children. For more information, call 208/885-6414 or visit their website, www.students.uidaho.edu/uikids.

The Margaret Ritchie School of Family and Consumer Sciences Child Development Laboratory provides childcare opportunities for preschool children. Call 208/885-6332 for information.

Computer Education

Re-entry students may find that they need to acquire or sharpen computer skills in order to complete class assignments. The Office of Enrichment Programs (885-6486) offers workshops in computer skills, for a nominal fee.

Counseling & Testing Center

Continuing Education Building, 3rd Floor; 208/885-6716; www.ctc.uidaho.edu

Many students find that it is helpful to discuss their concerns with a professional who takes the time to listen and understand. Counselors at the Counseling & Testing Center (CTC) are available to meet with students to discuss personal, educational, or career concerns. Counseling can help students learn more about themselves and develop new skills to deal more effectively with personal problems such as depression, anxiety, stress, eating disorders, sexual abuse, relationships, academic pressures, and problems with alcohol or other substances. Counseling sessions are confidential. The CTC offers the following services: crisis intervention, individual counseling, group counseling, couples counseling, stress management, biofeedback training, educational presentations, referral, testing, and assessment of learning disabilities. For students who wish to research issues on their own or in conjunction with a counselor, the CTC has a self-help room with information to assist students with solutions to problems such as test anxiety, panic, depression, homesickness, relationship concerns, and a variety of other issues common to college students.

The CTC also offers the following career development and counseling services to help students select a major and a career direction that is right for them: (1) individual counseling for major and career decision making, (2) career interest testing and interpretation, and (3) computerized career exploration system (DISCOVER®).

The CTC offers a variety of testing and assessment services. These include placement tests such as COMPASS which is used to determine initial placement in math and English courses, and advanced placement exams such as CLEP which allow students to earn college credit by passing exams in a variety of subject areas. The CTC also administers many of the national testing programs such as the SAT, ACT, GRE, TOEFL, MELAB, MCAT and PRAXIS and provides a secure testing environment for students who need exams proctored. Assessment services include evaluations for learning disabilities and Attention Deficit/Hyperactivity Disorder. In addition, psychological, diagnostic and career assessments are often used in the context of counseling and are available at the CTC. A fee is charged for most testing and assessment services. For more detailed information go to www.ctc.uidaho.edu/testing.

Counseling services are available without charge to full-time students. A fee is charged for most assessment and proctoring services. The CTC is committed to offering services that are inclusive and respectful of all students, regardless of race and/or ethnicity, sex, color, religion, spirituality, creed, national origin or ancestry, age, marital status, sexual orientation, gender identity, gender expression, disability, or veteran status. For additional information on services provided by the Counseling & Testing Center, visit the web at www.ctc.uidaho.edu.

Dean of Students

TLC 232; 208/885-6757; askjoe@uidaho.edu; www.uidaho.edu/dos.

The University of Idaho is comprised of a diverse student population that requires the UI to have a diverse student services program. The Dean of Students Office provides a variety of services that focus on assisting

students. Programs and services include advising students in living groups, as well as those off campus, ethnic minority students, and veterans. In addition, the Dean of Students Office coordinates New Student Orientation, Women's Center, Child Care Center, National Student Exchange Program, student leadership activities, fraternity/sorority programs, and student discipline/conduct activities.

This wide range of programs and services includes assisting families and students who may experience crisis situations that disrupt normal academic activities.

Staff members are trained to work with individuals and groups of students, or serve as a liaison between students, departments, and agencies on and off campus.

All of the services and programs are supportive of the academic mission of UI and are an integral part of the student's total education at the university. Services offered by the Dean of Students Office are highlighted below.

Disability Support Services

Idaho Commons 306; 208/885-6307; dss@uidaho.edu ; www.uidaho.edu/studentaffairs/asap

The University of Idaho has established services for students with disabilities in accordance with Section 504 of the Rehabilitation Act of 1973, as amended, and with the Americans with Disabilities Act (ADA) of 1990, as amended.

The mission of Disability Support Services (DSS) is to provide equal and integrated access to students with permanent or temporary disabilities. Students requesting accommodations/services are required to provide the DSS office with appropriate disability documentation to support their request. In order to receive services in a timely manner, students are advised to make requests with adequate advance notice. Services include, but are not limited to, alternate text, note-takers, sign language interpreters, real time captioners, disability parking and campus accessibility information, campus orientation, testing accommodations, and assistance with learning as it relates to disabilities. Additional accessibility information is available on the website of the Office of Human Rights Compliance at www.webs.uidaho.edu/hrco/.

Students are asked to notify DSS as soon as possible to discuss specific disability-related concerns and needs. This voluntary self-identification enables DSS to determine appropriate and reasonable accommodations to make classes, programs, services, and activities accessible to people with disabilities. Information regarding disabilities will be kept in strict confidence and has no effect on admission to the university. Federal law prohibits the Admissions Office from making preadmissions inquiries about disabilities.

Greek Life

Sororities

Nine national sororities have chapters on the University of Idaho campus. Each chapter owns and operates its own chapter house. These are: Alpha Gamma Delta, Alpha Phi, Delta Delta Delta, Delta Gamma, Gamma Phi Beta, Kappa Alpha Theta, Kappa Delta, Kappa Kappa Gamma, and Pi Beta Phi. The average cost for living in a sorority is $2,860 a semester, which includes charges for room, board, all activity fees.

The Panhellenic Council, which is the representative body of the nine sororities, coordinates inter-sorority activities, formulates policies, and facilitates the Formal and Informal Sorority Recruitment processes.

Arrangements for Sorority Living. Membership in a sorority is done by mutual selection, where sororities extend invitations to potential members who they are interested in asking to join their house. Women who are interested in sorority living should call 800/874-7335 or visit our website at www.uidaho.edu/greeklife. The selection of members in each sorority is made primarily during Formal Sorority Membership Recruitment, which is held in August before the beginning of the fall semester.

The Sorority Recruitment registration deadline is August 1 and the registration can be done online at www.uidaho.edu/greeklife. Formal Recruitment is not the only opportunity to become a member of a sorority, yet it is the only time when Recruitment is coordinated by Panhellenic Council and all sororities participate. If you are unable to participate in Formal Sorority Membership Recruitment but are interested in sorority membership, contact the Dean of Students Office, 208/885-6757; or greek@uidaho.edu.

Fraternities

Sixteen national fraternities are maintained on the University of Idaho campus. These are: Alpha Gamma Rho, Alpha Kappa Lambda, Alpha Tau Omega, Beta Theta Pi, Delta Chi, Delta Sigma Phi, Delta Tau Delta, FarmHouse, Kappa Sigma, Phi Delta Theta, Phi Gamma Delta, Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Sigma Phi Epsilon, and Theta Chi. Each of these groups is represented in the Interfraternity Council, which unites them in common service to the university and promotes a spirit of cooperation and self-government among fraternities.

Membership in a fraternity is done by mutual selection, where the fraternities extend invitations to join and potential members either accept or decline these invitations. The membership selection process is facilitated in collaboration with the Interfraternity Council. The average cost for living in a fraternity is $2,500 a semester, which includes room, board, and activity fees.

Arrangement for Fraternity Living. Anyone interested in fraternity living should call 800/874-7335 or visit our website at www.uidaho.edu/greeklife. Those who indicate an interest in fraternity living will receive information from the various fraternities during summer before they arrive at the university. Fraternity Formal Recruitment is held before the beginning of the fall semester. If you are unable to participate in Formal Recruitment but are interested in fraternity membership, contact the Dean of Students Office, 208/885-6757; or greek@uidaho.edu.

Judicial Affairs

To maintain the core values of the University of Idaho, Judicial Affairs upholds the rules and regulations as stated in the Student Code of Conduct. If you are in breach of the Student Code of Conduct, or need to speak with someone about it, contact a Judicial Officer in the Dean of Students Office, 208/885-6757.

National Student Exchange

National Student Exchange (NSE) gives University of Idaho students the opportunity to attend one of 175 colleges or universities throughout the United States for one or two semesters. UI students pay UI fees or the resident fees of their host campus. Students normally need to apply by February for the next academic year. Credits earned on NSE fulfill University of Idaho residence-credit requirements.

To qualify for participation in the NSE, a student should: (1) be a full-time University of Idaho student; (2) be a sophomore, junior, or senior at the time of exchange; and (3) have a UI grade-point average of 2.5 at the time the application is filed. Information and applications may be obtained from the NSE Office in the Office of the Dean of Students, TLC 232 (208/885-7979).

Violence Prevention Programs & Resource Services

Resource Specialists provide violence prevention and risk reduction programming for students, staff and faculty on campus. Services include crisis intervention and referrals for on-going campus/community resources. Individual students, student leaders, university administrators, and community medical/legal professionals collaborate with Resource Specialists to create and implement positive campus policy. Risk reduction educational programs are available to all students at no cost. For more information call 208-885-2956 or come visit us in the Teaching and Learning Center Room 232.

UI Children's Center

See "Child Care Services".

Veterans' Benefits for Educational Assistance

The Office of Veteran Affairs assists veterans, dependents, reservists, and national guardsmen who are eligible for educational benefits through the Veterans Administration. Students expecting to receive veteran's benefits must apply for benefits and should contact the Office of Veteran Affairs at least six weeks before the beginning of each semester.

To qualify for payments, all veterans must be released under honorable conditions. To receive full benefits, a veteran must be pursuing an approved course of study leading to a degree or other professional objective. To be considered full time, undergraduate students must carry 12 credits or the equivalent, and graduate students must carry 9 credits or the equivalent (see regulation O-1).

An advisory service is available to veterans and additional information, advice on benefits, or application forms may be obtained by writing to the

veterans' advisor in the Office of the Dean of Students, PO Box 442431, Moscow ID 83844-2431, (208/885-7979); or online at www.uidaho.edu/dos.

Women's Center

The Women's Center staff is committed to providing a welcoming environment and a sense of community for all. At the Women's Center, we foster personal and professional growth through a network of support and services including educational programming, gender equity issues, information, referrals, and outreach.

Programs and services at the Women's Center include: brown-bag lunchtime programs (presentations and discussions covering a variety of topics); library (a circulating library of over 1,500 books and journals, primarily comprised of research, information, and literature regarding gender issues; information and referral to other agencies and services); lounge (a place to relax, read, study, get acquainted with others, and exchange ideas); newsletter (a publication announcing current programs and services, and news about women's issues). The center also assists with nontraditional student services and programs. The Women's Center is located in Room 109 of Memorial Gym.

Human Resources, Student and Temporary Hiring

415 W. 6th St; 208/885-3609; employment@uidaho.edu; www.hr.uidaho.edu

Human Resources, assists students in gaining employment experience to supplement financial support. Office hours are Monday through Friday from 8:00 a.m. to 5:00 p.m. Hiring departments across campus post available positions through the Human Resources office. All University of Idaho students are eligible to apply for positions listed on the Human Resources website. Job vacancies, applications, and additional information are available online at www.hr.uidaho.edu. All employment and payroll forms for students are completed at the Human Resources office.

Off-Campus Employment. Job Location and Development (JLD) works with the local business community to develop off-campus part-time, full-time, and summer jobs for students. The JLD office is located on the first floor of the SUB in the Student Financial Aid Office. JLD services are available to all students. Phone: (208) 885-2778, website: www.students.uidaho.edu/finaid.

In addition, the Idaho Department of Labor, located at 1350 Troy Highway, behind the Eastside Marketplace in Moscow, is a free service and lists jobs in the community. The classified sections of the Moscow/Pullman Daily News and the campus paper, The Argonaut, carry job listings.

Intercollegiate Athletics

Athletics Department; ASUI Kibbie Dome 2302; 208/885-0200; www.GoVandals.com

Idaho has a proud athletic tradition and sponsors 16 intercollegiate sports for men and women. The teams are known as the Vandals and compete as a Division I member of the NCAA and Western Athletic Conference.

The men's program consists of teams in football, basketball, cross country, indoor and outdoor track and field, tennis, and golf. The women's program consists of teams in basketball, volleyball, cross country, indoor and outdoor track and field, tennis, golf, soccer and swimming and diving.

The athletic program enjoys splendid facilities. The Kibbie-ASUI Activity Center, known as the "Kibbie Dome," houses the Athletic Department offices, team locker rooms, weight room, athletic training facilities, and academic support unit. The Kibbie Dome itself is the site for football and men's and women's basketball games played at the Cowan Spectrum within the Kibbie Dome. Historic Memorial Gymnasium is the home for Idaho volleyball. Track and field and tennis make great use of the Kibbie Dome's indoor facilities for practice and competition as well, with the five-lane, 290-meter track and the nine indoor tennis courts. The women's soccer team plays its home matches on Guy Wicks Field. The university's 18-hole championship golf course, numerous outdoor tennis courts, and the UI Swim Center complete the facility picture.

Athletic Department Mission. The University of Idaho Department of Athletics is committed to enhancing the visibility and image of the university by:

- Developing and maintaining competitive, integrity-based athletic programs
- Uniting students, faculty, staff, alumni, and the community
- Educating and graduating student-athletes
- Competing for championships

The core values are: Tradition, pride, commitment to excellence, customer focus, accountability, integrity, diversity and gender equity.

Athletic Program Goals. The goals of the UI athletics program are:

1. Recruit and prepare student-athletes for successful competition academically, athletically, and socially. Contend for Western Athletic Conference Championships and graduate student-athletes at rates above national averages.
2. Establish a national image for the University of Idaho and engage the campus and community. Improve and expand our image through marketing and outreach activities.
3. Promote diversity and gender equity. Conduct an athletics program that incorporates, fosters, and enhances gender equity and diversity.
4. Increase Revenue from Development and Corporate Partner (Learfield) Sponsorship Opportunities. Annually increase revenue toward the average of Western Athletic Department institutions.
5. Enhance Internal and External Relationships. Strengthen our internal and external relationships through timely meetings, increased communications, and by exhibiting high standards of personal conduct at all times.
6. Attain Financial Stability. Develop a user friendly and informative budget process that ensures fiscal accountability and contributes to an athletic reserve fund.
7. Continue Improving Facilities. Complete fund raising for the Kibbie Dome and identify future priorities from feasibility study.
8. Enhance Support Services. Inventory and evaluate support services and processes for efficiency and effectiveness.
9. Recruit, Retain, Recognize and Reward Current and Former Coaches, Staff and Student Athletes. Identify and offer rewards and recognition for current and former student-athletes, coaches and staff.

Multicultural Affairs

Office of Multicultural Affairs; TLC. 230; 208/885-7716; fax: (208) 885-9494; oma@uidaho.edu; www.uidaho.edu/oma.

UI is committed to establishing and maintaining a campus environment that promotes cultural diversity. This is accomplished through the provision of student services that begin to address specific needs of Asian-American/Pacific Islander, Black or African-American, Chicano/Latino, and Native-American students. While offering targeted services and programs to these populations, OMA is fundamentally a campus wide resource meant to benefit the educational experience of the entire campus community by leading in the creation of an environment that supports multiculturalism and promotes inclusion.

The Office of Multicultural Affairs (OMA) provides assistance to these traditionally underrepresented students in the areas of advocacy, financial aid, and accessing university student support programs. OMA is staffed by a full time director, a program coordinator and an administrative assistant. Staff members are involved in campus wide leadership and state wide organizations to promote diversity. One important resource of these efforts is a group of student mentors selected to help new multicultural students connect with resources and learn from the experiences of more experienced U of I students. This mentor group is called P.A.C.E. (Peer Advising on the College Experience). OMA continuously works with other departments across the university to resolve issues that may hinder recruitment, retention or the success of multicultural students.

Multicultural student organizations serve a vital role in retention and helping to promote and support cultural diversity on the UI campus. Some of the organizations that are currently active are the Asian American/Pacific Islander Association (AAPIA), the Native American Student Association (NASA), The Native-American Graduate Student Association, Gamma Alpha Omega Sorority Inc., Iota Psi Phi Sorority Inc., Lambda Theta Alpha Sorority Inc,, the Interested Ladies of Lambda Theta Alpha, the University of Idaho's Black Student Union (UI-BSU), Organizacion de Estudiantes Latino Americanos (OELA), MEChA (Movimiento Estudiantil Chicanos de Aztlán), the Hispanic Business Association, Sigma Lambda

Beta Fraternity Inc., GSA (the Gay Straight Alliance), WOCA (Women of Color Alliance), the Men of Vision, the Hispanic Business Association (HBA), Sabor de la Raza, CAMPOS (the College Assistance Migrant Program Organization of Students), ALI (the Association of Latin-Americans and Iberians), ASA (African Students Association), the Associated Students of African Descent, and UNITY. OMA assists these and other organizations in planning and executing campus activities of special interest to their group's members (e.g., cultural heritage months, student leadership retreat, organizational meetings, and campus educational cultural activities). Many meetings of these student groups are held in the Multicultural Student Center, which is located in Rooms 228 and 229 of the Teaching and Learning Center (TLC). For further information contact the Office of Multicultural Affairs main office in room 230 of the Teaching and Learning Center at (208) 885-7716 or e-mail oma@uidaho.edu. To visit our web page visit www.uidaho.edu/oma.

Polya Mathematics Center

Brink/Phinney Hall, 1st floor; 208/885-5717; polya@uidaho.edu; www.sci.uidaho.edu/polya.

The Polya Mathematics Center is a resource for students who take mathematics courses. Polya is located on the ground floor of Brink/Phinney Hall in two large rooms. The computer room offers students mathematical software and courseware and is staffed over 80 hours each week. The study and consultation room provides space for individual and group study with readily available assistance by instructors and teaching assistants.

The pre-calculus courses Math 108, 143 are taught entirely in Polya. The students in these courses attend one focus group each week where they are guided by an instructor who provides the necessary structure and direction. Lectures are delivered at computers by streaming video so that students can view them at their convenience and review them as needed. Those who prefer a live lecture can attend the lecture series offered nine times a week. Students work homework exercises on the computer. The computer-mediated exercises offer assistance and immediate detection of errors. The flexible organization of these courses offers students the option of working at a faster pace than required in order to complete the courses in less than a semester.

The Polya Math Center staff also offers drop-in assistance for students in Math 160, 170, 175, and 275. The hours and location for calculus assistance varies from semester to semester and are posted on the Polya web-site.

Recreational, Social, Extracurricular, and Co-curricular Activities

Idaho Commons; 208/885-2667 Student Union Building 208/885-4636; www.commons.uidaho.edu.

Many of the programs and activities at the Idaho Commons and Student Union are co-curricular in design, linking students' academic endeavors with out-of-class learning experiences. Students can get involved in numerous functions and activities that meet their personal goals for individual growth and leisure time activity. UI student organizations in the Idaho Commons and Student Union are integral to the planning and implementation of educational, cultural, and recreational activities for the campus.

ASUI Productions is a forum for students to organize almost all entertainment each year including blockbuster film series, small concerts, coffeehouses, "open mic" nights, comedians, educational speakers, and nationally touring bands. In the process, students gain experience with event planning and marketing. **Idaho Commons and Student Union Programs** feature weekly foreign and alternative films, noontime and summertime concerts, and educational enrichment events. A College Bowl Tournament is also sponsored by ASUI Productions. For more information, contact the Student Activities and Leadership Programs Office in the Idaho Commons Room 302, 208/885-6331.

ASUI - Student Government is dedicated to addressing the needs of undergraduate students and the campus community at large. The Associated Students University of Idaho is an organization that represents the most important element of the university, the students. The ASUI Senate, while acting as a liaison between the undergraduate student population and university administration, plays a very active role in shaping policy. Student senators, who are elected to a two-semester term, are also given the opportunity to work with and learn more about the Idaho State Legislature and the State Board of Education. For those students who have an interest and want to shape policy in a specific area of campus life, the ASUI features many different boards: academics, activities, civic engagement, student issues, Idaho Commons and Union Facilities, ASUI productions, athletics, natural resources and conservation, and Student Recreation Center. Opportunities are also available for student appointment to university-wide committees. ASUI offices are located in the Idaho Commons in the Student Activities and Leadership Programs Office, Room 302, 208/885-6331, www.asui.uidaho.edu.

Civic Education Project and Volunteer Programs. The national community service movement is alive and well at the University of Idaho. Our programs are dedicated to providing students with opportunities to serve the community while developing group leadership skills and a better understanding of citizenship. The program coordinates several one-day service projects with the community including 'Make a Difference Day' and 'Saturday of Service' (Youth Service Day). The program also keeps an on-going catalog of service and volunteer positions available to students and student organizations. Some University classes offer credit for service commitments, and the program assists in connecting these students to community service projects. The program promotes the belief that young people can greatly impact our communities and future through community service and by building a lifelong ethic of civic engagement. In addition, the program offers national community service based scholarship programs such as the Bonner's Service Leaders for students, and administers these programs in the community. For more information on volunteering, contact the Student Activities and Leadership Programs Office, Idaho Commons Room 302, 208/885-6331

The **Enrollment Services**, located in the newly renovated Student Union, is the headquarters for Undergraduate Admissions, Registrar, Student Accounts, and Office of Undergraduate Recruitment. Branch offices of Vandal ID Card, Parking, and Housing are located near the Information Desk. The Financial Aid office and the UI Bookstore are also nearby. Tours of the campus originate from the Office of Undergraduate Recruitment on the main floor. For information on Student Union activities and services, call 208/885-INFO or 208/885-4636.

The **Graduate Student Association** (GSA) supports and promotes graduate student education and graduate student life at the University of Idaho. This includes creating programs and assisting graduate students during their transition from student life to professional life. GSA elections are held annually as a commitment to providing a collective voice for graduate students to the university and to the state. The GSA office is located in the Idaho Commons, Room 305, just off the Overlook Lounge. GSA can be reached at 208/885-9446 or gsa@uidaho.edu.

The **Idaho Commons** is the center of campus life and provides programs, amenities, and services to enhance the educational experience of UI students, their families, and guests. Located at the heart of campus, the Idaho Commons serves as the crossroads and meeting place for the University of Idaho. Services offered at the Idaho Commons include meeting rooms for nonacademic programs, a variety of student support services, a food court, coffee shop, convenience store, copy service, credit union, ATMs, lounges, and administrative offices. Through various programs and services, the Idaho Commons cultivates and enhances the living and learning experience of students. Our students enjoy the many aspects of the building itself while gathering with friends to study, learn, and socialize with each other in a comfortable atmosphere. Cultural enrichment programs such as art exhibits, music, and speaker presentations are available to students, other members of the university community, and area residents. For information on Commons' activities, call 208/885-CMNS (2667) or 208/885-2233.

Leadership Development starts from the moment students enroll at the University of Idaho. An annual fall leadership retreat promotes student development and growth through campus involvement. Students can stay involved throughout the year through leadership training seminars, student organizations, and meetings between student leaders and university administrators. The **Group Opportunities and Leadership (GOAL)** program stretches both mind and body. Through activities such as ropes courses and team initiatives, students will develop knowledge of leadership styles, conflict resolution, communication skills, and problem solving. For more information about leadership development, contact the Student Activities and Leadership Programs Office, Idaho Commons Room 302, 208/885-6331.

Looking for an adventure experience? **Outdoor Programs** offers classes and informal instruction in some of today's top outdoor activities; kayaking, rafting, rock climbing, mountaineering, skiing, and other winter sports. Take advantage of Outdoor Programs Resource Center and Climbing Center, which includes 6000 square feet of climbing surface and a 55 foot pinnacle. Want to experience the great outdoors, but lack

the gear? The **Outdoor Rental Center** has the most extensive inventory of quality outdoor equipment in the Northwest. From rafts, kayaks, and canoes to skis, climbing gear, and camping equipment, the Outdoor Rental Center is ready to serve students and the Moscow community with their outdoor needs. The Outdoor Program, the Outdoor Rental Center, and the Climbing Center are located in the Student Recreation Center (SRC). For information, call the Outdoor Program 885-6810, Rental Center 885-6170, www.asui.uidaho.edu/outdoors.

Recreational facilities located on the Moscow campus include the new Student Recreation Center with approximately 85,000 square feet devoted to student health and recreation. In it are a climbing wall with a 55 ft. high pinnacle (the highest of any university), fitness equipment, indoor jogging track, 2 full-size gyms, a multi-purpose court, 2 multi-purpose/aerobic rooms, locker rooms, and a social lounge. Additional recreation facilities include the ASUI Kibbie Activity Center, the Swim Center, an 18-hole golf course, and indoor and outdoor tennis and handball courts.

Sound, Production, and Lighting Services (SPL) offers training and experiential opportunities for student employees. SPL provides professional sound, lighting, and multimedia production for student-sponsored performance and entertainment events. Employment opportunities exist for technicians to work with sound, lights, and film. Other employment is also available to students interested in computer and network support. SPL is located on the 3rd floor of the Student Union, 208/885-6947.

In **Student Media,** students utilize real-world technology in the various productions of the student newspaper, yearbook, FM radio, and advertising. *Argonaut*, the twice-weekly student newspaper, gives students the chance to gain real-world experience in media writing, computer graphics, photography, advertising, marketing, and business management. Editors, paginators, reporters, and advertising representatives have the opportunity to work with the newest technological equipment to create a product comparable to many commercial newspapers. The *Gem of the Mountains* yearbook is about much more than putting out an annual; the most important commitment of the GEM staff has been their continued dedication toward preserving the UI legacy for students and alumni. KUOI-89.3 FM, the student-run campus radio station, provides a free-form alternative to other media in the Moscow-Pullman area. Students have the opportunity to serve as on-air announcers, music and programming directors, and station manager. All student media organizations are housed on the 3rd floor of the Student Union Building, 208/885-7825.

Variety is the spice of life, and there is no better place to find your niche than with the variety of **Student Organizations** available at the University of Idaho. With more than 150 campus-wide organizations, sports clubs, and Greek chapters, students have many choices when it comes to customizing involvement. Catch a glimpse of the options available on campus by attending the Student Involvement Fair and browsing the Student Organization Guide to Involvement. Not only is it easy to find a student organization, it is just as simple to start your own. Through resources in the Student Activities Office, new organizations can gain recognition, build membership, and apply for funding from the ASUI Activities Board. For more information, contact the Student Activities and Leadership Programs Office, Idaho Commons Room 302, 208/885-6331.

The **Student Union**, located at Sixth and Deakin Streets, is home to Enrollment Services; including the Registrar's Office, Admissions, Office of Undergraduate Recruitment, Student Accounts/Cashiers, Student Financial Aid; Off-Campus Student Employment; Student Media; Sound, Production, and Lighting; International Ballroom; Borah Theater; UI Lionel Hampton Jazz Festival office; and several meeting rooms. Services offered at the Student Union include student computer labs, a video center, a cafe, catering services, copy service, ATMs, and lounges. 208/885-4636.

Religious Activities

The university is served by three campus religious centers: Campus Christian Center (corner of University and Elm); LDS Institute of Religion (902 Deakin); and St. Augustine's Roman Catholic Center (corner of Sixth and Deakin). These centers provide opportunities for the study and practice of religion as well as resources in counseling and guidance. In addition, all of Moscow's churches provide opportunities for religious development for University of Idaho students.

Student Accounts and Cashiers

Student Union Building; 208/885-7447;acctrec@uidaho.edu; www.uidaho.edu/controller/studentaccounts

Billing and Payment Information

Students are email billed in July for fall semester and e-mail billed in December for spring semester. Students are also e-mail billed monthly throughout the semester for unpaid balances. All semester fees and tuition are due on or before the first day of each semester. Charges incurred over the course of the semester are considered due in full with 10 days of the posting date. The University of Idaho does not drop courses for nonpayment. Students are responsible for dropping courses prior to the first day of the term to avoid being billed and graded. Accounts with balances due greater than $100 will be blocked from adding/dropping/registration. Transcripts will not be released for students owing the university. Federal loan and grant regulations do not permit using federal financial aid to pay a balance from a prior aid year. Students may access their account information on Vandal Web www.vandalweb.uidaho.edu

Failure to receive a bill does not relieve students from payment responsibilities.

Credit card payments for fees, tuition, and room and board are not accepted at the cashier's window; these payments need to be made online. The UI assesses a 2.5% fee on credit cards payments of student fees, tuition, and room and board. The fee will not apply to family housing or incidental charges, like parking tickets, health center charges, etc. that are paid by credit card at the cashier's window. The University's web check application allows customers to pay online with a checking account and is not subject to the 2.5% fee.

The Family Educational Rights and Privacy Act of 1974, as amended, also known as the Buckley Amendment, is a Federal law that governs the confidentiality of student records. Generally, the law requires that educational institutions maintain the confidentiality of what are termed "education records," ensures that each student has access to his or her education records, and provides students with a limited opportunity to correct erroneous education records. This means that the University cannot release student records (grades, account information, class schedule, student ID, etc) to anyone other than the student without written consent from the student. A Consent to Release Information form is available for the student to complete and return to the University at www.uidaho.edu/controller/studentaccounts/forms.

E-mail Usage and On-line Account Access: The UI's official e-mail policy states, "A University assigned student e-mail account shall be the University's official means of e-mail communication with any student required to have a UI e-mail account. Students are responsible for all information sent to them via their University assigned e-mail account." Accordingly, the Student Accounts Office will use the official UI e-mail address to communicate with students. We send interim billing notices and other information using e-mail only, and it is essential that all students regularly check their UI e-mail accounts. Student Account information is available on Vandal Web under the Student Account Information/ Student Accounts Center. If parents or other individuals need access to student billing information, the student is responsible for granting them access to the information.

Statistics Assistance Center

First Floor of the University Library behind the Reference Desk; www.uidaho.edu/sci/stat/about/sac

The Statistics Assistance Center (SAC) was developed to give assistance to students taking lower level statistics courses. Statistics graduate students in the SAC provide help for students enrolled in Stat 251, Stat 301, and Stat 431. The staff works to provide a friendly, non-threatening environment where students will feel comfortable to work, ask questions, and learn statistics outside of class.

The SAC is generally open for statistics tutoring Monday through Friday. Statistics tutoring hours vary each semester so please check with the Department of Statistical Science Office (Brink 415A; 208/885-2929) for scheduled times or see the statistics web page www.uidaho.edu/sci/stat/about/sac. Students can visit the SAC on a drop-in basis during scheduled times for help with homework problems. There is a Student Computing Lab that has a number of computers that provide supporting software for statistics courses at the Library.

Student Financial Aid Services

Student Union Building; 208/885-6312; finaid@uidaho.edu; www.uidaho.edu/finaid

The office of Student Financial Aid Services assists students and their parents with applying for financial assistance in the form of scholarships, grants, loans, and part-time work to help pay the cost of attending college. These programs may include scholarships, Federal Pell Grants, Federal Supplemental Educational Opportunity Grants (FSEOG), Leveraging Educational Assistance Partnership Program (LEAPP), Federal or Idaho State Work Study Programs (FWS or IWS), Federal Perkins Loans, William D. Ford Federal Direct Loans, Graduate Student PLUS, and William D. Ford Federal Direct Parent Loans to Undergraduate Students (PLUS). Financial aid is expected to supplement student and family resources. The office also assists students in finding part-time jobs off campus.

Application Process:

Priority Dates. Because funds are limited, to receive priority consideration for all funds the student applicant must submit the Free Application for Federal Student Aid (FAFSA) so it is received by the federal processor by the priority date each year. The priority date is February 15. This priority date applies to students attending both fall and spring semesters. It is recommended that students file an electronic FAFSA form; the website link can be found on the Financial Aid homepage, www.uidaho.edu/financialaid. In addition to the FAFSA, all students who are new to the university must also have a complete application for admission on file by the February 15 priority date. Students who meet all of these priority dates will receive first consideration for all funds for which they qualify. Students who do not meet all of these priority dates will still be considered for Federal Pell Grants and William D. Ford Federal Direct Loans, which are available throughout the year.

Enrollment. Financial aid during the academic year is usually awarded in expectation of full-time enrollment: 12 credits per semester for undergraduate students, 10 credits per semester for law students, or 9 credits per semester for graduate students. If a student is receiving aid as a full-time student, he or she must be registered as a full-time student to receive the aid on the first day of class. Students are required to enroll full-time to receive scholarships, unless the donor specifies special circumstances allowing part-time enrollment. All students must enroll at least half-time (6 credits per semester for undergraduate students or 5 credits per semester for graduate or law students) to be considered for Direct Loans. Students must continue to be enrolled in their required credits through the 10th day of classes (census date) of the semester to continue receiving their financial aid and scholarships for the semester.

For federal loan eligibility calculation the following enrollment classifications will be used. Undergraduate enrollment will be 6-8 credits for half-time, 9-11 credits for three quarter time, and 12 or more credits for full time. Graduate enrollment will be 5-6 credits for half time, 7-8 credits for three quarter time, and 9 or more credits for full time. Law enrollment will be 5-6 credits for half time. 7-9 credits for three quarter time, and 10 or more credits for full time.

Scholarships. Students who wish to apply ONLY for scholarships not based on financial need and no other types of financial aid must do one of the following in order to receive consideration: (1) Students who are attending the university for the first time only need to have a complete application for admission, including all transcripts and required test scores (freshmen), on file by the February 15 priority date; (2) Students who are enrolled at the university during the prior spring semester in at least 9 credits for undergraduate students, 10 credits for law students, or 6 credits for graduate students will be considered automatically (without completing any additional forms) for scholarships not based on financial need; (3) Students who are enrolled at the university for the prior spring semester but in less than 9 credits for undergraduate students, 10 credits for law students, or 6 credits for graduate students will need to notify the Associate Director for Scholarships in Student Financial Aid Services by February 15 of their interest in scholarships not based on financial need; (4) Students who previously attended the university, but were not enrolled during the prior spring semester, must notify the Associate Director for Scholarships in the Office of Student Financial Aid Services of their intent to enroll by the February 15 priority date.

Work Study. Students who are awarded Federal Work Study or Idaho State Work Study will be offered part-time employment in order to earn their award amount. Students must indicate their interest in the Work Study program on the FAFSA. Awards are made based on financial need to students who meet all the priority dates.

Stafford Direct Loans. The University of Idaho participates in the William D. Ford Federal Direct Loan Program. Loan funds will be provided to the student directly from the U.S. Department of Education through the University of Idaho rather than funds coming from a bank or lender. Students will be awarded these loans and asked to sign a master promissory note at www.studentloans.gov. Students will need to sign a master promissory note only once during their career at the UI. Once the signed promissory note is received, the funds will be credited to the student's account.

Eligible Programs. Students who have one or more bachelor's degrees, who are working toward an additional undergraduate degree or a teaching certificate and who are not yet admitted to graduate school, are considered to be second degree-seeking undergraduates and are not eligible for federal grant programs (Pell, SEOG, or LEAPP). They are restricted to undergraduate borrowing limits for loan programs. Graduate Students and students in the College of Law are eligible to apply for all financial aid programs except Federal Pell and Federal Supplemental Educational Opportunity Grants. Non-degree-seeking students (those not enrolled in a degree program) may not be considered for any type of financial aid. Correspondence classes may not be funded by any type of federal financial aid.

Satisfactory Academic Progress. Students at the University of Idaho must maintain satisfactory academic progress (SAP) to receive federal student financial aid. Satisfactory academic progress will be reviewed at the end of each spring semester. For purposes of satisfactory academic progress, the academic year is defined as summer, fall, and spring. Therefore, the summer performance prior to the fall and spring will be included in the review of satisfactory academic progress. Students receiving financial aid for the first time will be considered as being in good academic standing until they reach the defined annual evaluation time for satisfactory academic progress. It should be noted that the eligibility criteria for financial aid differ from those for academic eligibility contained in regulation L-6.

Undergraduate Program. An undergraduate student must have a minimum cumulative grade-point average upon review of satisfactory academic progress. The required minimum cumulative grade-point average is as follows:

Having completed (number of credits)	Minimum Cumulative GPA
0-32	1.80
33 or more	2.00

Students must successfully complete 75 percent of the credits attempted, up to a maximum of 12 attempted credits each semester. All attempted credits for the summer, fall, and spring semesters will be totaled and the required number to be successfully completed will be 75 percent of that total. If a student enrolls in one semester only, the student will be expected to complete 75 percent of attempted hours for that semester.

Successful completion is defined as receiving earned credit as defined by the UI Academic Policy. For students receiving federal financial aid, attempted credits will be defined as the number of credits enrolled for the census date used for federal financial aid. For students not receiving federal financial aid, attempted credits will be defined as attempted hours recorded at the end of the semester in the Registrar's system.

A student is allowed to have attempted up to 150 percent of the required credits for a degree. Attempted credit hours is defined as the number of attempted credits in the registrar's system or the number of earned credits, whichever is higher. For an undergraduate degree other than a Bachelor of Architecture, a student will be allowed 150 percent of the 128 minimum credit hours required for a total of 192 credits. Once a student reaches 192 credits attempted, he or she will no longer be making satisfactory academic progress and will be placed on financial aid probation. Students in the Bachelor of Architecture program will be allowed 150 percent of the 160 credits required for the five-year degree, for a total of 240 credits. Students working on a second bachelor's degree will be allowed a total of 260 undergraduate credits.

Effective July 1, 2011, new regulations take effect for students who do not make Satisfactory Academic Progress (SAP). If a student cannot meet the minimum GPA, 75% completion rule or Max credits rule, they will be placed on financial aid probation, and no further financial aid would be available without a successful appeal. In prior years, a student could regain eligibility for financial aid by appealing to their college of study for a waiver of their suspension OR successfully complete 12 credits with a minimum GPA of 2.00 for a semester without federal or state financial aid. Students can continue to appeal to their college of study for a waiver, however new regulations may require an academic plan

before reinstatement can be considered. In addition, under the new rules, if a student's cumulative GPA cannot be raised to the minimum standard required (2.00 for undergraduate students) after one term, then the student would be required to complete an Academic Plan through their college of study. The Academic Plan must include the following elements:

A. The Academic Plan must state how the student can regain federal aid eligibility. This will include the number credits needed to obtain a degree and the minimum GPA that the student must achieve to regain a "good" academic progress standing.
B. The student will be asked to explain and possibly document the situations that warrant an appeal such as a family member's death, student illness, injury or other special circumstance.
C. Detail why the student did not meet SAP and what has changed that will allow the student to meet SAP standards for the next evaluation period.

An appeal for reinstatement form from their college of study will be provided to students seeking reinstatement of aid. Either the student's college of study or the financial aid office will inform the student of any deadlines related to appeals. If an appeal is granted, only one term can be approved for reinstatement of financial aid. A student must meet SAP standards each term after reinstatement to avoid being disqualified from future financial aid.

Graduate Program. A graduate student must maintain a minimum cumulative grade-point average of 3.00 or better to continue to receive federal financial assistance.

Graduate students must successfully complete 75 percent of their credits attempted, up to a maximum of 9 attempted credits each semester. All attempted credits for the summer, fall, and spring semesters will be totaled and the required number to be successfully completed will be 75 percent of that total. If a student enrolls in one semester only, the student will be expected to complete 75 percent of attempted hours for that semester.

Successful completion is defined as receiving earned credit as defined by the UI Academic Policy. For students receiving federal financial aid, attempted credits will be defined as the number of credits enrolled for the census date used for federal financial aid. For students not receiving federal financial aid, attempted credits will be defined as attempted hours recorded at the end of the semester in the Registrar's system.

A graduate student in the master's degree program (except M.Ed./M.S. Counseling and Human Services, M.F.A.) requires an average of 36 credits for graduation. Therefore, students will be allowed to accumulate up to 150 percent of the 36 credits, for a total of 54 credits. Once a student accumulates 54 attempted credits, he or she will be suspended from receiving further financial assistance. If a student is working on a second master's degree, the student will be allowed to attempt 27 additional credits, for a total of 81 attempted credits, before financial assistance is suspended.

Students enrolled in the M.Ed./M.S. Counseling and Human Services, M.F.A., and all specialist degree programs require 60 credits for graduation. Students in these programs will be allowed to attempt up to 150 percent of the 60 credits for a total of 90 attempted credits. Attempted credit hours is defined as the number of credits the student is enrolled in on the census date.

All doctoral degree graduation requirements require a minimum of 78 credits. Students enrolled in doctoral degree programs will be allowed to attempt 150 percent of the 78 credits for a total of 117 credits.

Law Students. Any students enrolled in the law program will be required to make satisfactory academic progress, as defined by the academic requirements of the College of Law.

Any student enrolled in the law program whose cumulative grade-point average falls below a 2.00 at the conclusion of their first semester will be placed on academic probation. If the student fails after one additional semester to obtain and maintain a 2.00 cumulative grade-point average, the student's federal financial aid will be suspended. A student, whose cumulative grade-point falls below 2.00 at the end of his or her second semester, or any semester thereafter, will be suspended.

Any student who is suspended due to a grade-point average below 2.00 may once again be eligible to receive assistance upon reinstatement by the dean.

A law student is expected to successfully complete 75 percent of all attempted credits, up to a maximum of 10 credits each semester. Successful completion is defined as receiving earned credits as defined by UI Academic Policy. For students receiving federal financial aid, attempted credits will be defined as the number of credits enrolled for the census date for federal financial aid. For students not receiving federal financial aid, attempted credits will be defined as attempted hours recorded at the end of the semester in the registrar's system. If a student is enrolled in one semester only, he or she must successfully complete 75 percent of the credits attempted for that semester.

Students enrolled in law must have a minimum of 88 credits for graduation. Students who have attempted 150 percent of the minimum required for graduation, a total of 132 credits, will be suspended from receiving further financial assistance. Attempted credit hours is defined as the number of credits a student is enrolled in on the census date.

Petition for Reinstatement of Aid. Students wishing to appeal their suspension should contact the dean's office in the college in which they are enrolled. Graduate students should contact the College of Graduate Studies and law students should contact the College of Law.

Upon receiving an appeal from the student, the academic dean (or designee) may require the completion of an academic plan before reinstatement can be considered. New regulations require a review of a student's SAP each semester to ensure that a degree is obtained in a reasonable time frame. If a reinstatement of aid is granted, the waiver can be applied to one semester only. SAP must be maintained for the remainder of the student's tenure to avoid any future academic probation. The director will review the recommendation and make the final determination of whether to waive the suspension for the student. The decision of the academic college and the director of Student Financial Aid Services may be appealed to the Student Financial Aid Committee and then to the Administrative Hearing Board. Students may appeal to the academic college in which they were enrolled at the time of suspension or the academic college in which they are currently enrolled.

Any special circumstances concerning the student's academic progress for student financial aid will be reviewed on an individual basis. The director of Student Financial Aid Services may reinstate a student based on special circumstances unique to that student.

A letter will be sent to the student informing him or her of the financial aid suspension. A copy of the notice of financial aid suspension will be forwarded to the academic dean of the college in which the student is enrolled.

Athletic Scholarship Appeal. Students who have had their athletic scholarship aid reduced or eliminated may appeal the loss of funds by submitting an appeal in writing to the chair of the Student Financial Aid Committee.

Financial aid policies and procedures are subject to change without notice to assure compliance with federal, state and university regulations. The Office of Student Financial Aid Services may be contacted for current information (208/885-6312). Additional information is available at the Financial Aid website, www.uidaho.edu/finaid.

Student Health Insurance Program

Student Health Building; 208/885-2210; health@uidaho.edu; www.health.uidaho.edu/ship

The Idaho State Board of Education requires health insurance as a condition of enrollment for all degree-seeking undergraduate and graduate students physically enrolled for classes or completing other required degree work within the State of Idaho. Students enrolled for four (4) credit hours on the Moscow campus or eight (8) credit hours at the UI centers must provide proof of valid health insurance or enroll in the Student Health Insurance Program. The health insurance requirement applies to all international students enrolled at either UI centers or the Moscow campus regardless of degree-seeking status or credit hours.

The Student Health Insurance Program features a $1,000,000 lifetime plan maximum, no pre-existing condition exclusion, and many benefit features that assure students receive an excellent benefit package at a very favorable cost. Students may waive enrollment in the Student Health Insurance Program by providing proof of valid insurance prior to the enrollment/waiver deadline. See www.health.uidaho.edu/ship for additional information.

Student Health Services

Student Health Services; 208/885-6693; www.health.uidaho.edu.

Student Health Services, in partnership with Moscow Family Medicine, provides a broad spectrum of outpatient medical care services. The medical staff includes Board-certified physicians, physician assistants,

and nurse practitioners. Services include pharmacy, lab and X-ray, nutrition counseling and psychiatry. Additional counseling services are available in cooperation with the Counseling and Testing Center.

Health education classes and wellness programs are available to students. These programs range from fitness and nutrition classes to substance abuse and smoking cessation courses. A list of programs and additional information is available at the Student Health Services web site, www.health.uidaho.edu.

The hours of operation, scope of services, and fee-for-service charge schedule are subject to change during the academic year. Please look for changes notices at the Student Health Services web site.

Student Rights, Conduct, and Records

The "Statement of Student Rights," "Student Code of Conduct," and "Student Records Policy" are published in the *Faculty-Staff Handbook* and in the booklet entitled "Policies and Information of Interest to Students." The booklet is available from the Office of the Dean of Students (TLC 232), the Office of Academic Affairs (Admin 104), and other locations around the campus. Members of the university community are urged to familiarize themselves with these basic documents.

Writing Center

Idaho Commons 323; 208/885-6644
www.class.uidaho.edu/english/WritingCenter/.

Located on the third floor of the Idaho Commons, the English department's Writing Center offers peer tutoring assistance to all UI students. Writing Center tutors assist students with analyzing writing strengths and weaknesses; developing ideas; and improving focus, organization, grammar, and punctuation. The Writing Center offers weekday, evening, and weekend hours. Students may stop by, telephone, or visit the website for further information and a current schedule.

International Programs

The International Programs Office (IPO) has campus-wide responsibility for international activities, including international student recruitment, student and faculty exchanges, intensive English language training, long- and short-term study abroad, and serves as a liaison with the community regarding international interests. IPO also acts as a clearinghouse for international education activities, training, development programs, research agreements, for faculty and student Fulbright scholarships, and provides support for international activities in the colleges. IPO is located in the Living and Learning Center at 901 Paradise Creek Street, Building #3, Ground Floor; phone 208/885-8984; fax 208/885-2859; e-mail ipo@uidaho.edu; www.uidaho.edu/international.

International Students

International students are an integral part of the ethnic diversity of the University of Idaho. Representing up to 90 countries from around the world, international students contribute significantly to the rich cultural atmosphere of UI.

International student services are provided by international student advisors (ISA's) in IPO. All matters pertaining to students' status with the Department of Homeland Security and the U.S. Department of State are handled by the ISA's, and they also serve as official liaisons between students and their consular offices or sponsoring agencies. ISA's are involved with the progress of international students at every stage of the educational process, and students are encouraged to visit an ISA regularly to discuss concerns or questions related to immigration matters and educational, financial, or cultural adjustments.

Once a student has been admitted, general information is provided about what to bring to the U.S., the U.S. educational system, and housing. A mandatory orientation before classes begin, answers initial questions and provides new students with information and skills to succeed in their academic programs as well as tips on cultural adjustment. Community contacts are arranged through the International Friendship Association (IFA). The IPO, IFA, and international student groups sponsor additional social, cultural, and educational activities.

Insurance. International students holding nonresident alien status must either purchase the UI's Student Health Insurance Plan (SHIP) for themselves and all accompanying dependents or document coverage of an equivalent insurance with the International Programs Office as part of their obligation to establish proof of financial responsibility for expenses incurred while attending the university. Failure to obtain and maintain the required insurance may subject students to sanctions, up to and including disenrollment. See the insurance section in this catalog for more information.

American Language and Culture Program

The American Language and Culture Program (ALCP) offers full-time courses in intensive English for Academic Preparation. Courses are offered throughout the year, with two eight-week sessions during each of the fall and spring semesters and one six-week session in the summer. The program also offers specialized short-term programs by arrangement.

Students wishing to improve their English or achieve the required level of English language proficiency for admittance to UI can work toward that goal while living on or off the UI campus and attending the American Language and Culture Program (ALCP). The curriculum emphasizes reading, writing, speaking, listening, and grammar skills from beginning to advanced levels. At the University of Idaho, students who pass Level 5 may use their passing grades as a substitute for the English language proficiency examination for undergraduate admission and passing grades in level 6 for admission into many graduate programs. ALCP students take part in special cultural activities and learn about U.S. culture and U.S. university culture.

For more information and/or applications, contact ALCP through the International Programs Office located at the Living Learning Center at 901 Paradise Creek Street, Building #3, Ground Floor; Phone: 208/885-8984; Email alcp@uidaho.edu ; Website: www.uidaho.edu/international/alcp.

Applicants to the University of Idaho, please note:

Deferred admission may be granted to applicants who qualify academically, but who have not yet met UI's minimum English language proficiency requirement. In deferred status, students enroll in UI's American Language and Culture Program to achieve their department's English language requirement prior to being granted full admission and commencing their degree programs.

Concurrent Enrollment. Concurrent enrollment is available to ALCP students at Levels 5 and 6. With the consent of the ALCP coordinator and the instructor of the course(s), qualified ALCP students may take up to 7 credits of academic course work at the undergraduate and graduate levels while still remaining enrolled full time in ALCP.

Study Abroad

The University of Idaho has the largest study abroad program in the state of Idaho and one of the most extensive programs in the U.S. With access to 364 universities in 63 countries, students in virtually any field can enhance their UI education. For example, students can study wildlife in South Africa, education in Sweden, ecology in Costa Rica, architecture in Italy, or business in Hong Kong. Students can also study subjects not normally offered at UI. A student pursuing a computer science major might choose to study animation in England, a student interested in microbiology might study genome science in Australia, or a student undertaking a civil engineering major might choose to study ocean engineering in Scotland. Courses in many countries are taught in English so that students without foreign language skills are still able to study abroad. However, those students who are interested in learning a foreign language will find that there are also excellent opportunities for studying Spanish, French, German, Italian, Chinese, Japanese, Arabic, as well as other world languages.

Students participating on UI study abroad programs may also take advantage of exciting opportunities in international service learning, internships, and volunteerism. For example, students studying in Kathmandu might volunteer for a cooperative promoting women's rights, health, and standing in Nepali society, students studying in Berlin might participate in an internship with Mercedes-Benz, and students in Quito might participate in a service learning course that explores the complex issues of development in the Amazonian region of Ecuador while they volunteer for the various agencies involved in these issues.

Program costs vary, but in many cases a study abroad experience will cost about the same amount as studying on campus. Students receiving federal or state financial aid may be able to apply their entire award to UI study abroad programs. UI full-time undergraduate students may also be eligible for International Experience Grants (IEGs) created through the Associated Students of the University of Idaho (ASUI). Approximately one hundred of these grants are awarded to UI undergraduate study abroad participants each year. Many other study abroad scholarships are available to UI students. Some study abroad programs such as the University

Studies Abroad Consortium (USAC), and the Institute for Foreign Study Abroad (IFSA) at Butler, have established scholarship programs at UI, a number of UI departments and colleges also provide study abroad scholarships, and there are also many national study abroad scholarships available to UI students.

Students may receive credit for study abroad or other experience overseas in the following ways:

1. **Residency credit toward baccalaureate degree.** Students are registered under the study abroad course number (SA 999). The "Advising - Credit Evaluation Agreement" form must be completed before departure to ensure proper evaluation when the program is completed. Upon receipt of an official transcript, courses are evaluated and recorded as transfer credit. However, credits earned through approved UI study abroad programs are included in the residency requirement for baccalaureate degrees.
2. **Transfer credit.** Students choosing non-UI study abroad programs must complete a UI Study Abroad Application, all required UI mandatory study abroad forms, and a "Financial Aid Consortium/Contract Agreement" form (signed by the study abroad institution and submitted to the International Programs Office before departure) for registration to be processed and financial aid to be disbursed. Students are registered under the non-UI study abroad course number (SA 998). Upon receipt of an official transcript, courses are evaluated and recorded as transfer credit. Credits earned through non-UI study abroad programs are not included in the residency requirement for baccalaureate degrees.
3. **Directed study.** Students may plan their own educational experiences abroad, and arrange *in advance* for credit from any appropriate department. This is for education comparable to that gained in other courses of that department, but it may be as general and inclusive as the department will allow. Students choosing this option must also fill-out all appropriate UI Study Abroad applications and mandatory forms.
4. **Course challenge.** Some courses may be challenged on the basis of knowledge gained abroad. See regulation I-2.
5. **Experiential learning.** Credit may be awarded to students for knowledge and/or competence gained in foreign travel. See regulation I-2. This option requires the submission of a portfolio demonstrating knowledge and competence.

UI Study Abroad Program Sites

All students who participate in UI study abroad programs do not pay their normal UI registration fees. Instead, they pay the program cost for each semester they are abroad.

Students participating in study abroad programs are required to be registered as full-time students unless special arrangements have been made.

For more information on study, work abroad, or volunteering overseas, call, email, or visit the study abroad office in LLC Building #3, Ground Floor (tel: 208/885-7870, email: abroad@uidaho.edu). Information about the following programs can also be obtained from exchange program coordinators in the departments listed below:

Countries	Number of Partner Institutions
Argentina	8
Australia	39
Austria	4
Belgium	1
Botswana	1
Brazil	6
Bulgaria	1
Cambodia	1
Canada	3
Chile	7
China	11
Costa Rica	10
Cuba	1
Czech Republic	2
Denmark	4
Dominican Republic	5
Dutch Territories	1
Ecuador	1
Egypt	4
England (UK)	35
Estonia	1
Fiji	1
Finland	13
France	28
French Territories	2
Germany	10
Ghana	2
Greece	1
Hungary	3
Iceland	1
India	3
Ireland	8
Israel	1
Italy	8
Japan	11
Jordan	1
Kenya	1
Korea, Rep. of	5
Latvia	1
Malta	1
Mexico	11
Morocco	3
Nepal	1

The Netherlands	9
New Zealand	8
Nicaragua	1
Northern Ireland (UK)	2
Norway	1
Peru	4
Poland	2
Portugal	2
Russia	1
Scotland (UK)	7
Senegal	3
South Africa	4
Spain	29
Sweden	6
Switzerland	3
Taiwan	2
Thailand	4
Turkey	1
Uruguay	1
Vietnam	2
Wales	1
Total International Institutions	**355**

UI participates in the following study abroad programs:

Study Abroad Program	Placement Sites	Duration	Grades	Reqd GPA	Fr	So	Jr	Sr	Gr	Other Requirements
Al Akhawayn University	Morocco	Semester, year, summer	P/F	2.50	X	X	X	X		
American InterContinental University	England, France	Semester, year, summer	P/F	2.50	X	X	X	X	X	Media, animation, graphic arts, interior design, English literature, political science, history majors
Arabic Language Institute in Fez	Morocco	Semester, year, summer	P/F	2.50	X	X	X	X		Arabic Language & Culture
Architecture in Rome	Italy	Summer	A-F	2.50			X	X	X	
Autonomous University of Guadalajara	Mexico	Semester, year, summer	P/F	2.50	X	X	X	X		
Centro Agronomica Tropical de Investigacion y Eñsenanza (CATIE)	Costa Rica	Semester, year, summer	P/F	3.0					X	Tropical agriculture, forestry in tropical & subtropical zones, agroforestry systems, plant, soil, and entomological sciences
Chulalongkorn University	Thailand	Semester, year, summer	P/F	2.50			X	X		
Deakin University	Australia	Semester, year	P/F	2.75		X	X	X	X	Environmental science, natural resources majors
Ecole Superiéure de Commerce de Chambéry	France	Semester, year, summer	P/F	2.50		X	X	X		Some business & economics
Fachhochschule für Technik und Wirtschaft Berlin (FHTW)	Germany	Semester, year	P/F	2.50			X	X		Some business & economics
Haagse Hogeschool	Netherlands	Semester, year	P/F	2.50		X	X	X		Some business & economics
Institut International d'Etudes Francaises	France	Semester, year, summer	P/F	2.50	X	X	X	X		
Institut National Polytechnique Grenoble	France	Semester, year, summer	P/F	2.50	X	X	X	X		Engineering, Computer Science majors, 19 credits French
KCP International Language Institute	Japan	Semester, year, summer	A-F	2.50		X	X	X		
Kenya Methodist University	Kenya	Semester, year	P/F	2.50		X	X	X		
Lancaster University	England	Semester, year	P-F	2.75		X	X	X	X	
Landscape Architecture in Cremolino	Italy	Summer	A-F	2.50		X	X	X	X	
Lincoln University	New Zealand	Semester, year	P-F	2.75	X	X	X	X	X	
Luleå University	Sweden	Semester, year	P/F	2.50			X	X	X	Engr, geology, computer sci, business majors
Mikkeli Polytechnic	Finland	Semester, year	P/F	2.50		X	X	X	X	Forestry, environmental science, business majors
Nagasaki University of Foreign Studies	Japan	Semester, year	A-F	2.50	X	X	X	X		
National Chiayi University	Taiwan	Semester, year	P/F	2.50		X	X	X		
Pontificia Universidad Católica del Ecuador (PUCE)	Ecuador	Semester, year	P/F	2.50		X	X	X		

Study Abroad Program	Placement Sites	Duration	Grades	Reqd GPA	Fr	So	Jr	Sr	Gr	Other Requirements
Sann-Nepal/India	Nepal	Semester, year, summer	A-F	2.50	X	X	X	X		
Southern Denmark University	Denmark	Semester, year	P/F	2.50		X	X	X	X	
Universidad de Zaragoza	Spain	Semester, year	P/F	2.50		X	X	X		
University of Pretoria/Ecolife	South Africa, Swaziland	Summer, winter	A-F	2.50	X	X	X	X	X	
University of the Sunshine Coast	Australia	Semester, year	P/F	2.50	X	X	X	X		
Växjö University	Sweden	Semester, year	P/F	2.50		X	X	X		Comm, educ, political sci, business majors
AustraLearn	25 universities in Australia, 1 in Fiji, and 8 in New Zealand	Semester, year, summer	P/F	2.50-3.00	X	X	X	X	X	
Australian Education Connection	6 universities in Australia, 1 in New Zealand	Semester, year	P-F	2.50-3.00	X	X	X	X	X	
Council on International Educational Exchange (CIEE)	66 institutions in 36 countries	Semester, year, summer	A-F	2.50-3.00		X	X	X	X	8-19 credits foreign language *
Institute for Study Abroad through Butler University	92 universities in Argentina, Australia, Chile, China, Costa Rica, Egypt, England, India, Ireland, Mexico, New Zealand, Northern Ireland, Peru, Scotland, Spain, Wales	Semester, year, summer	A-F	2.50-3.70		X	X	X	X	
International Student Exchange Program (ISEP)	51 institutions in 43 countries	Semester, year, summer	P/F	2.75		X	X	X		19 credits foreign language*
International Studies Abroad (ISA)	45 universities in Argentina, Belgium, Chile, Costa Rica, Czech Republic, Dominican Republic, England, France, Italy, Mexico, Morocco, Peru, Portugal, Spain	Semester, year, summer	A-F	2.50-3.00	X	X	X	X	X	3-19 credits foreign language*
University Studies Abroad Consortium (USAC)	42 institutions in Australia, Brazil, Chile, China, Costa Rica, Cuba, Czech Republic, Denmark, England, France, Germany, Ghana, India, Ireland, Israel, Italy, Japan, Korea, Malta, Mexico, The Netherlands, New Zealand, Norway, Scotland, Spain, Sweden, Thailand	Semester, year, summer	A-F	2.50-3.00	X	X	X	X	X	

** Not all sites require knowledge of foreign languages.*

U. of Brighton, Chelsea School: HPERD (PE Bldg 206, 208/885-2187)

Chambéry: Foreign Languages and Literatures (Admin 312A, 208/885-7756)

FHTW: Business (ALB 312, 208/885-7342), and Foreign Languages & Literatures (Admin 314A, 208/885-8995)

Haagse Hogeschool: Business (ALB 312, 208/885-7342)

Institut International d'Etudes Francaise: Foreign Languages & Literatures (Admin 312A, 208/885-7756)

KVL-Denmark: Food Science & Toxicology (HRC 22, 208-885-9234)

Monterrey Tech: Business (ALB 312, 208/885-7342), Foreign Languages & Literatures (Admin 314A, 208/885-8995)

PUCE: Foreign Languages & Literatures (Admin 314A, 208/885-8995)

Southern Denmark: Business (ALB 312, 208/885-7342)

Zaragoza: Business (ALB 312, 208/885-7342), and Foreign Languages & Literatures (Admin 314A, 208/885-8995)

Mutual Responsibility Agreement

UI's acceptance of a student for admission and the student's enrollment in the university constitute an agreement of mutual responsibility. The student's part of this agreement is to accept established UI policies and rules, to respect the laws of governmental units, and to act responsibly and in a manner appropriate to these laws, policies, and rules. UI's part is to carry out its commitment to higher education, to fulfill its responsibilities in pursuit of the academic goals and objectives of all members of the university community, and to meet its obligation to provide an atmosphere in which students will have an opportunity to be heard in matters affecting their welfare as students. UI must take appropriate disciplinary action when it has been ascertained that a student's action is contrary to UI regulations and thus that this agreement has been violated.

GENERAL REQUIREMENTS AND ACADEMIC PROCEDURES

The following procedures and regulations have been adopted to help students, faculty members, and administrators carry out UI's overall academic program successfully. Students have the ultimate responsibility for meeting university, college, and departmental graduation requirements and academic procedures. Students, with the help of faculty advisors, should check their records each time they prepare to register to ensure that they are correctly and systematically fulfilling their degree requirements. It is the responsibility of advisors, major professors, and deans to assist students in understanding and complying with these requirements and procedures. The registrar assists by checking students' records for compliance with the regulations in this section of the catalog. Requests to waive curricular requirements, academic provisions, or academic standards should be presented to the appropriate department and/or college.

Rights Reserved to the University

Catalogs, bulletins, and course or fee schedules shall not be considered as binding contracts between UI and students. UI reserves the right at any time, without advance notice, to: (**1**) withdraw or cancel classes, courses, and programs; (**2**) change fee schedules; (**3**) change the academic calendar; (**4**) change admission and registration requirements; (**5**) change the regulations and requirements governing instruction in and graduation from UI and its various divisions; and (**6**) change any other regulations affecting students. Changes go into effect whenever the proper authorities so determine and apply not only to prospective students but also to those who are matriculated in UI. When economic and other conditions permit, UI tries to provide advance notice of such changes. In particular, when an instructional program is to be withdrawn, UI will make every reasonable effort to ensure that students who are within two years of completing graduation requirements, and who are making normal progress toward completion of those requirements, will have the opportunity to complete the program that is to be withdrawn.

UI also reserves the right, when a student has failed to discharge any obligation to UI, to deny that student the privilege of reregistering or to withhold the student's records or information based on the records. Students may verify the status of their accounts and be informed of any financial obligation to UI by inquiring at the cashier's window in the Student Union Building.

Academic Appeals Process

Students may petition the appropriate committee for exceptions to the administrative and academic regulations of the University of Idaho. Petitions are submitted to one of the following committees depending on the nature of the petition.

Academic Petitions Committee. This committee hears student appeals for exceptions to the regulations in this catalog section including, but not limited to, such matters as (1) registration for courses after the deadline, (2) reinstatement from 3rd disqualification, (3) withdrawing from a course after the deadline, and (4) expunging a grade of W from an academic record. Should be presented to the Academic Petitions Committee on forms available in college offices. www.webs.uidaho.edu/fsh/1640.html#1640.04

Academic Hearing Board. This committee hears student appeals from decisions made by college authorities concerning, but not limited to, such matters as (1) eligibility for advanced placement or credit by examination, (2) objectivity or fairness in making, administering, and evaluating class assignments, (3) maintenance of standards for conscientious performance of teaching duties, and (4) scheduling of classes, field trips, and examinations. The board does not hear appeals concerning requirements or regulations of the College of Graduate Studies or the College of Law. www.webs.uidaho.edu/fsh/1640.html#1640.02

Administrative Hearing Board. Students submit appeals to the Administrative Hearing Board on administrative decisions in such matters as residence status for tuition purposes, granting of student financial aid, and assessment of fees or charges (except in connection with parking regulations), and disputes involving interpretation and application of policies concerning such matters as student records, smoking, and treatment of disabled persons. www.webs.uidaho.edu/fsh/1640.html#1640.06

Appeals from decisions of the Academic Petitions Committee and the Academic Hearing Board are submitted to the provost. If the provost concurs with the body whose decisions was appealed, the appellant then may appeal to the president and regents if the president and regents consent to hear the appeal.

Decisions of the Administrative Hearing Board may be appealed to the president and regents when they consent to hear such appeals.

A - Matriculation

Applicants for enrollment in any course offered by UI for college credit, except correspondence study, submit personal data and credentials covering all previous academic work. (See "Undergraduate Admission to the University" or "Graduate Admission to the University") After UI has received these credentials and approved the application, registration access is given to the applicant and the applicant's first registration at UI concludes the matriculation process.

B - Registration

B-1. Registration Access. Registration access is given to new students as described above. It is also given to students who were previously enrolled within two years of the term in which they wish to register. Former students who have not been enrolled at UI within those two years must be re-admitted by the Undergraduate or Graduate Admissions Office at least one month prior to the term in which they wish to register. Such students will be required to submit transcripts from any institutions attended since their last registration at UI, and they may also be required to complete a residence questionnaire. Failure to meet the deadline may cause a delay in registration. Undergraduate students are required to meet with their academic advisor prior to registration,

B-2. Admission to Classes. Instructors do not admit anyone to class whose name does not appear on the class roster. UI instructors are given the authority to grant or deny access to classes by visitors.

B-3. Auditing Classes. Auditing a course consists of attendance without participation or credit. Audited courses will be recorded on a student's permanent record. The permission of the instructor is required before a student may audit a course. Seating preference in a course will be given to students who are completing the course for credit. (See C-2 and C-3 for deadlines).

B-4. Independent Study Courses. A student enrolled in the regular program is permitted to carry independent study courses for college credit only with the prior written approval of his or her academic dean. Credit for correspondence-study courses will not be accepted without such approval.

B-5. Registration for Courses Without Completion of Prerequisites. Students who have not completed the prerequisites to a course for which they are otherwise eligible may register for the course with the instructor's approval.

B-6. Registration of Lower-Division Students in Upper-Division Courses. All academic programs give priority in the first two years to meeting the general requirements for the appropriate degree and acquiring the foundation for advanced study; therefore, freshman students may not take upper-division courses. Exceptions may be made for students who have fulfilled the prerequisites and who are well prepared in their field of study. In such cases, the instructor may, with the concurrence of the student's advisor, authorize the exception.

B-7. Registration of Undergraduate and Non-degree Students in Graduate Courses. Undergraduate and non-degree students may register in graduate courses under the conditions outlined in the College of Graduate Studies section with the prior written approval of the instructor of the course, the student's advisor, and the Dean of the College of Graduate Studies.

B-8. Registration of Students with Baccalaureate Degrees as Undergraduates. To register as undergraduates, students with baccalaureate degrees must secure the permission of the dean of his or her undergraduate college and file a statement with the registrar indicating that they

understand that the work will not be classified as graduate work and cannot be used toward a graduate degree at a later date. (See J-7-b and c.)

B-9. Registration for Full Semester Courses. Students may register for full semester courses through the sixth day of the semester. A student may register for a course with instructor approval through the tenth day of the semester.

B-10. Registration for Accelerated and Other Short Courses. Students may register for accelerated and other short courses at any time up to and including the starting date of the course without petition.

B-11. Pass-Fail Option.

B-11-a. Undergraduate Students.

1. After consultation with their advisors, undergraduates who have a cumulative grade-point average of 2.00 or higher are permitted to enroll in one course a semester under this P/F option. (The grade-point requirement is not applicable to students who are taking university-level courses for the first time.) This procedure is separate from taking courses that are regularly graded P/F. Within the limitations specified above, an undergraduate may enroll under the pass-fail option in any course EXCEPT: (a) courses listed by number and title in the student's major curriculum as printed in the individual department section; (b) courses taken to meet the distributional requirements of the college or curriculum, unless allowed for P/F enrollment by the college in which the student is majoring; (c) courses used to satisfy the general education requirements; (d) courses in the major subject field; and (e) courses in closely related fields that are excluded from this option by the student's department. (See B-11-d for "Reporting of Grades.")
2. Students in officer education programs (OEP) may enroll under this regulation in courses required because of their affiliation with the OEP ONLY with the permission of the administrator of the OEP department concerned.
3. A maximum of 12 credits earned in courses under this regulation may be counted toward a baccalaureate degree.

B-11-b. Graduate Students.

1. With the approval of the major professor concerned (or advisor in the case of an unclassified student) and the dean of the College of Graduate Studies, graduate students may enroll in a limited number of courses under this P/F option. This procedure is separate from taking courses that are regularly graded P/F.
2. Courses that may be taken by graduate students under this regulation are: (a) any course not in the student's designated major and (b) any course required to remove a deficiency or to provide background for the student's program, unless the major department stipulates that such deficiency courses must be taken on a regular-grade basis and completed with an A or B.
3. Of the minimum number of credits required for a degree, no more than three credits in a master's or specialist program or nine in a doctoral program may be taken under this P/F option.
4. To have P recorded for courses taken under this regulation, a graduate student must earn a C or above. A grade of D will be converted to an F on the student's records.
5. An unclassified student may enroll for courses under this option with the approval of his or her advisor (if assigned) and the dean of the College of Graduate Studies. If, however, at a later date an unclassified student is admitted to a degree program, the above regulations apply and no changes to regular letter grades will be permitted.

B-11-c. Adds, Drops, and Changes. Students may add or drop a P/F option course in the same manner as a regular course, and they may change from P/F to regular-grade classification, or vice versa, if they do so no later than the deadlines stated in regulation C and the academic calendar. Students may make these changes by securing the signatures of the advisor or major professor and dean concerned.

B-11-d. Reporting of Grades. Instructors are not notified as to which students are enrolled in courses under this P/F option. Grades are reported in the same manner as grades in courses taken on a regular-grade basis. The registrar is responsible for converting Cs or above to Ps on students' records and, for graduates, Ds to Fs. Grades of D reported for undergraduates are recorded on students' records and are not converted.

B-12. Registration in Joint-Listed Courses. A student who enrolls in a joint-listed course may only earn credit at the level the student initially completes the course. A student who enrolls in the same joint-listed course at a different level will not receive credit on his or her transcript.

C - Changes in Registration

C-1. Adding a Course. A student may add a full semester course online through the sixth day of the semester. A student may add a course with instructor approval through the tenth day of the semester. These periods are prorated for accelerated or short courses.

C-2. Dropping a Course. A student may drop a full semester course through the tenth day of the semester without a grade of W. This period is prorated for accelerated or short courses. Students may not drop a course by simply staying out of class.

C-3. Withdrawing from a Course. Beginning with the eleventh day of the semester and ending with the tenth week of the semester a student may withdraw from a course. During this period a grade of W will be recorded on the student's record and will count against their 21 credit withdrawal limit (see regulation C-4). This period is prorated for accelerated or short courses.

C-4. Credit Withdrawal Limitation. The number of credits that a student may withdraw from during his or her undergraduate career at UI is limited to 21 credits. If a student attempts to drop a course(s) that would bring the total credits he or she will have withdrawn from above 21, the student will not be allowed to do so. When a student withdraws from the university the credits in the courses for the semester do not count against the withdrawal credit limitation (see regulation G).

D - Credit and Continuing Education Unit

D-1. Unit of Credit Defined. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than:

1. One hour of classroom or direct faculty instruction and a minimum of two hours of out-of class student work each week for approximately fifteen weeks for one semester or the equivalent amount of work over a different amount of time; or
2. At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities, including laboratory work, internships, practica, studio work, short courses, workshops and other academic work leading to the award of credit hours.

D-2. Credit-Load Limitations. (Also see J-5.)

D-2-a. Fall and Spring Semesters, and Summer Session.

1. During the Fall and Spring, an undergraduate student may register for no more than 20 credits in a semester. This number may be increased to 22 with specific written approval by his or her academic dean. Registration for more than 22 credits (except for students enrolled in the WWAMI Medical Education Program) is permitted only on approval of a petition to the Academic Petitions Committee (petition forms are available in deans' offices). During the Summer Session, an undergraduate student may register for no more than 18 credits. A law student may register for no more than 18 credits in a semester without approval of the Associate Dean in the College of Law. See the College of Graduate Studies section for the credit limitation for a graduate student.
2. Registration for courses with conflicting or overlapping meeting times is allowed only with the approval of the instructor of each affected course.

D-2-b. Full-Time Employees. A full-time UI employee may register for no more than six credits in a semester or three credits during the Summer Session. Written approval by the employee's departmental administrator and dean or director must accompany the registration form.

D-2-c. Non-degree Students. A non-degree students may register for no more than 7 credits each semester and may complete a maximum of 32 semester credits. Students on official UI exchange programs are not limited to 7 credits each semester. International exchange students must take 12 or more credits. Upon completion of 32 semester credits, the student must either be admitted as a degree-seeking student at UI or submit a letter of appeal to continue as a non-degree student.

D-2-d. Under Idaho State law, eligible high school students are given the opportunity to enroll in University of Idaho undergraduate courses and receive both college credit and credit towards high school grad-

uation while still enrolled in high school. The number of credits for which a dual credit student may register in a given semester is determined by the high school counselor who must sign the enrollment form. However, the credit load limitations that apply to undergraduate students also apply to dual credit students.

D-3. Transfer Credit. Credit is accepted for work completed in accredited institutions of higher education as provided in the regulations covering the admission of transfer students. (See "Transfer Admission Requirements"; also see E-4 and J-5.)

D-4. Review and Prerequisite Courses. Students will not receive credit for courses taken in review or for courses that are prerequisites of courses they have already completed in the same subject area. Exceptions: 1) As stated in I-1, 2) Students who transfer in a course for which the UI requires Biol 115 or Biol 116 as a prerequisite (but who have not yet taken Biol 115 or Biol 116), may take Biol 115 and Biol 116 for credit.

D-5. Continuing Education Unit. Short learning activities may also be evaluated by a system of uniform continuing education units. Such units are granted in accordance with the following guidelines, which are set forth by the (national) Task Force on the Continuing Unit: A continuing education unit is expected to require 10 contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instructors. Continuing education, as used in this definition, includes all instructional and organizational learning experiences in organized formats that impart noncredit education to post-secondary-level learners. These properties of continuing education may be applied equally under the system regardless of the teaching-learning format, program duration, source of sponsorship, subject matter, level, audience, or purpose. The number of units to be awarded is determined by considering the number of contact hours of instruction, or the equivalent, included in the educational activity. Reasonable allowance may be made for activities such as required reports, lab assignments, field trips, and supervised study. A student may not receive academic credit and continuing education units for the same learning activity.

E - Grades

E-1. Grading System.

E-1-a. For purposes of reporting and record, academic work is graded as follows: A-superior; B-above average; C-average; D-below average; F-failure; I-incomplete work of passing quality (see regulation F); W-withdrawal; WA-withdrawal to audit; WU-withdrawal from the university; P-pass (see below); IP-in progress (see E-2); N-unsatisfactory and must be repeated (used only in Engl 090, Engl 101, and Engl 102 and Chem 050); S-satisfactory (used only in CEU courses); CR-Credit, and NC-No Credit (may be used only in professional development courses).

E-1-b. Grades of P may be reported at the option of the department on a course-by-course basis in noncompetitive courses such as practicum, internship, seminar, and directed study. Grades of P are also reported in courses carrying the statement, "Graded P/F," in the course description. In courses in which Ps are to be used, the method of grading will be made known to the students at the beginning of the semester, and the grading system will be uniform for all students in the courses. Grades under the pass-fail option are not affected by this regulation because the conversion of the regular letter grade is made by the registrar after instructors turn in the class rosters.

E-1-c. Midsemester grades in undergraduate courses must also conform to the above regulations. It is permissible to report Ps at midsemester ONLY in courses that have been approved for grading on this basis.

E-2. In-Progress (IP) Grades.

E-2-a. Grades in Undergraduate Senior Thesis or Senior Project. The grade of IP (in progress) may be used to indicate at least minimally satisfactory progress in undergraduate courses such as senior thesis or senior project that have the statement "May be graded IP" in the course description. When the thesis or project is accepted, the IP grades are to be removed (see E-2-c). Grades of IP in undergraduate courses are considered to represent grades of at least C or P. If, in any given semester, the instructor considers the student's progress unsatisfactory, an appropriate letter grade (D or F) should be assigned for that semester.

E-2-b. Grades in Graduate Research Courses. The grade of IP (in progress) may be used in courses 500 (Master's Research and Thesis), 599 (Non-thesis Master's Research), and 600 (Doctoral Research and Dissertation). When the thesis, dissertation, or other research document is accepted, or when a student ceases to work under the faculty member who is supervising his or her research, the IP grades are to be removed (see below). Grades of IP in graduate courses are considered to represent at least grades of B or P. If, in any given semester, the faculty member supervising the student's research considers the student's progress unsatisfactory, a regular letter grade (C, D, or F) should be assigned.

E-2-c. Removal of IP Grades. Departments may use on a department-wide basis either the P/F grading system, or regular letter grades, as well as P, when removing the previously assigned IP grades (e.g., a student who enrolled for six credits in course 500 one semester, four credits another semester, and five credits an additional semester could have 15 credits of IP grades removed with different grades for each of the blocks of credit registered for each semester, such as six credits of A, four credits of B, and five credits of P).

E-3. Grades in Law Courses. For additional provisions applicable to grades in law courses, see the College of Law section.

E-4. Computing Grade-Point Averages. Grades are converted by assigning the following number of points per credit for each grade: A-4, B-3, C-2, D-1, F-0. In computing the grade-point average, neither credits attempted nor grade points earned are considered for the following: courses graded I, IP, P, S, W, WU, N, CR, NC, correspondence courses, continuing education units, credits earned under regulation I, or courses taken at another institution. Credit earned at non-U.S. institutions is recorded as pass (P) or fail (F), except for some courses taken through an approved study abroad program.

[The UI considers only the *Institutional* grade-point average official. Although both institutional and overall grade-point averages are printed on transcripts, the overall grade-point average (which includes transfer courses) is informational only. To calculate a grade-point average divide the *Quality Points* (course credits times the points assigned for the grade earned) by the *GPA Hours* (course credits attempted *not* including grades of I, IP, P, W, WU, or N). *Earned Hours* indicate the total number of semester credits successfully completed (course grades of A, B, C, D, or P earned). Grades of P are included in *Earned Hours* but do not earn any quality points; grades of F are included in *GPA Hours*, but not in *Earned Hours*.]

E-5. Replacing Grades.

E-5-a. Some courses are listed in this catalog as "repeatable" (i.e., the credits listed for the courses show a maximum number of credits that may be earned or show "cr arr" or "max arr" indicating that the courses may be repeated for credit without restriction as to maximum). Other courses show one credit entry for the course (e.g., "1 cr," "2 cr," etc.) and may be taken only once for credit (see procedure for repeating to replace a grade below). [See the section entitled "Credit Designations" for more information.]

E-5-b. Replacing a Grade by Repeating a Course. A student who has received a D or F in a course at UI may repeat the course at the UI provided credit has not been earned in a more advanced vertically related course in the same subject area. Although all grades remain on the record, the first repeat will replace the grade and credit earned initially in the course. The second and subsequent repeats of the same course will be averaged in the student's institutional GPA. See the College of Law section for the exception to this regulation applicable to students in that college.

E-6. Reports of Grades and Grade Corrections. Grades are reported to the registrar for all courses at the end of each academic session and at mid semester for undergraduate courses (see deadlines in the academic calendar). The assignment of grades and corrections of grades are the sole prerogative of the instructor and are reported by the instructor directly to the Registrar's Office via the UI Faculty Web. All grades except I and IP (see regulation F and E-2) are considered final when assigned by an instructor at the end of a term. An instructor may request a grade correction when a computational or procedural error occurred in the original assignment of a grade. No final grade may be revised as a result of re-examination or the submission of additional work after the close of the semester. Grade corrections must be processed within one year of the end of the term for which the original grade was assigned. In the event the instructor leaves the university, the departmental administrator may assign the final grade.

F - Grades of Incomplete

F-1. A grade of "Incomplete" is assigned only when the student has been in attendance and has done passing work up to a time within three weeks of the close of the semester, or within one week of the close of the summer session. It may be assigned only upon agreement of the student and course instructor when extenuating circumstances make it impossible for the student to complete course requirements on time (Extenuating circumstances include serious illness, car accidents, death of a family member, etc. It does not include lateness due to procrastination, the student's desire to do extra work to raise his/her grade, allowing a student to retake the course, etc.). Graduate students on probation, see College of Graduate Studies section on Probation, Disqualification, and Reinstatement. If a grade of "Incomplete" is submitted, the instructor will assign a reversion grade in the event the missing work is not completed. The instructor must also specify conditions and requirements for completing the deficient work, as well as any deadline shorter than the maximum time period allowed in F-2. At the end of each semester, the Registrar's Office will send an Incomplete Grade Report (IGR) to departmental administrators detailing every I grade submitted by their faculty that semester and the conditions for student completion.

F-2. Completion of "Incomplete" Grades. Final grades for incompletes received in the Fall semester or Intersession, must be assigned by the last day of the following Summer semester. Final grades for incompletes received in the Spring semester or Summer Session, must be assigned by the last day of the following Fall semester. When a student has completed the deficient work, the instructor will assign a final grade. An incomplete that is not completed within the time limit specified above would automatically be changed to the reversion grade assigned by the instructor at the time the incomplete was submitted. Instructors may assign a final grade anytime within the time period specified above. In the event the instructor leaves the university, the departmental administrator may assign the final grade. An incomplete remains on the student's permanent record and is accompanied by the final grade (i.e. I/A, I/B, I/C).

F-3. "Incomplete" Grades on Record at End of Final Term. A student cannot graduate with a grade of "Incomplete" on his or her record. At the end of the term in which the student will graduate, a grade of "Incomplete" in any UI course on that degree level (undergraduate, graduate, law, etc.) reverts to the grade that the instructor had specified on the online grade roster (see F-1). Reverted grades are included in the computation of the student's cumulative grade-point average at graduation. Nonetheless, a student who has graduated may make up the incomplete work within the usual time limit in an effort to raise the grade on the permanent record.

G - Withdrawal Procedures.

G-1. Standard Withdrawal Procedures.

G-1-a. A student who wishes to withdraw from UI before the end of the second week following midterms may begin the process of withdrawal by contacting the Registrar's Office. Withdrawal forms can be picked up at the college dean's office or the Registrar's Office. The request is not official until it is processed in the Registrar's Office. See regulation G-I-b for withdrawal from the university after the end of the second week following midterms.

G-1-b. A student is permitted to withdraw from UI after the end of the second week following midterms for compelling reasons only and after approval by the Academic Petitions Committee *or* after completing a medical withdrawal as explained in G-2. Examples of compelling reasons are: serious illness or injury of the student or death or serious illness or injury in the student's immediate family. Petitions for permission to withdraw after the end of the second week following midterms are forwarded *via the student's academic dean* to the Academic Petitions Committee on forms available in department and college offices. If the student's petition is approved, the Academic Petitions Committee will determine the effective date of the withdrawal. (See "Refund of Fees")

G-2. Medical Withdrawal Procedures.

G-2-a. The medical director of the Student Health Service, University Psychiatrist or the director of the Counseling and Testing Center is authorized to grant or require a student's withdrawal from UI for medical reasons.

G-2-b. Voluntary Medical Withdrawal. Students desiring to withdraw from UI for medical reasons will consult the medical director of the Student Health Service, University Psychiatrist, or the director of the Counseling and Testing Center who will evaluate the request. If granted, the dean of students will be notified in writing to process the medical withdrawal.

G-2-c. Emergency Transfer to Institutional Care. The medical director of the Student Health Service or University Psychiatrist is authorized to act as the representative of the president in emergencies that, under Idaho laws, require the transfer of a student to a community or state health facility. The student may be granted a medical withdrawal from UI at the discretion of either director.

G-2-d. Mandatory Medical Withdrawal. It is the responsibility of the dean of students to order a medical examination of a student if the dean has reason to believe that the student has a serious medical or psychiatric condition that substantially threatens or interferes with the welfare of the student, other members of the university community, or the educational processes of the university. The dean notifies the student and the director of the Student Health Service that such an evaluation is to be conducted. This process may be started by the director of the Student Health Service, University Psychiatrist or the director of the Counseling and Testing Center for patients under care or counseling by notifying the student and the dean of students in writing.

1. **Request for Evaluation.** On notification from the dean of students, the medical director of the Student Health Service requests the student to undergo immediate professional evaluation by the medical director or the medical director's designee, or, at the student's request and expense, by a private physician or psychiatrist deemed appropriate by the medical director. A report of this evaluation is presented to the medical director with a specific recommendation as to whether a medical withdrawal is warranted.
2. **Evaluation Conference.** The medical director of the Student Health Service provides the student written notice of a time and place at which the medical director and student will confer on the final determination as to mandatory withdrawal. The student may have the assistance of a representative at this conference. The medical director refers to reports, recommendations, and evaluations pertinent to the case and is empowered to request additional relevant medical or psychiatric examinations of the student.
3. **Determination of Director.** Based on the evaluation and the conference, the medical director of the Student Health Service may determine: (a) that mandatory withdrawal **is** warranted by the student's medical or psychiatric condition; (b) that mandatory withdrawal **is not** warranted by the student's medical or psychiatric condition; or (c) that the student may remain enrolled subject to conditions specified by the medical director. The medical director transmits this decision in writing to the student and the dean of students. If withdrawal is ordered, the dean will process it.
4. **Finality of Determination.** Decisions made by the medical director of the Student Health Service pursuant to these procedures are final.
5. **Refusal of Evaluation.** If, after a request by the medical director of the Student Health Service, the student refuses to consult with a physician or psychiatrist, the director will, if practicable, seek the help of the student's family in persuading the student to seek appropriate professional assistance. Should these efforts not result in the student taking the desired action, the director summarizes the steps taken to secure needed information and the reasons for the withdrawal and instruct the dean of students to process the withdrawal. A copy of this order for withdrawal is sent to the student. The dean will process the withdrawal as mandatory, but involuntary.
6. **Appeal.** A student may appeal to the Vice Provost for Academic and Student Affairs either (a) to revoke the order of the dean of students for a medical examination or (b) in case a procedural error is alleged, to order the determination of the medical director of the Student Health Service reopened.

G-2-e. Any student placed on medical withdrawal may, if appropriate, be informed, in writing, by the medical director of the Student Health Service, University Psychiatrist or the director of the Counseling and Testing Center that he or she is eligible to return to UI at a later date on the favorable recommendation of one of the above. When applying for readmission, the student is responsible for providing one of the above with evidence of satisfactory treatment of the condition that necessitated

medical withdrawal. Medical withdrawals are subject to the same refund rules and procedures as other withdrawals (see "Refund of Fees").

G-3. Grades for Students Who Withdraw. Grades for a student who withdraws are recorded as provided in regulations C and F-1. A student who withdraws from, or leaves, UI without official approval will receive Fs in all courses in which he or she is registered and for which the grade has not already been assigned.

H - Final Examinations

H-1. The last five days of each semester are scheduled as a final exam week (two-hour exams) in all divisions except the College of Law. The following provisions apply:

H-1-a. No quizzes or exams may be given in lecture-recitation periods during the week before finals week. Exams in lab periods and in physical education activity classes, final in-class essays in English composition classes, and final oral presentations in speech classes are permitted.

H-1-b. Final exams or final class sessions are to be held in accordance with the schedule approved by the Faculty Council. Instructors may deviate from the schedule only on the recommendation of the college dean and prior approval by the provost or provost's designee.

H-1-c. The final exam time will be scheduled based on the lecture portion of a course. The final exam time is based on the meeting schedule of the course section, as it exists in the class schedule for that semester. If a class meets Monday, Wednesday, and Friday, for example, the final exam time will be based on the time the class is scheduled to meet on these days. If the meeting day(s) and/or time of the lecture portion of a course change during the semester the final exam time will be scheduled based on the first meeting time.

H-1-d. Where exams common to more than one course or section are required, they must be scheduled through the Registrar's Office and are regularly held in the evening.

H-1-e. Students with more than two finals in one day may have the excess final(s) rescheduled. A student must make arrangements with the department and the instructor of the course to schedule the final exam in one of the conflict exam periods.

H-1-f. Athletic contests are not to be scheduled during finals week.

H-2. Students who miss final exams without valid reason receive Fs in the exams. Students who are unavoidably absent from final exams are required to present evidence in writing to the instructor to prove that the absence is/was unavoidable.

H-3. Instructors, with the concurrence of their departments, may excuse individual students from final exams when such students have a grade average in the course that will not be affected by the outcome of the final exam. In such instances, the grade earned before the final exam is to be assigned as the final grade.

H-4. Early final exams are permitted for students, on an individual basis, who clearly demonstrate in writing that the reasons for early final exams are compelling. Such requests require approval by the department and instructor of the course.

I - Other Credit Opportunities

I-1. Credit opportunities for exams/high school courses taken prior to becoming a degree-seeking undergraduate student at UI. (See regulation J-5-b for credit limitations.)

I-1-a. College Board Advanced Placement Exams (AP). Credit is granted for advanced-placement courses completed in high school in which a rating of 5, 4, or 3 is attained in College Board advanced-placement tests. For details, see Registrar's website, www.students.uidaho.edu/default.aspx?pid=19556.

I-1-b. College Level Examination Program (CLEP). UI grants credit for the successful completion of tests under the College Level Examination Program, as approved for specific courses by UI departments. For minimum scores needed to earn credit, see Registrar's website, www.students.uidaho.edu/default.aspx?pid=19556.

I-1-c. Other Exams. UI grants credit for students who achieve specific scores on the ACT, SAT, and COMPASS exams. Credit from these exams for Engl 101 will be granted after the successful completion of Engl 102. For the minimum scores needed to earn credit, see Registrar's website, www.students.uidaho.edu/default.aspx?pid=19556.

I-2. Credit opportunities while a degree-seeking student at UI. (See regulation J-5-b for credit limitations.)

I-2-a. Challenged Courses (Credit by Examination). Degree-seeking students may challenge UI lecture and associated laboratory courses (earn credit by examination) as follows:

1. Students must receive permission from the course instructor, from the administrator of the department in which the course is offered, and from his/her academic dean to challenge a course. Applications to challenge a course are available on the Registrar's Website. The application must be signed and the application fee paid to the Student Accounts/Cashiers Office (see Special Fees for extramural credits). The form is then returned to the Registrar's Office. The registrar checks the student's record to confirm if the student is eligible to challenge the course and notifies the instructor or student accordingly.
2. Undergraduates must score C or higher to pass and obtain credit. Graduate students must score A or B to pass and obtain credit. A passing grade is entered as P and is not included in grade-point computations. The student's account will be charged the appropriate per-credit fee at the time the credits are recorded on the student's transcript (see Special Fees for extramural credits). If a student does not meet these standards, no entry is made on their record and no per-credit fee is charged to their account.
3. Results of the challenged courses must be forwarded to the registrar no later than the beginning of the last week of the semester.
4. No examinations under this regulation may be conducted during the last two weeks of any academic session.
5. Students are not permitted to challenge a prerequisite course after having completed the advanced course.
6. Credit in courses offered by the College of Law may not be obtained by this procedure.

I-2-b. Experiential Learning Credit. With the approval of an ad hoc committee consisting of representatives from the colleges and departments involved (convened by the registrar) and payment of the applicable fees (see Special Fees for extramural credits), an undergraduate may be awarded lower-division and/or upper-division (100-499 series) credit in recognition of university-level knowledge or competence gained in work and life situations outside of UI's jurisdiction, mass media, and independent reading and study. Examples of work and life situations outside UI's jurisdiction include knowledge or competence gained in business, industry, government, or community agencies; or through travel or private study; or while studying at a proprietary or non-accredited institution. Petitions for such credit must be approved by the student's departmental administrator and academic dean, and must be supported by such evidence as is needed to provide a sound basis for evaluating the student's achievements. Credits granted under this regulation are recorded as experiential learning and a grade of P is assigned. The department through which the degree is to be granted will determine the applicability of credits earned through experiential learning toward the satisfaction of specific degree requirements. (See J-5.) Petition forms for experiential learning credit are available on the Registrar's website, www.registrar.uidaho.edu.

I-2-c. Technical Competency Credit. Technical competency credits may be gained from experience in areas of concentration related to bachelors degrees in professional-technical education or industrial technology. Grades of P for the successful completion of CTE 470, are normally recorded on a student's transcript during their last semester or upon completion of all degree requirements. A maximum of 32 credits may be earned in a combination of CTE 470. Applications and instructions for technical competency credits are available at the Department of Curriculum and Instruction. See Special Fees for extramural credits.

I-2-d. Vertically Related Course Credit. Undergraduate degree-seeking students may bypass an elementary course and enroll in a higher vertically related course. Student with a C or better in the advanced course are eligible to receive credit and a grade of P for the lower vertically related courses in the same subject matter. Vertically related courses are listed at the beginning of each subject in the course descriptions section. Applications to receive credit for vertically related courses are available on the Registrar's website, www.registrar.uidaho.edu. See Special Fees for extramural credits. *Advisors should make sure that students are aware of this opportunity for obtaining credit.*

I-3. Students who have completed courses at other institutions after bypassing lower vertically related courses, but have not been awarded credit for those bypassed courses, will be granted such credit on completion of a yet higher vertically related course at UI.

J - General Requirements for Baccalaureate Degrees

Candidates for baccalaureate degrees must fulfill the following requirements. (See the College of Graduate Studies section for the requirements for graduate degrees. See the College of Law section for the requirements for the degree of Juris Doctor.)

J-1. Credit Requirements.

J-1-a. Students must have earned a minimum of 120 credits to be granted a baccalaureate degree from the University of Idaho. Some programs require a higher minimum. For the minimum number of credits required in each degree program, see the major curricula of the various degree-granting units in the individual departmental section.

J-1-b. A minimum of 36 credits in upper-division courses (numbered 300 or above) is required for a baccalaureate degree.

J-2. Residency Requirements. A student must earn a minimum of 30 upper-division credits in UI courses. No credits awarded for independent study, bypassed courses, credit by examination, College Level Examination Program (CLEP), or experiential learning can be counted among these 30 UI credits. Study abroad and student exchange credits may be counted toward this requirement with prior approval by the student's academic department and dean.

J-3. Subject Requirements (General Education Curriculum). First-year students (see Admissions Status) are to complete the University of Idaho general education curriculum. A university education is a preparation both for living and for making a living. It offers an opportunity not only to lay the foundations of a career, but also to develop the mind to its highest potential, to cultivate the imagination as well as the power to reason, and to gain the intellectual curiosity that makes education a life-long enterprise. A central component of this preparation is the requirement that a student working toward a baccalaureate degree must complete the necessary course work in the six categories described below (J-3-a through J-3-f). This requirement is to be satisfied by earning the minimum number of credits specified for each category. Within the J-3-d, J-3-e, J-3-f categories, students must complete a total of 18 credits, with courses from at least four different disciplines. The ISem courses may not be counted towards the four discipline requirement. (Transfer students have two options for fulfilling this requirement; these are described under "General Education Requirements for Transfer Students" in the Undergraduate Admission section of this catalog). Courses that fulfill requirements in each category are reviewed each year and the list is updated in the Spring. Students and advisors are encouraged to check the list when it is published in the Spring to be aware of any additional courses that have been added to meet specific requirements. Courses that are approved to satisfy a general education requirement can be used to satisfy those requirements even if the course is completed prior to being approved as a general education course.

Note: Remedial courses may not be used to satisfy any of this requirement. Degree-seeking students must be enrolled in Engl 090, Engl 101, or Engl 102 in their first semester in residence and in each subsequent semester until they have passed Engl 102. They must also be enrolled in Math 108 or in a course that meets the general education requirement in mathematics, statistics, or computer science in their first year in residence and in each subsequent semester until the general education requirement in mathematics, statistics, or computer science has been satisfied.

J-3-a. Communication (5-7 cr). The purpose of this requirement is to develop the ability to organize one's thoughts, to express them simply and clearly, to observe the standards and conventions of language usage, and to suit tone to audience. The requirement is proficiency in written English equal to that needed for the completion of UI course Engl 102 and the completion of one additional course in this category.

- **Public Speaking.** Students who receive a passing grade in Comm 101, Fundamentals of Public Speaking, are expected to develop and demonstrate the ability to make oral presentations in one-on-one settings, small groups, and large groups. Students should be able to demonstrate basic competency in (1) organization and preparation, (2) oral language use and presentation, and (3) addressing audience needs and interests.
- **Written English.** Students who receive a passing grade in any of the six English classes included in the general education are expected to develop and demonstrate competencies in their writing in (1) organization and development, (2) sentence variety and word choice, and (3) language usage conventions.

The following specific provisions apply to the English composition component:

1. Students who attain a satisfactory score on the College Board English Achievement or Scholastic Aptitude (Verbal) Test or the American College Testing (ACT) English Test will be awarded credit and grades of P for Engl 101 and Engl 102. Also, students who attain a score of 4 on the Advanced Placement Test in English will be awarded credit and a grade of P for Engl 101 and students who attain a score of 5 on the Advanced Placement Test in English will be awarded credit and grades of P for Engl 101 and Engl 102.
2. Students who do not meet the conditions stated in paragraph (1) will be tentatively placed, on the basis of their scores on the tests cited above, in either Engl 101 or Engl 102.
3. UI accepts credits earned in comparable writing courses taken at other accredited institutions. (See credit limitation in J-5-d.)

Comm 101 Fundamentals of Public Speaking (2 cr)
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 316 Environmental Writing (3 cr)
Engl 317 Technical Writing (3 cr)
Phil 102 Reason and Rhetoric (2 cr)

J-3-b. Natural and Applied Science (8 cr which include two accompanying labs OR 7 cr which includes a Core Science (CORS) course and one course with lab). The purpose of this requirement is to develop a better understanding of the physical and biological world by learning some of the principles that explain the natural phenomena of the universe, the experimental method used to derive those principles, and their applications.

Study in this area is undertaken as part of the general education requirements in order to promote scientific literacy; that is, the ability to read and understand the science issues being debated in society. Scientific literacy is essential if citizens are to make informed judgments on the wide range of issues that affect their everyday lives. Students receiving passing grades in the natural and applied science courses of the general education curriculum will demonstrate competency in the following areas: (1) knowledge of scientific principles; (2) the ability to write clearly and concisely using the style appropriate to the sciences; (3) the ability to interpret scientific data; (4) the ability to analyze experimental design critically; and (5) the development of laboratory skills.

Biol 102, 102L Biology and Society and Lab(4 cr)
Biol 115 Cells and the Evolution of Life (4 cr)
Biol 116 Organisms & Environments (4 cr)
Chem 101 Introduction to Chemistry I (4 cr) OR Chem 111 Principles of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
CORS 205-297 Integrated Science (3 or 4 cr)
EnvS 101 Introduction to Environmental Science, and EnvS 102 Field Activities in Environmental Sciences (4 cr)*
Geog 100, 100L Physical Geography and Lab (4 cr)
Geol 101, 101L Physical Geology and Lab (4 cr)
Geol 102, 102L Historical Geology (4 cr)
MMBB 154 and MMBB 155/Biol 155 Introductory Microbiology and Lab (4 cr)*
Biol 250 and MMBB 255/Biol 255 General Microbiology and Lab (5 cr)*
Phys 100, 100L Fundamentals of Physics and Lab(4 cr)
Phys 103, 104 General Astronomy and Lab (4 cr)*
Phys 111, 111L General Physics I and Lab (4 cr)
Phys 112, 112L General Physics II and Lab (4 cr)
Phys 211, 211L Engineering Physics I and Lab (4 cr)
Phys 212, 212L Engineering Physics II and Lab (4 cr)
Soil 205, 206 The Soil Ecosystem and Lab (4 cr)*

**To be counted toward satisfaction of this requirement, the full four or five credits (that is, both the lecture course and the accompanying laboratory course) must be completed.*

J-3-c. Mathematics, Statistics, or Computer Science (3 cr). These courses develop analytical, quantitative, and problem solving skills by involving students in doing mathematics, statistics, or computer science and by focusing on understanding the concepts of these disciplines.

Students receiving passing grades in mathematics, statistics, or computer science will have the ability to recognize, analyze, and solve problems.

CS 101 Introduction to Computer Science (3 cr)
CS 112 Introduction to Problem Solving and Programming (3 cr)
Math 123 Mathematics Applied to the Modern World (3 cr)
Math 130 Finite Mathematics (3 cr)
Math 137 Algebra with Applications (3 cr)
Math 143 Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 160 Survey of Calculus (4 cr)
Math 170 Analytic Geometry and Calculus I (4 cr)
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 275 Analytic Geometry and Calculus III (3 cr)
Stat 150 Introduction to Statistics (3 cr)
Stat 251 Statistical Methods (3 cr)

J-3-d. Humanities (6 cr) and Social Sciences (6 cr). The purpose of these liberal arts courses is to provide students with critical tools for understanding the human experience and providing the means for students to respond to the world around them.

Humanities courses enable students to reflect upon their lives and ask fundamental questions of value, purpose, and meaning in a rigorous and systematic interpretative manner, with the goal of fostering understanding of culture and inspiring a citizenry that is more literate, respectful of diverse viewpoints, and intellectually inquisitive.

Social science courses enable students to apply rigorous analytic skills for the purpose of explaining the dynamic interaction among history, institutions, society and ideas that shape the behaviors of individuals, communities and societies. With these skills students can critically address the social issues of our contemporary world.

Courses on the humanities and social science lists that are also listed as satisfying the American diversity or international requirement are indicated by a D or I designation.

Approved Humanities Courses:
AmSt 301 Studies in American Culture (3 cr) D
Art 100 World Art and Culture (3 cr) I
Art 205 Visual Culture (3 cr)
Art 213 History and Theory of Modern Design I (3 cr) I
Art 302 Modern Art and Theory (3 cr)
Art 382 History of Photography (3 cr) I
Art 407 New Media (3 cr)
Dan 100 Dance in Society (3 cr)
Engl 175 Introduction to Literary Genres (3 cr)
Engl 221 History of World Cinema I (3 cr) I
Engl 222 History of World Cinema II (3 cr) I
Engl 257 Literature of Western Civilization (3 cr)
Engl 258 Literature of Western Civilization (3 cr)
Engl 341 Survey of British Literature (3 cr)
Engl 342 Survey of British Literature (3 cr)
Engl 343 Survey of American Literature (3 cr)
Engl 344 Survey of American Literature (3 cr)
Engl 345 Shakespeare (3 cr)
Engl 375 The Bible as Literature (3 cr)
FLEN 210 Introduction to Classical Mythology (3 cr)
FLEN 313 Modern French Literature in Translation (3 cr) I
FLEN 324 German Literature in Translation (3 cr) I
FLEN 331 Japanese Anime (3 cr) I
FLEN 391 Hispanic Film (3 cr) I
FLEN 393 Spanish Literature in Translation (3 cr)
FLEN 394 Latin American Literature in Translation (3 cr) I
Hist 350 European Cultural History, 1600-1800 (3 cr)
Hist 357 Women in Pre-Modern European History (3 cr)
Hist 366 Intellectual and Cultural History of Modern Europe (3 cr) I
Hist 442 The Medieval Church: Europe in the Early and High Middle Ages (3 cr)
Hist 443 or RelS 443 The Medieval State: Europe in the High and Late Middle Ages (3 cr)
Hist 447 or RelS 447 The Renaissance (3 cr)
Hist 448 or RelS 448 The Reformation (3 cr)
IS 370 African Community, Culture, and Music (1-3 cr) I
MusH 101 Survey of Music (3 cr)
MusH 111 Introduction to Music Literature (3 cr)
MusH 201 History of Rock and Roll (3 cr)
Phil 103 Ethics (3 cr)
Phil 201 Critical Thinking (3 cr)
Phil 240 Belief and Reality (3 cr)
Phil 351 Philosophy of Science (3 cr)
Phil 361 Professional Ethics (3 cr)
The 101 Introduction to the Theatre (3 cr)
The 468 Theatre History I (3 cr) I
The 469 Theatre History II (3 cr) I
WmSt 201 Introduction to Women's Studies (3 cr) D

Approved Social Science Courses:
Anth 100 Introduction to Anthropology (3 cr)
Anth 220 Peoples of the World (3 cr) I
Anth 261 Language and Culture (3 cr) I
Anth 329 North American Indians (3 cr) D
Anth 350 or Soc 350 Food, Culture, and Society (3 cr) D
Anth 462 Human Issues in International Development (3 cr)
Comm 233 Interpersonal Communication (3 cr)
Comm 335 Intercultural Communication (3 cr) I
Comm 410 Conflict Management (3 cr)
CSS 235 or For 235 Society and Natural Resources (3 cr)
Econ 201 Principles of Macroeconomics (3 cr)
Econ 202 Principles of Microeconomics (3 cr)
Econ 272 Foundations of Economic Analysis (4 cr)
EDCI 301 Learning, Development, and Assessment (3 cr)
FLEN 270 or Hist 270 Introduction to Greek and Roman Civilization (3 cr)
FLEN 307 The European Union (3 cr) I
FLEN 308 European Immigration and Integration (3 cr) I
Geog 165 Human Geography (3 cr) I
Geog 200 World Regional Geography (3 cr) I
Geog 365 Political Geography (3 cr) I
Hist 101 History of Civilization (3 cr) I
Hist 102 History of Civilization (3 cr) I
Hist 111 Introduction to U.S. History (3 cr) D
Hist 112 Introduction to U.S. History (3 cr) D
Hist 380 Disease and Culture: History of Western Medicine (3 cr)
IS 325 The Contemporary Muslim World (3 cr) I
IS 326 Africa Today (3 cr) I
IS 350 Sport and International Affairs (3 cr) I
PolS 101 Introduction to Political Science and American Government (3 cr) D
PolS 205 Introduction to Comparative Politics (3 cr) I
PolS 237 International Politics (3 cr) I
PolS 275 American State and Local Government (3 cr)
PolS 331 American Political Parties and Elections (3 cr)
PolS 332 American Congress (3 cr)
PolS 333 American Political Culture (3 cr) D
PolS 338 American Foreign Policy (3 cr) I
PolS 360 Law and Society (3 cr) D
PolS 381 Western European Politics (3 cr) I
Psyc 101 Introduction to Psychology (3 cr)
Soc 101 Introduction to Sociology (3 cr) D
Soc 230 Social Problems (3 cr) D
Soc 250 Social Conflict (3 cr) D
Soc 301 or Anth 301 Introduction to Diversity and Stratification (3 cr) D
Soc 323 Political Economy (3 cr) I
Soc 336 Comparative Criminal Justice Systems (3 cr) I
Soc 340 Social Change & Globalization (3 cr) I
Soc 343 Political Sociology (3 cr) I
Soc 422 or RelS 423 Religion, Culture & Society (3 cr) D
Soc 423 Social Class & Stratification (3 cr) D
Soc 424 Sociology of Gender (3 cr) D
Soc 427 or Anth 427 Racial and Ethnic Relations (3 cr) D
Soc 431 Personal and Social Issues in Aging (3 cr) D
Soc 439 Inequalities in the Justice System (3 cr) D
Soc 440 Post-Colonialism (3 cr) I
Soc 450 Dynamics of Social Protest (3 cr) D

J-3-e. American Diversity (One course) and International (One course or an approved study abroad experience). As we live in an increasingly diverse and multicultural world, the purpose of these courses is to prepare students to understand, communicate and collaborate with those from diverse communities within the United States and throughout the world.

The American diversity courses seek to increase awareness of contemporary and historical issues surrounding the social and cultural diversity in the U.S. Students engage in critical thinking and inquiry into the issues, complexities, and implications of diversity, and how social, economic, and/or political forces have shaped American communities. Diversity includes such characteristics as ability, age, ethnicity, gender, race, religion, sexual orientation, and socioeconom-

ic status

*One course chosen from the approved American diversity courses listed below. If a student takes a Great Issues Seminar (ISem 301), Humanities, or Social Science course that also appears on the list of approved American diversity courses, then this requirement is considered to be completed.

The international courses seek to develop an understanding of international values, belief systems and social issues that have contributed to current balances of power and cultural relations. Students develop an understanding of the roles that the United States and other countries have played in global relations and the ways cultures have interacted and influenced each other.

*One course chosen from the approved international courses listed below. If a student takes a Great Issues Seminar (ISem 301), Humanities, or Social Science course that also appears on the list of approved International courses, then this requirement is considered to be completed. The international requirement may be waived if a student successfully completes an approved Summer, Fall, or Spring term abroad through the International Programs Office.

Approved American Diversity Courses:

AIST 320 The Celluloid Indian: American Indians in Popular Film (3 cr)
AIST 401 Contemporary American Indian Issues (3 cr)
AIST 420 Native American Law (3 cr)
AIST 422, Anth 422, or RelS 422 Plateau Indians (3 cr)
AIST 478 Tribal Nation Economics and Law (3 cr)
AIST 484 or Engl 484 American Indian Literature (3 cr)
AmSt 301 Studies in American Culture (3 cr)
Anth 329 North American Indians (3 cr)
Anth 350 or Soc 350 Food, Culture, and Society (3 cr)
Arch 411 or AIST 411 Native American Architecture (3 cr)
Comm 432 Gender and Communication (3 cr)
Comm 491 Communication and Aging (3 cr)
EDCI 302 Teaching Culturally Diverse Learners (4 cr)
Engl 380 Introduction to U.S. Ethnic Literatures (3 cr)
FCS 414 Idaho's Journey Toward Diversity and Human Rights (1 cr, max 3)
Hist 111 Introduction to U.S. History (3 cr)
Hist 112 Introduction to U.S. History (3 cr)
Hist 315 or LAS 315 Comparative African-American Cultures (3 cr)
Hist 411 Colonial North America, 1492-1763 (3 cr)
Hist 415 Civil War and Reconstruction, 1828-1877 (3 cr)
Hist 417 United States, 1919-1960 (3 cr)
Hist 418 Recent America, 1960-Present (3 cr)
Hist 420 History of Women in American Society (3 cr)
Hist 423 Idaho and the Pacific Northwest (3 cr)
Hist 425 Immigration and Ethnicity in the United States (3 cr)
Hist 426 or AIST 426 Red Earth White Lies: American Indian History 1840-Present (3 cr)
Hist 428 History of the American West (3 cr)
Hist 431 Stolen Continents, The Indian Story: Indian History to 1840 (3 cr)
ID 443 Universal Design (3 cr)
JAMM 340 Cultural Diversity and the Media (3 cr)
JAMM 445 History of Mass Media (3 cr)
MusH 410 Studies in Jazz History (3 cr)
PolS 101 Introduction to Political Science and American Government (3 cr)
PolS 333 American Political Culture (3 cr)
PolS 335 American Interest Groups & Social Movements (3 cr)
PolS 360 Law and Society (3 cr)
PolS 468 Civil Liberties (3 cr)
Psyc 315 Psychology of Women (3 cr)
Psyc 419 Adult Development and Aging (3 cr)
Soc 101 Introduction to Sociology (3 cr)
Soc 230 Social Problems (3 cr)
Soc 250 Social Conflict (3 cr)
Soc 301 or Anth 301 Introduction to Diversity and Stratification (3 cr)
Soc 431 Personal and Social Issues in Aging (3 cr)
Soc 422 Religion, Culture & Society (3 cr)
Soc 423 Social Class & Stratification (3 cr)
Soc 424 Sociology of Gender (3 cr)
Soc 427 or Anth 427 Racial and Ethnic Relations (3 cr)
Soc 439 Inequalities in the Justice System (3 cr)
Soc 450 Dynamics of Social Protest (3 cr)
Span 306 or LAS 306 Culture and Institutions of Latin America (3 cr)
Span 411 Chicano and Latino Literature (3 cr)
Span 413 Spanish American Short Fiction (3 cr)
WmSt 201 Introduction to Women's Studies (3 cr)

Approved International Courses:

AgEc 481 Agricultural Markets in a Global Economy (3 cr)
AgEd 406 Exploring International Agriculture (3 cr)
Anth 220 Peoples of the World (3 cr)
Anth 261 Language and Culture (3 cr)
Anth 462 Human Issues in International Development (3 cr)
Arbc 101 Elementary Modern Standard Arabic I (4 cr)
Arbc 102 Elementary Modern Standard Arabic II (4 cr)
Art 100 World Art and Culture (3 cr)
Art 208 Italian Renaissance Art and Culture (3 cr)
Art 213 History and Theory of Modern Design I (3 cr)
Art 302 Modern Art and Theory (3 cr)
Art 303 Contemporary Art and Theory (3 cr)
Art 313 History and Theory of Modern Design II (3 cr)
Comm 335 Intercultural Communication (3 cr)
CSS 493 International Land Preservation and Conservation Systems (3 cr)
Econ 446 International Economics (3 cr)
Econ 447 Economics of Developing Countries (3 cr)
Engl 221 History of World Cinema I (3 cr)
Engl 222 History of World Cinema II (3 cr)
EnvS 225 International Environmental Issues Seminar (3 cr)
FCS 411 Global Nutrition (2 cr)
FCS 419 Dress and Culture (3 cr)
FLEN 307 The European Union (3 cr)
FLEN 308 European Immigration and Integration (3 cr)
FLEN 313 French/Francophone Literature in Translation (3 cr)
FLEN 324 German Literature in Translation (3 cr)
FLEN 331 Japanese Anime (3 cr)
FLEN 391 Hispanic Film (3 cr)
FLEN 393 Spanish Literature in Translation (3 cr)
FLEN 394 Latin American Literature in Translation (3 cr)
Fren 101 Elementary French I (4 cr)
Fren 102 Elementary French II (4 cr)
Fren 201 Intermediate French I (4 cr)
Fren 202 Intermediate French II (4 cr)
Fren 301 Advanced French Grammar (3 cr)
Fren 302 Advanced French Writing Skills (3 cr)
Fren 304 Connecting French Language and Culture (4 cr)
Fren 307 French Phonetics (4 cr)
Fren 308 Advanced French Conversation (3 cr)
Fren 407 French & Francophone Literatures (3 cr, max 9)
Fren 408 French and Francophone Culture and Institutions (3 cr, max 9)
Fren 410 French and Francophone Arts (3 cr)
Geog 165 Human Geography (3 cr)
Geog 200 World Regional Geography (3 cr)
Geog 350 Geography of Development (3-4 cr)
Geog 360 Population Dynamics and Distribution (3-4 cr)
Geog 365 Political Geography (3 cr)
Germ 101 Elementary German I (4 cr)
Germ 102 Elementary German II (4 cr)
Germ 201 Intermediate German I (4 cr)
Germ 202 Intermediate German II (4 cr)
Germ 301 Advanced German Grammar (3 cr)
Germ 302 Advanced German Speaking and Writing (3 cr)
Germ 306 Introduction to German Literature (3 cr)
Germ 420 Topics in German Culture and Literature - Themes (3 cr, max 6)
Germ 440 German Media through the Internet (3 cr)
Hist 101 History of Civilization (3 cr)
Hist 102 History of Civilization (3 cr)
Hist 180 Introduction to East Asian History (3 cr)
Hist 315 or LAS 315 Comparative African-American Cultures (3 cr)
Hist 366 Modern European Cultural and Intellectual History, 1880-1980 (3 cr)
Hist 372 History of England (3 cr)
Hist 414 History and Film (3 cr, max 6)
Hist 421 Pirates of the Caribbean and Beyond (3 cr)
Hist 438 or LAS 438 Modern Mexico and the Americas (3 cr)
Hist 439 or LAS 439 Modern Latin America (3 cr)
Hist 440 or LAS 440 Social Revolution in Latin America (3 cr)
Hist 441 or LAS 441 Slavery and Freedom in the Americas (3 cr)
Hist 455 Modern Europe (3 cr)
Hist 456 Anti-Semitism and the Holocaust (3 cr)

Hist 457 History of the Middle East (3 cr)
Hist 466 Eastern Europe Since 1774 (3 cr)
Hist 467 Russia to 1894 (3 cr)
Hist 468 Russia and Soviet Union Since 1894 (3 cr)
Hist 481 America's Wars in Asia (3 cr)
Hist 482 Japan, 1600 to Present (3 cr)
Hist 484 Modern China, 1840s to Present (3 cr)
Hist 485 Chinese Social and Cultural History (3 cr)
IS 325 The Contemporary Muslim World (3 cr)
IS 326 Africa Today (3 cr)
IS 350 Sport and International Affairs (3 cr)
IS 370 African Community, Culture, and Music (1-3 cr)
JAMM 490 Global Media (3 cr)
Japn 101 Elementary Japanese I (4 cr)
Japn 102 Elementary Japanese II (4 cr)
Japn 201 Intermediate Japanese I (4 cr)
Japn 202 Intermediate Japanese II (4 cr)
Japn 301 Japanese Reading (3 cr)
Japn 302 Japanese Writing (3 cr)
Japn 303 Japanese Speaking (3 cr)
LArc 390 Italian Hill Towns and Urban Centers (3 cr)
MusH 420 Studies in World Music (3 cr)
PolS 205 Introduction to Comparative Politics (3 cr)
PolS 237 International Politics (3 cr)
PolS 338 American Foreign Policy (3 cr)
PolS 381 European Politics (3 cr)
PolS 420 Introduction to Asian Politics (3 cr)
PolS 449 World Politics and War (3 cr)
PolS 480 Politics of Development (3 cr)
PolS 487 Political Violence and Revolution (3 cr)
Soc 323 Political Economy (3 cr)
Soc 336 Comparative Criminal Justice Systems (3 cr)
Soc 340 Social Change & Globalization (3 cr)
Soc 343 Political Sociology (3 cr)
Soc 367 or Phil 367 Global Justice (3 cr, max arr)
Soc 440 Post-Colonialism (3 cr)
Span 101 Elementary Spanish I (4 cr)
Span 102 Elementary Spanish II (4 cr)
Span 104 Elementary Spanish Transition (4 cr)
Span 201 Intermediate Spanish I (4 cr)
Span 202 Intermediate Spanish II (4 cr)
Span 301 Advanced Grammar (3 cr)
Span 302 Advanced Composition (3 cr)
Span 303 Spanish Conversation (3 cr)
Span 305 Culture and Institutions of Spain (3 cr)
Span 306 or LAS 306 Culture and Institutions of Latin America (3 cr)
Span 308 Proficiency in Reading (3 cr)
Span 310 Spanish for Professions (3 cr)
Span 401 or LAS 401 Readings: Spanish Literature (3 cr)
Span 402 or LAS 402 Readings: Spanish American Literature (3 cr)
Span 411 Chicano and Latino Literature (3 cr)
Span 412 Spanish Short Fiction (3 cr)
Span 413 Spanish American Short Fiction (3 cr)
Span 419 Latin America Theatre Through Literature (3 cr)
Span 420 Modern Spanish Theatre Through Literature (3 cr)
The 468 Theatre History I (3 cr)
The 469 Theatre History II (3 cr)

J-3-f. Integrated Studies - ISem 101 Integrative Seminar (3 cr), ISem 301 Great Issues (1 cr), and Senior Experience. The purpose of these courses is to provide students with the tools of integrative thinking, which are critical for problem solving, creativity and innovation, and communication and collaboration. Integrated learning is the competency to attain, use, and develop knowledge from a variety of disciplines and perspectives, such as the arts, humanities, sciences, and social sciences, with disciplinary specialization (to think divergently, distinguishing different perspectives), and to incorporate information across disciplines and perspectives (to think convergently, re-connecting diverse perspectives in novel ways). It is a cumulative learning competency, initiated as a first-year student and culminating as reflected in a graduating senior.

One course from ISem 101 (open to first-year students only). One credit of ISem 301. One course chosen from the approved Senior Experience courses listed below.*

Approved Senior Experience Courses:

AgEc 478 Advanced Agribusiness Management (3 cr)
Art 490 BFA Art/Design Studio (6 cr, max 12)
Art 491 Information Design (3 cr, max 9)
Art 495 BFA Senior Thesis (2 cr, max 4)
BAE 478 Engineering Design I (3 cr)
BAE 479 Engineering Design II (3 cr)
Biol 405 Practicum in Anatomy Laboratory Teaching (2-4 cr. Max 8)
Biol 407 Practicum in Biology Laboratory Teaching (2-6 cr, max 12)
Biol 408 Practicum in Human Physiology Laboratory Teaching (2-4 cr, max 8)
Biol 411 Senior Capstone (2 cr)
Biol 495 Research in Molec/Cell/Dev Biology (cr arr)
Biol 496 Research in Ecology and Evolution (cr arr)
Biol 497 Research in Anatomy and Physiology (cr arr)
Bus 490 Strategic Management (3 cr)
CE 494 Senior Design Project (3 cr)
ChE 452 Environmental Management and Design (3 cr, max arr)
ChE 454 or MSE 454 Process Analysis and Design II (3 cr)
CS 481 CS Senior Capstone Design II (3 cr)
CSS 475 Conservation Management and Planning II (4 cr)
ECE 481 EE Senior Design II (3 cr)
ECE 483 Computer Engineering Senior Design II (3 cr)
Econ 490 Economic Theory and Policy (3 cr)
Engl 440 Reading, Writing, and Rhetoric (3 cr)
Engl 490 Senior Seminar (3 cr)
EDCI 401 Internship Seminar (1 cr)
EnvS 497 Senior Research (3 cr)
FCS 486 Nutrition in the Life Cycle (3 cr)
Fish 418 Fisheries Management (4 cr)
Fish 495 Seminar (1 cr)
For 424 Forest Dynamics and Management (4 cr)
For 427 Prescribed Burning Lab (3 cr)
FS 489 Food Product Development (3 cr)
Geog 493 Senior Capstone in Geography (3 cr)
Geol 490 Field Geology II (3 cr)
Hist 401 Seminar (cr arr)
Intr 401 Career and Leadership Development (2 cr)
IS 495 International Studies Senior Seminar (3 cr)
LArc 480 The Emerging Landscape (3 cr)
ME 424 Mechanical Systems Design I (3 cr)
ME 426 Mechanical Systems Design II (3 cr)
MMBB 401 Undergraduate Research (1-4 cr, max 8)
MMBB 497 Practicum in Teaching (2 cr)
MvSc 486 Marketing, Implementation and Evaluation for Healthy, Active Lifestyles (1 cr)
REM 456 Integrated Rangeland Management (3 cr)
RMat 495 Product and Process Development and Commercialization (3 cr)
The 483 Senior Capstone Project (1 cr)
WLF 492 Wildlife Management (4 cr)

**Within the J-3-d, J-3-e, J-3-f categories, students must complete a total of 18 credits, with courses from at least four different disciplines. The ISem courses may not be counted towards the four discipline requirement.*

J-4. Grade Requirements. To qualify for the baccalaureate degree, a candidate must have a UI grade-point average of 2.00 or better. See exceptions under E-4 and E-5.

J-5. Credit Limitations. A candidate may count toward a baccalaureate degree no more than:

J-5-a. Seventy credits earned at junior or community colleges, or one-half of the total credits required for a student's intended baccalaureate degree, whichever is the higher number.

J-5-b. Forty-eight credits in any combination of credits granted for the following types of courses: credit based on test scores (for CLEP, College Board advanced-placement tests, ACT, SAT, COMPASS), credit by examination (challenge), experiential learning, independent study, technical competence, vertically-related course credit, and vocational-technical or military school courses. This 48-credit limitation may be exceeded for good cause with the approval of the Academic Petitions Committee (file petition through dean's office). Note: credits earned through any combination of external study and technical competence cannot exceed a maximum of 32 of the allowable 48 credits.

J-5-c. Twelve credits earned under the pass-fail option (see B-11).

J-5-d. Six credits in remedial-level courses; to be counted, these credits must have been earned before the fall semester 1983; no such credits earned after summer session 1983 may be counted.

J-6. Assignment of Curricular Requirements (Catalog Issue). In addition to fulfilling the general university requirements for degrees, candidates for baccalaureate degrees must satisfy the particular requirements speci-

fied for their curricula. The pertinent requirements are those contained in the most recent UI catalog issue that was in effect at the time of, or subsequent to, the candidate's initial enrollment as a degree-seeking student at UI. The earliest catalog issue available to students readmitted as a degree-seeking student at the UI, is the most recent catalog at the time of re-enrollment. A catalog issue is valid for a maximum of seven years from its effective date. The effective date of a catalog issue is the first Monday following spring graduation.

J-7. Second Baccalaureate Degree.

J-7-a. Students may concurrently pursue two different majors leading to two different baccalaureate degrees (e.g., B.A. and B.S.Ed.) from UI by working to fulfill the general university requirements for one degree and the departmental and college subject-matter requirements for each. For exceptions to this regulation, see notes with the curricula in general studies and agricultural science and technology in Parts 4 and 5, respectively. Students who plan to pursue two degrees concurrently should develop a schedule of studies that combines the degree requirements and present it to the dean(s) of the college(s) concerned as early as possible, preferably before the end of the junior year.

J-7-b. Students who have earned a baccalaureate degree at UI and who wish to complete the requirements for a different major and receive a second baccalaureate degree must earn at least 16 credits as an undergraduate student in UI courses other than those offered by independent study after the receipt of the first degree and fulfill the departmental and college subject-matter requirements for the second degree. (See B-9.) Students may return to UI and earn a second degree carrying the same name as one previously granted by UI so long as the requirements for a different major are satisfied and the students earn at least 16 credits as an undergraduate student in UI courses other than those offered by independent study after the receipt of the first degree. For exceptions to this regulation, see notes with the curricula in general studies and agricultural science and technology in parts 4 and 5, respectively. This regulation does not apply to students who were concurrently pursuing two different degrees under regulation J-7-a or to students who were concurrently pursuing two different majors under regulation J-8.

J-7-c. Students who have a baccalaureate degree from another recognized institution and who wish to earn another baccalaureate degree at UI, must earn a minimum of 32 credits as an undergraduate student in upper-division UI courses other than those offered by independent study after the receipt of the first degree and fulfill the departmental and college subject-matter requirements for the degree.

J-8. Degree with Double Major. Students may complete two different majors (curricula) offered under a particular baccalaureate degree and have both majors shown on their academic records and diplomas, e.g., Bachelor of Arts with majors in history and political science. Each of the majors must lead to the same degree. When majors leading to different degrees are involved, see the requirements applicable to the awarding of a second baccalaureate degree (J-7).

J-9. Academic Minors.

J-9-a. An academic minor is a prescribed course of study consisting of 18 or more credits which supplements an undergraduate major at the University of Idaho. For descriptions of minor curricula, see the programs of the degree-granting units in the individual departmental section. In the following paragraphs of J-9, "minor" denotes "academic minor," which is to be distinguished from "teaching minor"; for information on the latter, see the Department of Curriculum and Instruction section.

J-9-b. A student may pursue one or more minors in addition to a major by filing with the registrar a declaration of intention to do so. Completion of a minor is required only if specified by the degree-granting unit, but any minor completed is recorded on the student's academic record.

J-9-c. Transfer credits may be applied to a minor with the approval of the department offering the minor; however, the last nine credits applied to completion of the minor must be earned in UI courses, through study abroad, or through student exchange programs, and may not include credits earned through correspondence study.

J-9-d. A student may complete an undergraduate minor even though he or she has already earned a baccalaureate degree at the University of Idaho. If the sole objective is to complete an undergraduate minor, the student should declare a "Minor-Only" curriculum in the department offering the minor. Students who declare a minor-only curriculum are not eligible for financial aid funds (see the Student Financial Aid Services section).

K - Academic Honors

K-1. Graduation with Honors. Candidates for baccalaureate degrees are graduated with honors if they satisfy ONE of the following conditions. Note: Graduation with honors is determined at the point in time when the degree is posted to the student's academic record based upon the student's grade point average at that time. Grade corrections subsequent to the posting of the degree will be processed by the Registrar's Office but will not impact the honors designation for the student.

1. Their cumulative UI grade-point averages are as specified in K-1-a, K-1-b, or K-1-c and they have earned at least 56 credits in UI courses OR
2. Both their cumulative UI grade-point averages AND their grade-point average from all sources (the overall GPA on Banner) are as specified in K-1-a, K-1-b, or K-1-c, and they have earned at least 32 credits in UI courses.

No credits earned through correspondence study, bypassed courses, credit by examination, College Level Examination Program, experiential learning, or technical competence may be counted among these 56 or 32 credits. Candidates for the degree of Juris Doctor are graduated with honors under the same conditions, except the grade-point average considered is based exclusively on the student's record in the College of Law. Honors are not awarded with degrees earned through the College of Graduate Studies.

K-1-a. Candidates whose grade-point averages would place them within the top 3 percent of graduates from their respective colleges over the preceding five years are graduated **summa cum laude** (with highest distinction).

K-1-b. Candidates whose grade-point averages would place them within the top 6 percent (but below the top 3 percent) of graduates from their respective colleges over the preceding five years are graduated **magna cum laude** (with great distinction).

K-1-c. Candidates whose grade-point averages would place them within the top 10 percent (but below the top 6 percent) of graduates from their respective colleges over the preceding five years are graduated **cum laude** (with distinction).

K-2. Dean's List. Undergraduate students who are registered for at least 12 credits (10 in the College of Law) and attain a grade-point average of 3.50 (3.00 in the College of Law) for a given semester are placed on lists prepared for the college deans. [Note: The 3.50 GPA is based on 12 graded credit hours (GPA hours) and does not include courses graded pass/fail.] These lists are publicized within UI and are distributed to news agencies.

L - Academic Standing, Probation, Disqualification, and Reinstatement

L-1. Academic Standing for Undergraduate Students. Students are considered to be in good academic standing when they have a semester and a UI cumulative grade-point average of 2.00 or higher.

L-2. Academic Probation for Undergraduates.

L-2-a. At the end of a semester, undergraduate students who do not attain a UI cumulative grade-point average of 2.00 are placed on academic probation for the next semester of enrollment and are referred to the appropriate academic dean for advising. The effect of this probationary status is to serve notice that if a student's cumulative record at the end of the next semester in residence is unsatisfactory he or she will be disqualified and ineligible to continue at UI. Students in their first semester of college who achieve less than a 1.0 grade point average at the end of the semester will be placed on first academic disqualification rather than probation (see L-4-a).

L-2-b. Students on academic probation who attain a UI cumulative grade-point average of 2.00 or higher are automatically removed from probation.

L-2-c. Students on academic probation who attain a semester grade-point average of 2.00 or higher during the next or subsequent semester after being placed on probation, but whose cumulative grade-point average is still below 2.00 remain on academic probation.

L-2-d. Because final grades for a probationary term may not be available until after a student has registered for an ensuing term, such registration must be considered tentative until the student's ac-

ademic standing may be determined. If the student is disqualified at the end of the probationary term, the registration for the ensuing term is invalid and will be cancelled unless the student is reinstated (see L-4).

L-3. Academic Disqualification for Undergraduates.

L-3-a. Students in their first semester of college who achieve less than a 1.0 grade point average at the end of the semester will be placed on first academic disqualification.

L-3-b. Students on academic probation with less than 33 cumulative net credits will be disqualified if their semester grade-point average falls below a 2.00 and their UI cumulative grade-point average falls below a 1.80. Students in this group with a semester grade-point average below a 2.00 and a UI cumulative GPA between 1.80 and 1.99 will remain on probation.

L-3-c. Students on academic probation with 33 or more cumulative net credits will be disqualified at the end of a probationary semester if both their UI cumulative grade-point average and their semester grade-point average are below 2.00.

L-3-d. To reregister after being academically disqualified, students must be reinstated. (Students must contact their respective college, prior to the beginning of the semester, for the deadline to petition for reinstatement.)

L-3-e. Because final grades for a probationary term may not be available until after a student has registered for an ensuing term, such registration must be considered tentative until the student's academic standing may be determined. If the student is disqualified at the end of the probationary term, the registration for the ensuing term is invalid and will be cancelled unless the student is reinstated (see L-4).

L-4. Academic Reinstatement for Undergraduates.

L-4-a. After a first academic disqualification, students may be reinstated (i.e., have their eligibility to continue restored) by petition to and favorable action by the college in which they are enrolled OR by remaining out of UI for at least one semester. Summer does not qualify as a one semester absence.

L-4-b. After a second academic disqualification, students may be reinstated at any time only by petition to and favorable action by the college in which they are enrolled.

L-4-c. Students academically disqualified for a third time may be reinstated only after successful petition to the college in which they are enrolled and the Academic Petitions Committee.

L-4-d. Students who have been reinstated may continue to register on probation so long as they attain a 2.00 or better grade-point average for each semester following a disqualification.

L-4-e. Students who are academically disqualified and reinstated are reinstated on academic probation.

L-5. Academic Warning for Undergraduates. Students not on probation who attain a grade-point average below 2.00 during a given semester without dropping below a UI cumulative grade-point average of 2.00 receive an academic warning. Although this does not affect their academic standing or their eligibility to register, the students are referred to the appropriate academic dean for advising.

L-6. Summer Session. Academic disqualification at the end of a spring semester does not affect a student's eligibility to continue in the immediately ensuing summer, but to register in any subsequent term the student must be reinstated. Academic standing is not computed at the end of summer session.

L-7. Fresh Start. Qualified undergraduate students who wish to reenter the university in a specific degree program after a period of absence will be allowed a "Fresh Start" as described below.

L-7-a. To qualify for a Fresh Start, students (1) must not have been enrolled in any college or university as a full-time matriculated student for at least the five years immediately before applying for the program, (2) must have a UI cumulative GPA of less than 2.00, and (3) must be approved for the program by the college dean that administers the academic program they wish to pursue.

L-7-b. Once the student has completed an additional 24 credits of course work with a Fresh Start cumulative GPA of at least 2.00 and has been in the program at least two semesters, the cumulative GPA will be reset to 0.00 as of the time of admission to the Fresh Start Program.

L-7-c. Students in the Fresh Start Program will be allowed a maximum of six credits of "W" during the first two semesters after admission to the program. If the Fresh Start is successfully completed, the count for the 20-credit limit on withdrawals (see C-2) will be reset to 0 as of the time of admission to the Fresh Start Program.

L-7-d. University probation and disqualification regulations apply throughout the Fresh Start process.

L-7-e. To graduate with honors, a student in the Fresh Start Program must have at least 56 credits in UI courses after the Fresh Start (see K-1). Fresh Start Program participants are eligible for the dean's list (see K-2) on a semester-by-semester basis.

L-7-f. Application forms and explanatory materials are available at the Registrar's Office.

L-8. Academic Standing for Graduate Students. Graduate students are considered to be in good standing when they have a semester and cumulative grade-point average of 3.00 or higher.

L-9. Academic Probation for Graduate Students.

L-9-a. A graduate student is placed on academic probation after any semester or summer session in which a GPA of less than 3.00 is earned in courses placed on the graduate transcript, regardless of the student's cumulative GPA.

L-9-b. Graduate students on academic probation who attain a semester and cumulative grade-point average of 3.0 or higher are automatically removed from academic probation.

L-9-c. Graduate students on academic probation who attain a semester GPA of 3.00 or higher during the next or subsequent semester or summer session after being placed on probation, but whose cumulative GPA is still below a 3.00, will remain on academic probation.

L-10. Academic Disqualification for Graduate Students. A graduate student will be disqualified if a semester GPA of less than 3.00 (regardless of cumulative GPA) is earned on courses placed on the graduate transcript during the second, consecutive semester or summer session

L-11 Academic Reinstatement for Graduate Students.

L-11-a. A graduate student may be reinstated after disqualification under the following conditions: the student may not enroll as a graduate student for at least one semester (fall or spring), must get the positive recommendation of his or her program's administrator, and must gain approval from the College of Graduate Studies.

L-11-b. Reinstatement is granted for a specific semester only and the student must enroll in that semester.

L-11-c. The student must receive a term GPA of at least 3.0 the first semester back in the College of Graduate Studies.

L-11-d. A reinstated student will be placed on probation if their cumulative GPA is below a 3.00.

L-11-e. A reinstated student will be disqualified after the second consecutive term where a 3.0 GPA was not achieved (see L-10).

L-12. Regulation L does not apply to law students. See the College of Law Announcement for information for law students.

M - Attendance, Field Trips, and Official Student Travel

M-1. Attendance. Instructors will make clear at the beginning of each course the extent to which grades are dependent on attendance and in-class participation. Students are responsible for class attendance. Students are accountable for communicating with the instructor and making up missed work in the event of any absence. Instructors shall provide reasonable opportunity for students to make up work when the student's absence from class resulted from: (a) participation in official university activities and programs, (b) personal illness, (c) family illness and care, or d) other compelling circumstances.

M-2. Field Trips and Official Student Travel. "Field trip" is defined as any required, course-related student travel that exceeds 25 air miles from the campus or conflicts with other classes that the students involved are taking. (A trip taken within 25 air miles during the class scheduled for the particular class or at a time that does not conflict with other classes the students involved are taking is a "local trip," not a "field trip.")

M-2-a. Missed Class Work. Students participating in field trips, as defined above, or other official UI activities are responsible for conferring in advance with the instructors of any classes that will be missed in order to be eligible for making up missed class work. (See M-1.)

M-2-b. Approval of Course-Related Field Trips. Administrative approval for course-related field trips will be obtained by the person in charge of the trip as follows:

1. Each field trip as identified in the catalog course description requires prior approval by the department in accordance with divisional procedures (application for approval should be made at least one week before the expected departure).
2. Each field trip NOT identified in the catalog course description requires prior approval by the departmental administrator, and the dean of the college (application for approval should be made at least two weeks before the expected departure).

M-2-c. Approval of Other Official Student Travel. Administrative approval for official student travel that is NOT course related is obtained from the vice president for student affairs (application for approval should be made at least two weeks before the expected departure).

M-2-d. Costs. When a college can cover all or part of the cost of a course-related field trip from allocated funds, the college should do so. If the college cannot cover the cost, or a portion thereof, the cost (or remaining portion) must be borne in proportionate share by the students in the course. Students missing required field trips identified in the catalog course description must pay their proportionate shares.

M-2-e. Field-Trip Completion Deadline. All field trips and other UI-approved student travel must be completed before 7:30 a.m. on the fifth day of classes before the start of final examinations. Part3 Pg. 4 of 6

M-2-f. Vehicle Information. Information concerning privately owned vehicles (registration, insurance, driver's license, etc.) to be used for field trips or other official student travel must be filed in the Risk Management Office (Rm. 209, Admin. Bldg.). Administrators of departments and divisions are responsible for ensuring that the required information is filed before the initial use of each privately owned vehicle in a given academic year.

M-3. Accommodation of Religious Observances in the Administration of Examinations. When tests or examinations fall on days objectionable to a student because of religious beliefs, the student should contact the instructor as soon as possible. The instructor may require the student to submit a concise, written statement of the reasons for the request. If the request appears to be made in good faith, the instructor should make alternative arrangements for the administration of the examination or test. If the instructor believes the request not to be in good faith, or if the instructor and the student are unable to agree on arrangements, the student or the instructor should seek the assistance of the departmental administrator, dean, or provost, in that order.

M-4. Drop for Non-attendance. Students are responsible for notifying their instructors through the Registrar when extenuating circumstances not covered as an official absence as defined in M-1 prevent their attendance during the first week of the semester. Instructors may notify the Registrar to drop students who have not attended class or laboratory meetings nor notified the instructor through the Registrar by the end of the sixth business day following the start of the class. Valid reasons for missing classes do not relieve the student of making up the work missed.

N - Class Rating

Class ratings of undergraduates are determined as follows: Sophomore-26 credits, Junior-58 credits, and Senior-90 credits.

O - Miscellaneous

O-1. Credit Requirements for Full-Time Students.

O-1-a. For purposes other than fees, UI students in all divisions except the College of Graduate Studies and the College of Law must carry 12 credits each semester or summer session to be classified as full time.

O-1-b. For fee and tuition purposes only, students carrying eight or more credits (or equivalent in audits and zero-credit registrations) and all teaching/research assistants on full appointment, regardless of the number of credits they register for, are classified as full-time students.

O-1-c. Students in the College of Graduate Studies are considered full time: (1) when registered for nine credits (or equivalent) of course and/or thesis work; or (2) when on full-time appointments as teaching assistants or research assistants.

O-1-d. Veterans and war orphans attending UI on the G.I. Bill must carry certain minimum credit loads to be considered by the Veterans' Administration for benefits as indicated in the table accompanying this regulation. (Audits do not count; repeats and reviews may be included when the student's advisor certifies that the course is required in the student's curriculum or is needed to remove a deficiency or to provide essential background for the student's program; file a copy of the program with the veterans' clerk at the Office of Dean of Students.)

Minimum Credit Loads for Veterans' Benefits

Benefits	Academic Year Undergraduate	Academic Year Graduate	Summer Session Undergrad & Grad
Full	12 or more	9 or more	Must be Arranged
Three-fourths	9-11	6-8	
Half	6-8	3-5	
Fees and tuition only	Fewer than 6	Fewer than 3	

O-1-e. Students in the College of Law are considered full time when registered for 10 credits (or equivalent) of course work.

O-1-f. The president, vice president, and senators of the Associated Students University of Idaho are considered full time when carrying at least the following credit loads: president, three credits; vice president and senators, six credits. The editor and associate editor of the *Argonaut* are considered full time when paying full-time student fees and carrying at least the following credit loads: editor, three credits; associate editor, six credits.

O-2. Academic Performance. Instructors and students are responsible for maintaining academic standards and integrity in their classes. Consequences for academic dishonesty may be imposed by the course instructor. Such academic consequences may include but cannot exceed a grade of "F" in the course. If the student deems the grade unfair, he or she may appeal through the appropriate departmental administrator and college dean, and finally to the Academic Hearing Board.

In addition to the academic consequences, disciplinary penalties for academic dishonesty may include suspension or expulsion and must be handled by the Student Judicial System, which is described in the Student Code of Conduct section of the *"Policies & Information of Interest to Students"* booklet and the *Faculty-Staff Handbook.*

O-3. Application for Degrees. In the semester prior to the completion of degree requirements, candidates for degrees must pay the graduation fee (graduate students may also need to pay a binding and microfilming fee) and file an application with the dean of the college through which the degree is offered. If two degrees are to be received concurrently, separate applications must be filed with the dean(s) of the college(s) concerned. The application must be filed with the dean after the graduation, binding, and microfilming fees have been paid at the Student Accounts/Cashiers Office. (See "Fees and Expenses" .) The deadline for filing applications for degree without a late service charge, is the final day of the Fall semester for degrees to be awarded in May, and the final day of the Spring semester for degrees to be awarded in August or December.

O-4. Commencement. Formal commencement exercises are held at the close of the fall and spring semesters; however, diplomas are also issued at the close of the summer session to such candidates as have completed their graduation requirements at that time. All students who graduate in the summer, fall, or spring are entitled to participate in the commencement exercises. Students must indicate on their application for degree whether they intend to participate in the formal commencement exercises so that appropriate arrangements can be made. Reservations for caps, gowns, and hoods must be made by the date specified by the registrar. Diplomas are ready about six weeks after the end of the academic session in which graduation requirements are completed.

O-5. Limitations on Class Size.

O-5-a. Limitations on class size must have prior approval by the dean of the college in which the course is offered. If it becomes necessary to limit the size of a class on a continuing basis (more than two semesters), the limitations must be approved through faculty channels--University Curriculum Committee and university faculty--and be made part of the catalog description of the course.

O-5-b. Preference for enrollment in courses with limitations on class size is given to students enrolling in them for the first time. At the op-

tion of the department, students repeating courses for any reason may be placed on standby status. Students in that status are allowed to register for the course, if there is available space, by permission of the department offering the course. In no case may a student be held in standby status for any one course for more than two consecutive semesters.

O-5-c. Any student denied admission to a class may appeal in writing to the provost for a review of the circumstances involved.

O-6. Students' Right to Change Course Sections. Students have the right to change from one section of a course for which they are qualified to another section of the same course during the first two weeks of classes so long as the section into which they wish to transfer has not reached the maximum number of students that may be accommodated. (See appeal procedure in O-5.)

O-7. Availability of Instructors' Names. As a matter of principle, students and their academic advisors and deans have the right to know the names of the instructors who will teach course sections to be offered during the immediately ensuing semester or summer session. Departments are required to submit the names of instructors for all course sections for publication in the Class Schedule. Where it is impossible to determine the teaching assignments of individual members of the instructional staff before the deadline for the Class Schedule, departments are responsible for making information concerning adjustments in teaching assignments generally available to students, advisors, and deans at such time as they occur.

O-8. Confidentiality of Academic and Counseling Records. See the student records policy in the booklet entitled "Policies and Information of Interest to Students," available from the Office of the Dean of Students (UCC 241), the Office of the Vice President for Student Affairs (Student Union Building), and other locations around the campus.

O-9. Deviations from Established Class Schedules.

O-9-a. The provost periodically reminds deans and departmental administrators of their responsibility to ensure that classes meet in conformity with the course descriptions and *Class Schedule*. (It is the responsibility of the University Curriculum Committee to see that the time requirements stated in new or revised course descriptions satisfy general regulation D-1, "Credit Defined"; it is the responsibility of the registrar to see that listings in the Class Schedule conform to the respective course descriptions.)

O-9-b. The cancellation of a particular class session or sessions on an occasional basis, normally due to unusual circumstances affecting the instructor of or the students in the class, is a matter for the instructor's discretion. Nonetheless, instructors should keep such cancellations to a minimum, be satisfied that the grounds for cancellation are defensible, give as much advance notice of the cancellation as is possible, and, if time permits, obtain the concurrence of the departmental administrator in advance. Frequent failure of an instructor to meet classes, except for reasons clearly recognizable as adequate, may be grounds for disciplinary action.

O-9-c. The scheduling of required class meetings at times other than those specified in the Class Schedule or authorized in the course descriptions (e.g., field trips) requires approval by the provost. In addition to securing the provost's approval, the instructor must give the students at least two weeks' notice, provide alternative means of completing class requirements for students who have irreconcilable conflicts with the irregular meetings, and, normally, cancel regularly scheduled class meetings equivalent to the irregular meetings. (If it is proposed that such irregular meetings be made a continuing practice, they are to be incorporated in the course description and the revised description submitted to the University Curriculum Committee for routine faculty approval.)

O-9-d. Authorized class meetings at times other than those shown in the Class Schedule is one of the topics that instructors are to discuss at the first or second class session.

COLLEGES AND RELATED UNITS

Academic Certificates

The University offers Academic Certificates in various academic disciplines. An academic certificate is defined as a coherent body of work designed to reflect specialized expertise.

An academic certificate must include at least 12 credits of coursework. All required coursework must be completed with a grade of "C" or better unless the certificate specifies a higher grade requirement. Any student (undergraduate or graduate) may pursue an academic certificate by contacting the academic department in which it is offered.

Up to six of the required credits may consist of course work completed at another regionally accredited institution.

Course work must not be more than five years old unless it is being used in conjunction with the completion of a graduate degree.

Enrollment in 500-level courses is limited to students with a baccalaureate degree from a regionally accredited institution with a minimum 3.00 cumulative grade point average and applicable undergraduate seniors (see Regulation B-7 and the College of Graduate Studies section of this catalog).

The curricular requirements of the academic certificates can be found in the relevant department in the catalog. The curricular requirements of the University of Idaho Leadership academic certificate can be found below.

University of Idaho Leadership Undergraduate Academic Certificate

The Leadership Program develops general leadership skills that are needed and valued in the workplace and community but not commonly taught in the traditional college classroom. This 18-credit program, open to all undergraduates, consists of courses and structured practicum that provide academic knowledge mixed with practical, hands-on experience. An application form must be filed in their college office. The college associate deans or other college designees will advise students and approve applications, study plans, practicum, and course substitutions.

General Leadership and Communication Courses (12 cr). Students must complete 12 credits with a minimum of 6 cr in leadership and 3 cr in communication courses.

Leadership courses (minimum of 6 cr):

AgEd 450	Developing Leaders (2 cr)
Bus 311	Introduction to Management (3 cr)
Bus 413	Organizational Behavior (3cr)
Bus 418	Organization Design and Changes (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
MS 101, MS 111	Introduction to Military Science/Leadership Lab (2 cr)
MS 102, MS 112	Fundamentals of Leadership and Management/Leadership Lab (2 cr)
MS 201, MS 211	Applied Leadership and Management/Leadership Lab (3 cr)
MS 202, MS 212	Applied Leadership and Management/Leadership Lab (3 cr)
MvSc 429	Leadership, Pedagogy and Program Planning for Healthy Active Lifestyles (3 cr)
Rec 254	Camp Leadership in Recreation and Sport (3 cr)

Communication courses (minimum of 3 cr):

Art 121	Integrated Design Process (2 cr)
Art 122	Design Process II (3 cr)
Comm 233	Interpersonal Communication (3 cr)
Comm 235	Organizational Communication (3 cr)
Comm 332	Communication and the Small Group (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 431	Professional Presentation Techniques (3 cr)
CSS 387	Environmental and Communication Skills (3 cr)
Engl 207	Persuasive Writing (3 cr)
Engl 313	Business Writing (3 cr)
Engl 316	Environmental Writing (3 cr)
Engl 317	Technical Writing (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 252	Introduction to Public Relations (3 cr)

Leadership Development Courses (6 cr). Students must complete 6 cr with a minimum of 2 cr each in leadership practicum and service practicum.

498 Intern:	Practicum in Leadership (2-4 cr). Supervised leadership development through on-campus or off-campus organizations, living groups, etc.
498 Intern:	Practicum in Service (2-4 cr). Supervised university or community service such as tutoring, mentoring, teaching, etc.

College of Agricultural and Life Sciences

John Foltz, Term Dean (53 Iddings Wing, Ag. Sc. Bldg.; 208/885-6681); Charlotte Eberlein, Associate Dean and Director of the University of Idaho Extension; Don Thill, Associate Dean and Director of the Idaho Agricultural Experiment Station; Larry Makus, Term Associate Dean and Director of Academic Programs.

The College of Agricultural and Life Sciences provides quality programs in agricultural, food, family and consumer sciences, and related areas to all of Idaho. In addition to academic programs, the college also advances knowledge in these areas by research conducted through the Idaho Agricultural Experiment Station and provides information transfer and application of new knowledge to the state and the nation through the Cooperative Extension System. The college also actively participates in international development and student and faculty exchange programs around the world. The College of Agriculture was established in 1901 and was renamed to the College of Agricultural and Life Sciences in 2001. The Margaret Ritchie School of Family and Consumer Sciences became part of the college in 1983.

Advantages

The College of Agricultural and Life Sciences offers a quality education in a professional and friendly atmosphere. Each student has a faculty advisor who is readily available to assist in academic and career planning. There is also a peer advising program to help first-time students become acquainted with the college and the university. Undergraduate students often have the opportunity to experience their major by working on research projects and internships directed by faculty members. The college also offers leadership opportunities through 25 departmental and college student organizations.

Faculty

The faculty are the key to quality education. In the College of Agricultural and Life Sciences, there is a low student/teacher ratio and most classes are taught by faculty members. They bring to their students a strong commitment to teaching and a richness of depth, experience, and research.

Units

The College of Agricultural and Life Sciences offers 21 majors through 8 academic units. The units are Agricultural Economics and Rural Sociology; Agricultural Education and 4-H Youth Development; Animal and Veterinary Science; Biological and Agricultural Engineering; School of Family and Consumer Sciences; School of Food Science; and Plant, Soil and Entomological Sciences.

Facilities of the College

The College of Agricultural and Life Sciences is housed in five buildings on campus and in many other facilities around the state. Some of the unique facilities include a child development laboratory, student computer laboratories, a state-of-the-art biotechnology research laboratory, an agricultural engineering laboratory, a food science and toxicology research center, and research farms of more than 2,500 acres for beef, dairy, sheep, plant science, and other programs. In addition to facilities

at Moscow, there are offices in 42 counties and research and extension centers at 10 locations throughout Idaho.

Agricultural Experiment Station

The Idaho Agricultural Experiment Station was established in 1892 as the research function of the College of Agricultural and Life Sciences and has the responsibility to conduct applied and basic investigations leading to problem solving and new knowledge for agricultural industries, rural communities, and family living. The Idaho Agricultural Experiment Station is coordinated with and provides research for teaching and extension to more effectively meet the needs of Idaho citizens.

The Idaho Agricultural Experiment Station is integrated into all departments of the college. Thus, most of the college's teaching faculty also have partial research appointments in the experiment station. Other faculty members have combined extension and research appointments and some are assigned to full-time research.

The Idaho agricultural research program is statewide. Research is conducted in a number of areas related to agriculture and on all major agricultural commodities. The center for the research program is located on the Moscow campus. In addition, there are 10 research and extension centers in strategic agricultural areas around the state where resident research and extension personnel are located.

The Idaho Agricultural Experiment Station shares the responsibility of developing and educating future scientists through undergraduate research and graduate assistantship programs. Currently, there are approximately 177 graduate students enrolled in the College of Agricultural and Life Sciences, most are on assistantships or stipends. These appointments are generally for two years at the Master of Science level and for three years in Ph.D. programs, during which time the students conduct research as a part of their graduate education.

University of Idaho Extension

The Cooperative Extension System was established by the Smith-Lever Act, signed May 8, 1914, to help extend research to the people of the United States in order to improve their farms, families, and communities. The Idaho legislature approved the Cooperative Extension concept in 1915. In 1917, additional state legislation brought the county boards of commissioners into the cooperative three-way federal, state, and county partnership.

The Extension System is an integral part of the University of Idaho and the College of Agricultural and Life Sciences and is administratively coordinated with the teaching and research functions of the college. The extension function is organized to extend the knowledge created through research to the people of the state of Idaho so that they can apply the findings to their particular situations, thereby solving their problems and improving their quality of life.

The headquarters of the University of Idaho Extension is in Moscow. District offices are located at Coeur d'Alene, Boise, Twin Falls, and Idaho Falls. The state is the campus for University of Idaho Extension.

Educators live and work in the areas to which they are assigned by mutual agreement of the university and the counties involved. Agricultural, family and consumer sciences, and youth educators are located in 42 of Idaho's 44 counties and are also involved in multi-county programming.

Backstopping the county faculty are state Extension specialists located at Idaho Falls, Parma, Caldwell, Aberdeen, Coeur d'Alene, Boise, Sandpoint, Soda Springs, Twin Falls, Moscow, and Kimberly. These specialists, in turn, keep up to date by cooperating with research scientists of the College of Agricultural and Life Sciences and the U.S. Department of Agriculture.

Extension educational programs are conducted in five broad areas. These are: (1) Competitive Agriculture, (2) Natural Resources and the Environment, (3) Youth and Families, (4) Health, Food Safety and Quality, and (5) Community Development. Programs are both disciplinary and interdisciplinary and are designed to address the issues facing Idahoans. Major programming issues include water quality, 4-H, youth at risk, waste management, food quality, nutrition, community development, and agricultural sustainability.

The University of Idaho Extension helps people improve the social, economic, and environmental qualities of their lives through research-based education and leadership development focused on issues and needs. To accomplish this mission, the University of Idaho Extension works under the basic philosophy that programs planned with people will achieve greater success than programs planned for them. Extension takes the resources and research of the land-grant university out into the state so that Idaho's citizens can benefit from their university.

Degrees and Curricula Offered

Students in the College of Agricultural and Life Sciences are encouraged to pursue a broad education. In each curriculum, minimum requirements are specified in agriculture, life or family and consumer sciences disciplines; in the biological, physical, and social sciences; and in humanities to qualify the graduate to enter professional fields in agriculture, life and family and consumer sciences. Each curriculum also permits students to choose elective courses that will assist in personal and professional growth, development of communication skills, and a better understanding of the world in which we live.

Undergraduate. Baccalaureate degrees and major curricula offered by the College of Agricultural and Life Sciences include Bachelor of Science degrees in Agricultural and Life Sciences (with majors in Agricultural Science, Communication and Leadership; Agricultural Systems Management; and Sustainable Crop and Landscape Systems); Agricultural Education; Agricultural Economics (with majors in agricultural economics and agribusiness, Agricultural Science and Technology; Animal and Veterinary Science (with options in production, business, dairy science and science/preveterinary); Family and Consumer Sciences (with majors in child, family, and consumer studies; clothing, textiles, and design; and food and nutrition); and Food Science (with emphases in processing, business, science, and nutrition). Baccalaureate degrees in Agricultural Engineering and Biological Systems Engineering are offered through the College of Engineering. See the departmental sections below for the programs of study leading to these degrees.

Graduate. Graduate study leading to the degree of Master of Science is offered in Applied Economics; Agricultural Education; Animal Science; Entomology; Family and Consumer Sciences; Food Science; Plant Science; and Soil and Land Resources. Graduate study leading to the degree of Doctor of Philosophy is offered in Animal Physiology; Entomology; Food Science, Plant Science; and Soil and Land Resources. Both M.S. and Ph.D. programs in Biological and Agricultural Engineering are offered through the College of Engineering. Students must fulfill the requirements of the College of Graduate Studies and the units in which they study.

General College Requirements for Graduation

University Requirements. See regulation J for requirements that all students in the university must meet.

College Requirements. See the individual department section for degree requirements within each department.

Major Curricula

The specific requirements for the undergraduate majors are listed in the individual department section. Each student is assigned an advisor who assists in the planning of his or her program; however, the student has the final responsibility for the completion of all university, college, and departmental requirements.

College of Art and Architecture

Mark E. Hoversten, Dean (AA 202 83844-2461; 208/885-5423).

The College of Art and Architecture was re-established in October 2005, by mandate of the State Board of Education, to bring together the accredited programs in art and design, architecture, landscape architecture, interior design, and virtual technology and design. All majors will be engaged in professionally accredited, studio-based programs through inspired teaching and individual attention, developing in each student their unique qualities and qualifications for success. The students will also be connected with communities and other "clients" to gain immediate experience addressing real-world problems, and the rewards of making a difference, and inspired to thrive in a world of change by being Creative, Collaborative Leaders, within and outside their disciplines.

This combination of strong, accredited programs increases the resources available to students, and brings together a community of scholars with a common dedication to a sustainable, high quality physical environment. Additionally, this relationship promotes opportunities for integration, and prepares students for the interdisciplinary nature of contemporary practice. The quality of these programs has earned the college an excellent and widespread reputation.

Aptitudes

Students likely to succeed in the design and visual arts are those with a serious purpose and willingness to work hard. Equally important is the ability to visualize in three dimensions. Students need to be creative, inquisitive, and be able to effectively communicate both visually and verbally. Students should also value cultural and social diversity and be willing to learn in an interdisciplinary and cooperative manner. Some of the programs also require an ability and interest in the natural sciences and math.

Faculty

Faculty are the key to the quality of the educational experience obtained through the college programs. Combining the energies of a well recognized, scholarly and creative faculty with the innovative talents of experienced architects, artists, designers, and landscape architects, the college develops the skills of future professionals by preserving the balance between the theoretical and practical aspects in each of the programs represented. Within the design professions focus is placed on the application of contemporary design issues with an emphasis on environmental responsibility and the role of history and culture in meeting the diverse needs of a global society.

Facilities

The College of Art and Architecture is housed in several buildings located in the very center of the university campus. These buildings are in close proximity to university classroom buildings, library, administrative offices, and recreational facilities. The Ridenbaugh Hall Gallery on campus and the Prichard Gallery in downtown Moscow are administered by the college and provide support to all college disciplines. There are also two facilities located in Boise: The Idaho Urban Research and Design Center (IURDC) and the Integrated Design Lab (IDL).

Programs

There are five programs within the College of Art and Architecture: Architecture, Interior Design, Art and Design, Landscape Architecture, and Virtual Technology and Design. Each program represents unique disciplines that are integrated throughout their curriculum, research and service mission.

Fees

The State Board of Education has granted approval to charge a professional fee to all College of Art and Architecture students on a semester basis over and above general tuition and fees. This fee is used to directly support technology and computing for students and faculty, supplement operating budgets, hire temporary faculty, support the college's visual and design resource centers, cover professional accreditation costs, and partially support student field trips, clubs, and guest lecturers. See "Fees and Expenses" of this catalog.

Preparation and Admission

A statement of undergraduate and graduate admission requirements is included in this catalog. Students who contemplate entering the College of Art and Architecture with advanced standing from a junior college or other institution should complete as many of the first year and sophomore requirements listed in the curricula as possible. Certain courses are prerequisites to many advanced courses, and their omission will delay graduation. Certain grade-point averages and other conditions are required for entering into particular programs in the college. See the preface to each curriculum.

Programs and Degrees

All program curricula require three courses that provide foundation skills and knowledge for all majors in the College. These include Art 110, Art 112 and Art 121. Other foundation courses unique to each discipline are also required. The curricular options in each program provide an opportunity for interdisciplinary learning and outreach.

Architecture. The seamless Bachelor of Science/Master of Architecture, a six-year program fully accredited by the National Architectural Accreditation Board (NAAB). Students also earn the pre-professional B.S. Arch after four years and are qualified to pursue an accredited professional degree at other accredited schools. The M.S. Architecture is also offered as a non-accredited post-professional degree available to students with or without a previous architecture degree.

Interior Design. The Bachelor of Interior Design (B.I.D.) is a four-year degree accredited by the Council of Interior Design Accreditation (CIDA).

Art and Design. The Art and Design program offers the following undergraduate degrees: the Bachelor of Fine Arts (B.F.A.) in Studio Art and Design, the Bachelor of Science in Art Education (B.S. in Art Ed.), and the Bachelor of Arts (B.A.) in Art, with areas of emphasis in drawing, painting, sculpture, printmaking, graphic design and interaction design (web). Graduate degrees include the Master of Fine Arts, (M.F.A.) and the Master of Arts in Teaching (M.A.T.). The National Association of Schools of Art and Design (NASAD) accredits all programs.

Landscape Architecture. The Landscape Architecture program offers the new Bachelor of Science/Master of Landscape Architecture, a five and one-half year program that is the terminal professional degree. Students earn the B.S.L.A. after four years and may apply to the M.L. A. for an additional year and one-half. Students who have a baccalaureate degree in another discipline may apply directly to the three-year M.L.A.. Landscape Architecture programs are accredited by the Landscape Architecture Accreditation Board (LAAB).

Virtual Technology and Design. The Virtual Technology and Design (VTD) program offers a Bachelor of Science in Virtual Technology and Design, which emphasizes an interdisciplinary education, through a curriculum that integrates emerging technologies with the process of design. VTD is accredited through the National Association of Schools of Art and Design.

Graduate Programs

Please refer to the specific programs.

Scholarships and Awards

Scholarships and awards are available to students and prospective students.

See Student Financial Aid Services. Also, visit the College of Art and Architecture website or contact specific program administrators.

General Requirements for Graduation

University Requirements. See Regulation J for the all-university requirements for graduation.

College Requirements. See specific degree requirements within each program.

Upon registering for any course offered in this college, the student agrees that the program offering the course may retain work completed by the student. The program will make retained work available to the student for photographing.

College of Business and Economics

Mario Reyes, Dean (301A J. A. Albertson Bldg.; 208/885-6478); Daniel J. Borgia, Associate Dean.

The college was established as a professional division of the university in 1925. Long known as the College of Business Administration, it became the College of Business and Economics (CBE) in 1969. Its vision is to be a leader in integrated business education and provide a sound background in basic business principles that prepare graduates for positions of responsibility in firms and organizations including entrepreneurial ventures. As part of a state-supported land grant university, the CBE also aims to give its students an appreciation of the social importance and responsibilities of businessmen and businesswomen, and both the values and the knowledge to discharge those responsibilities.

The college's mission is to provide a collaborative learning environment that prepares students to be responsible leaders, managers, entrepreneurs and professionals. Students are prepared to succeed personally and professionally and to practice exemplary principles of citizenship. We accomplish this mission by:

- Delivering a high quality and team-based undergraduate curriculum that integrates accounting, economics, and business disciplines.
- Delivering and supporting focused graduate and outreach programs that build on our competencies within the college and meet the needs of our stakeholders.
- Providing experiential learning opportunities for our students.
- Engaging in research that makes meaningful contributions to management practice and business education.
- Sharing our business expertise in support of our state, our professions and the academic community.

The college has adopted a set of learning goals that mirrors this mission. These goals are: 1) Business Knowledge and Environment - CBE students will acquire an integrated understanding of business, accounting, and economic principles; 2) Critical Thinking and Ethical Problem-Solving - CBE students will be able to use appropriate tools of analysis to identify and address problems or opportunities; 3) Communication - CBE students will develop the ability to effectively obtain, organize, and communicate information; 4) Clarify purpose and perspective – CBE students will develop a better understanding of self and their place in the world; 5) Teamwork and Collaboration – CBE students will acquire the ability to interact effectively and professionally with people of varied backgrounds, abilities, and values.

International Business Programs. There are various programs by which a UI student can pursue international business. The following programs are available in connection with a business degree (B.S.Bus.): a major or minor in a foreign language; a major or minor in international studies; a major or minor in political science. For students seeking a business degree (B.S.Bus.), a minor is offered in international business (see Department of Business below). In addition, a student may have a dual major in business and foreign languages or major in foreign languages (B.A.) with a business option. A third option is the international studies program (B.A.), which may be selected by itself or as a dual major with business. Contact the Dean's Office in the College of Business and Economics for further information on international business programs.

Curricula and Degrees Offered

Undergraduate. The degree of Bachelor of Science in Business is offered with seven majors through two departments, as follows: Department of Accounting (accounting) and the Department of Business (business economics, finance, information systems, management and human resources, marketing, and operations management).

Specific requirements for each major are described in the individual department section. The program of study includes three principal components: the general university requirements, the business and economics core, and the requirements for the selected CBE major field. Detailed statements of college requirements are under "General Requirements for Graduation."

Graduate. The CBE, through the College of Graduate Studies, offers the degrees of Master of Accountancy (M.Acct.) in accounting and the Master of Business Administration (M.B.A.). The M.Acct. degree qualifies students to enter the public accounting profession in auditing, tax, or other positions ultimately requiring a Certified Public Accountant (CPA) license. The M.B.A. degree is designed to teach management concepts and an integrated view of business decision making to professionals who have been targeted in succession plans to take on greater managerial responsibility and leadership roles in an organization.

Graduate students must fulfill the requirements of the College of Graduate Studies and the department in which they study.

Accreditation

Fully accredited by The Association to Advance Collegiate Schools of Business, (AACSB International), and the Northwest Association of Schools and Colleges, the College of Business and Economics keeps apace of developments in business through membership in various professional organizations and by consultation with Idaho business leaders, particularly through the CBE Advisory Board. The quality of the program has been recognized by Idaho leaders through the awarding of the Idaho Quality Award. In addition, the outstanding achievements of CBE graduates in business and government, and in professional certification examinations, such as the CPA exam, also attest to the quality of the programs.

General College Requirements for Graduation

University Requirements. See regulation J-3 for requirements that all students in the university must meet.

College Requirements. Before proceeding to upper-division work, students majoring in the College of Business and Economics (CBE) must have junior standing and have good academic standing. To enroll in Bus 390, a student may not have more than two courses in the College of Business and Economics Common Requirements in which he or she has a D grade and must have good academic standing. If a student retakes a class in which he or she earned a grade of either F or D, the second grade will be used to determine compliance with the requirement that the student have no more than two CBE Common Requirement courses with a D. A student may retake any individual course in the CBE Common Requirements only once

Undergraduate students enrolled as majors in the College of Business and Economics may not take any course required for the major on a pass/fail basis, with the exception of those courses offered only on a P/F basis.

Courses completed at a two-year college for transfer into the CBE core or major must be validated before they will be accepted for upper-division course requirements. Validation procedures are established by the faculty members of the CBE department offering these courses. Validation techniques include a proficiency examination, CLEP testing, or successful completion of an additional advanced course in the given field.

Candidates for the B.S.Bus. degree must be accepted officially as majors in the College of Business and Economics for at least their last two semesters before graduation, excluding summer sessions, and complete at least the last 24 credit hours applicable toward their degree during this period.

At least 27 upper division College of Business and Economics credits applied to a B.S. Bus. Degree must be earned in residence on the University of Idaho campus. In addition, at least 12 upper division credit hours of the course requirement in the major must be earned on the UI campus.

All majors require the completion of at least 120 credit hours with the exception of the Marketing, PGA Golf Management Option Major which requires completion of at least 128 credit hours. The required program of study includes: (A) 58-60 credit hours in the CBE Common Requirements, and (B) the major-specific required credit hours in the selected CBE major field. Additional undesignated electives are included in the 120 required credit hours (or 128 required credit hours in the case of the Marketing, PGA Golf Management Option major).

A. CBE Common Requirements:

Communication (5 cr):

Comm 101	Fundamentals of Public Speaking (2 cr)

One of the following (3 cr):

Engl 207	Persuasive Writing (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)
Phil 201	Critical Thinking (3 cr)

Mathematics and Statistics (6-7 cr):

One of the following courses (3-4 cr):

Math 160	Survey of Calculus or
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)

One of the following (3 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Statistics (3 cr)

Economics (7-9cr):

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)

OR

Econ 272	Foundations of Econ Analysis (4 cr)

AND

Upper-Division Economics Elective (3 cr)

Humanities (3 cr):

Phil 103	Ethics (3 cr)

Accounting and Business Law (9 cr):

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
BLaw 265	Legal Environment of Business (3 cr)

Integrated Business Core (27 cr):

Bus 190	Integrated Business and Value Creation (3 cr)
Bus 252	Formal Models of Decision Making (3 cr)
Bus 290	Leading Organizations and People (3 cr)
Bus 301	Financial Resources Management (3 cr)
Bus 321	Marketing (3 cr)
Bus 350	Managing Information (3 cr)
Bus 370	Process Management (3 cr)
Bus 390	Integrated Topics in Business (3 cr, max 6)
Bus 490	Strategic Management (3 cr)

B. Requirements in Major (major-specific required credits

Undeclared Status

A student may enter CBE as a freshman in an undeclared status. Because the first two years are nearly equivalent programs in all CBE majors, he or she may remain in the undeclared status until reaching junior level (completion of 58 credits). At that time, a major in the college should be selected. The undeclared status allows a student time to become acquainted with the majors within the college and to solidify career objectives before choosing a major.

College of Education

Cori Mantle-Bromley, Dean; Kathy D. Browder, Associate Dean, James A. Gregson, Interim Associate Dean (301 Educ. Bldg.; 208/885-6773).

The College of Education was organized as an independent unit of the university in 1920. It is the principal teacher-education unit and consists of the Department of Curriculum and Instruction; Department of Movement Sciences; and Department of Leadership and Counseling. Undergraduate programs leading to degrees in teaching fields are offered in elementary education, technology education, physical education, secondary education, special education, and professional-technical education (teaching option). Programs leading to non-teaching degrees include: athletic training, dance, physical education and recreation.

The education of professional personnel for the public schools constitutes a critical service to the state and its people and to the education profession. The college screens for admission to programs leading to educational service to assure that they are qualified by preparation and personal attributes for this important work. Once admitted, the student completes a program in which competence in a broad, general education, the professional functions of the teacher, and the subjects and/or skills to be taught are demonstrated and applied in P-12 schools.

Besides preparing personnel for the schools, the college provides educational leadership for the people of Idaho, to the state's education system, and to the teaching profession through consultation, participation in organizational activities, and research. Preparation is provided in all of the major areas of professional education.

Accreditation and Program Approval

The College of Education is accredited by the National Council for the Accreditation of Teacher Education and its school preparation programs are approved by the State Board of Education. The programs of study in education are planned to meet certification requirements in Idaho, those of most other states, and the requirements of the various accrediting agencies, such as the Northwest Commission of Colleges and Universities.

Admission Requirements

Admission to the University. For a statement of general undergraduate and graduate admission requirements, see admissions portion of this catalog.

Transfer Students. Students who have attended college, whether at another institution or in another division of the university, before matriculation in the College of Education, must have a grade-point average of 2.00 (C) or better.

Degrees and Programs Offered

Undergraduate. Baccalaureate degrees offered in the College of Education are the Bachelor of Science in Education, Bachelor of Science in Dance, Bachelor of Science in Physical Education, Bachelor of Science in Recreation, and Bachelor of Science in Technology. See the departmental section for the programs of studies leading to these degrees.

Graduate. The College of Graduate Studies offers work toward advanced degrees in several disciplines of the college. Students must fulfill the requirements of the Graduate College and of the division in which they intend to study. Consult the College of Graduate Studies section for further information.

Upon the completion of the appropriate programs of study, the following degrees are conferred: Master of Science, Master of Education, Education Specialist in Adult/Organizational Learning and Leadership, Education Specialist in Educational Leadership, Education Specialist in School Psychology, Education Specialist in Professional-Technical Education, Doctor of Education, and Doctor of Philosophy.

Studies at the master's level are offered in adult/organizational learning and leadership, counseling and human services, curriculum and instruction, educational leadership, physical education, recreation, special education, and professional-technical and technology education.

Doctoral candidates majoring in education may concentrate in the following programs through the departments in the college: adult/organizational learning and leadership, counseling and human services, education, educational leadership, exercise science, higher education, curriculum and instruction, special education, healthy active lifestyles, or professional-technical and technology education. Students interested in pursuing a doctoral program must meet both the admission requirements from the College of Graduate Studies and the doctoral admission requirement from the College of Education. See the College of Graduate Studies and College of Education web pages for specific requirements and timelines.

Teacher Education Programs

At the University of Idaho, the preparation of teachers is a cooperative enterprise between the College of Education and other colleges. Coordination is achieved through the Teacher Education Coordinating Committee. The screening of all applicants for admission to Teacher Education Programs is the responsibility of the College of Education, and the dean of the College of Education is the recommending authority for certification.

Students preparing for a career in secondary teaching have the option of completing their bachelor's degrees in the College of Education (except for agricultural education, family life education, and music education) or in the department of their subject major.

Secondary education students have an advisor from the College of Education who is the primary advisor on teacher education requirements. Students should contact their content area for advising on content classes. When a student identifies teacher education as his or her objective (this could be as early as the freshman year and certainly no later than admission to Teacher Education Programs), the education advisor is designated.

Admission to, Continuation in, and Exit from Teacher Education Programs. Prospective teacher education candidates work closely with academic advisors to assure that they meet the criteria for each step in the admission and continuation process.

Admission to Teacher Education Programs. All students who plan to enter degree seeking or certification only teacher education programs must make application for admission to the program. Criteria for admission to teacher education programs include: 1) Initial interview with academic advisor; 2) cumulative grade point average of 2.75 or better; 3) have completed, with a minimum of a C in the following courses: Engl 102, University of Idaho General Education Mathematics Course, Comm 101, and EDCI 201 (including 20 hours of service-learning or FCS 210 for ECDE students); 4) letter of application; 5) recommendations; 6) completion of background check; and 7) (when enrollment projections exceed departmental resources) a competitive interview.

Continuation in Teacher Education Program. Students seeking to continue in teacher education programs shall not have received more than two negative indicators ("red flags") on all education-coursework Standards and Dispositions evaluations.

Eligibility for Internship Experience. Prospective teachers seeking to enter the internship year must meet the following criteria: (1) cumulative grade-point average of 2.75 or higher; (2) completion of background check, (3) completion of and successfully passing program-area content assessment (e.g. Praxis II), (4) for Elementary Education and Early Childhood Development and Education students only, completion of at least parts I and II of the Idaho Comprehensive Literacy Assessment with passing scores; and (5) recommendation of advisor.

The College of Education does not permit students enrolled in any student teaching or internship course to concurrently function as head coach in any school sponsored sport at any grade level, whether paid or voluntary. Students who desire to function as assistant coaches must have written approval of the department chair and the director of clinical experiences (adopted 1996).

Graduate Practicum and Internship in School Positions

Admission. Admission to practicum and internship courses is conditioned upon acceptance in a graduate program and approval of the major professor and/or student's committee.

The Program. Graduate students are provided clinical experience in the study of teaching and learning and in the performance of other school positions through graduate practica and internships (see courses 597 and 598 in the various subject fields in the college).

Teacher Certification

Students who complete Teacher Education Programs at the university are eligible to receive the Idaho Elementary School Certificate, the Secondary School Certificate, the Exceptional Child Certificate, or the Professional-Technical Certificate. Students who complete the certification program in school counseling or school psychology qualify for the Idaho Pupil Personnel Services Certificate. Students completing a master's degree, specialist degree, or doctorate in educational administration may qualify for an administrator's certificate. The College of Education reserves recommendations for initial teacher certification to students who have completed the approved teacher preparation program and hold a bachelor's degree. The student initiates the certification process through the dean's office in the College of Education.

Certification-Only for Elementary, Secondary, and Special Education

Elementary Education Certification. Students who are seeking certification as an elementary teacher satisfy the requirements for the Idaho Elementary School Certificate, endorsed grades K-8, by meeting the general education requirements outlined by the state, completing the professional education core, and by completing the elementary major and professional year.

Secondary School Teaching Certification. Students who are seeking certification while enrolled in an academic major or after completion of a degree normally satisfy the requirements for the Idaho Secondary School Certificate by including Psyc 101 Intro to Psychology or Psyc 305 Developmental Psychology, and the professional education core as electives in their program for the baccalaureate degree, and by completing one of the following options: (1) one 45-credit teaching major; or (2) one 30-credit teaching major and one 20-credit teaching minor, and the professional year.

Special Education Certification. Students who are seeking certification as a special education teacher satisfy the requirements for the Idaho Exceptional Child Certificate, endorsed grades K-12, by meeting the general education requirements outlined by the state, completing the professional education core, completing the special education major, and by meeting the requirements for the elementary or secondary education major, and the professional year.

Certification Checklists. Checklists for the elementary, secondary, and special education certification programs are available through the Department of Curriculum and Instruction; and the Department of Movement Sciences. See the Academic Majors list in this section to locate the appropriate division.

Application for Certification. See procedures listed under Teacher Certification in this section.

General College Requirements for Graduation

University Requirements. See regulation J for requirements that all students in the university must meet. When appropriate, courses listed in J-3 may satisfy both the university requirements and the college requirements.

College Requirements. All candidates for a baccalaureate degree in the College of Education must complete 128 semester credits, of which at least 36 must be in upper-division courses. (See the Department of Movement Sciences for the special requirements applicable to the major curricula in athletic training, dance, physical education, recreation; the Department of Curriculum and Instruction for the major curricula in career and technology education, and the Department of Curriculum and Instruction for the major curricula in elementary education, special education and secondary education.)

Major Curricula

Students in the College of Education must complete a major curriculum that leads to a degree granted by the college (B.S.Dan., B.S.Ed., B.S.P.E., B.S.Rec., or B.S.Tech.). These major curricula (with the degree goal identified) are listed in the individual department section.

Careful distinction should be made between a student's "academic major" and any additional "teaching majors" or "teaching minors" leading to certification.

Academic Majors Leading to Teacher Certification

Ag Education (B.S.Ag.Ed.) - Department of Agricultural Education and 4-H Youth Development

Art Education (B.S.Art Ed.) -Art and Architecture

Elementary Education (B.S.Ed.) - Department of Curriculum and Instruction

Music Education (B.Mus.) - Lionel Hampton School of Music

Physical Education (B.S.Ed.) - Department of Movement Sciences

Career and Technical Education (B.S.Ed.) - Department of Curriculum and Instruction

- Business and Marketing Education Option
- Occupational Education Option
- Engineering & Technology Education Option

Secondary Education (B.S.Ed.) - Department of Curriculum and Instruction (see list below)

Teaching Majors and Minors

45-Credit Teaching Majors

Art
Biological Sciences
Chemistry
Earth Science
English
French
German
History
Latin
Mathematics
Physical Science-Life Science (60 cr)
Physical Sciences
Physics
Social Science
Social Science Through American Studies (45 or 60 cr)
Spanish
Theatre Arts
Theatre Arts-Speech

30-Credit Teaching Majors

English
English through American Studies
Geography
History
History Through American Studies
Journalism
Mathematics
Political Science
Psychology
Speech
Technology Education

20-Credit Teaching Minors

Art
Biological Sciences
Business Education
Chemistry
Computer Science
Consumer Economics
Dance
Economics
English
English As a Second Language
French
Geography
Geology
German
Health Education
History
Journalism
Latin
Library Science
Mathematics
Music: Vocal
Physical Education (Secondary)
Physics
Political Science

Psychology
Sociology/Anthropology
Spanish
Speech
Theatre Arts

Centers and Institutes

Centers and institutes affiliated with the College of Education support the mission of the college and extend services to the state, region, and nation. Programs offered through the college are enriched and extended as a result of these initiatives. Historically, the College of Education established the Center for Educational Research and Public Service (CERPS) to conduct research, to facilitate research by College of Education faculty members and graduate students, and to be of assistance to local school districts and other educational units. More recently, additional centers and institutes have been established. They are listed below; additional information about them can be accessed at the college website:

Center for Disabilities and Human Development
Center for Dance
Center for Economic Education
Center for ETHICS
Institute for Mathematics, Instructional Technology, and Science Education
TRIO Programs

College of Engineering

Larry A. Stauffer, Dean (125 Janssen Engr. Bldg.; 208/885-6470); Joseph Law, Associate Dean Undergraduates; Barry Willis, Associate Dean Outreach; Jon Van Gerpen, Associate Dean Research.

The mission of the College of Engineering is to prepare students for global professional practice, for admission to advanced degree programs, for leadership in their public and private lives, and for life-long learning in their chosen professions. We promote discovery, development, and dissemination of knowledge through excellence in research, and provide quality academic courses and continuing education to enhance the capability of practicing professionals. Through our scholarly activity, we have the responsibility to be a major contributor to our state, region, and nation's economic and technology base, while contributing to the body of knowledge for an array of research topics.

Our vision is to be an engine of innovation that integrates student-centered academics, relevant research, and meaningful outreach that advances Idaho and beyond.

The Engineering Profession

Members of the engineering profession use their knowledge of mathematics and the sciences to create useful and economic devices, structures, and systems for the benefit of the earth and its inhabitants. The engineer's talents are used in many ways: design, construction, and operation of public works and utilities systems; planning, construction, and operation of industrial processes and equipment; application of technical products; and creation of devices and systems needed for the support of all human activity, such as food production, transportation, communication, and enhancement of the environment. Many engineers hold responsible managerial positions; others are key members of the interdisciplinary teams that solve the complex technical, economic, and social problems of the world.

The engineering profession recognizes that social, economic, political, and cultural, as well as technical considerations are involved in most of the works in which the modern engineer is engaged. A part of an engineer's education is devoted to the humanities and the social sciences to help relate the technical preparation received to the world today, and to enhance the engineer's role as an educated, responsible citizen.

To qualify as an engineer, one usually undertakes a four-year college program leading to a Bachelor of Science (B.S.) degree in one of the major branches of engineering practice. Bachelor of Science graduates may either go directly into engineering employment or proceed to graduate study to pursue a given area of interest in depth. As the technology of engineering includes a wide range of subject matter that can be explored only to a limited extent in undergraduate programs, more and more students undertake graduate study for better preparation in a specific field before seeking employment as practicing engineers.

All states require that engineers engaged in work affecting public health and welfare be licensed or registered. This requires a qualifying examination in the fundamentals of engineering, usually taken during the last year of undergraduate study, and a period of practical experience followed by a second qualifying examination in the practice of engineering. Many industries, while not legally required to use registered engineers, encourage registration as evidence of professional stature of their engineering employees.

The Computer Science Profession

Computer science is a discipline that involves the understanding and design of computers and computational processes. In its most general form it is concerned with the understanding of information transfer and transformation. Computer science is evolving rapidly and includes theoretical studies, experimental methods, and engineering design all in one discipline. In computer science there is an inherent intermingling of the theoretical concepts of computability and algorithmic efficiency with the modern practical advancements in electronics that continue to stimulate advances in the discipline. It is this close interaction of the theoretical and design aspects of the field that binds them together into a single discipline.

Because of the rapid evolution it is difficult to provide a complete list of computer science areas. Yet it is clear that some of the crucial areas are theory, algorithms and data structures, programming methodology and languages, and computer elements and architecture. Other areas include software engineering, artificial intelligence, computer networking and communication, database systems, parallel computation, distributed computation, computer-human interaction, computer graphics, operating systems, numerical and symbolic computation, and computer security.

A professional computer scientist must have a firm foundation in the crucial areas of the field and will most likely have an in-depth knowledge in one or more of the other areas of the discipline, depending on the person's particular area of practice. Thus, a well-educated computer scientist should be able to apply the fundamental concepts and techniques of computation, algorithms, and computer design to a specific design problem. The work includes detailing of specifications, analysis of the problem, and provides a design that functions as desired, is reliable and maintainable, and meets desired cost criteria. Clearly, the computer scientist must not only have sufficient training in the computer science areas to be able to accomplish such tasks, but must also have a firm understanding in areas of mathematics and science, as well as a broad education in liberal studies to provide a basis for understanding the societal implications of the work being performed.

Equal Opportunity

The degree programs of the college and the professions they represent actively seek out women and under-represented minorities. Opportunities are unlimited and an increasing number are entering the professions.

Preparation and Admission

A statement of undergraduate and graduate admission requirements is included in the admissions portion of this catalog. A student may be admitted with less than the requirements listed, but the deficiency must be made up before he or she can progress very far in a college engineering course of study.

Students who contemplate entering the College of Engineering with advanced standing from other institutions should complete as many of the freshman and sophomore requirements listed in the curricula as possible. Calculus, chemistry and physics and the various introductory engineering courses are prerequisites to many advanced courses, and their omission may delay graduation.

Students from out-of-state institutions who wish to transfer to a degree program offered by the College of Engineering are invited to apply. Those who's cumulative GPA is below 2.8 for all previous college-level courses, including any courses taken at UI, may be admitted on approval of the College of Engineering Admissions Committee.

Admission to Classes

As a prerequisite to any upper-division course normally taken in the junior or senior year and offered by the College of Engineering, students in the College of Engineering must have completed selected courses from the required courses in chemistry, computer science, engineering, mathematics, and physics that are normally to be taken by them during their first two years, and must have attained a grade of C or better in each of those courses.

Scholarships and Awards

Many scholarships and awards are available to College of Engineering students and prospective students. See "Student Financial Aid Services" in the student service section.

Courses of Study and Degrees

The College of Engineering includes the degree-granting Departments of Biological and Agricultural Engineering, Chemical and Materials Engineering, Civil Engineering, Electrical and Computer Engineering, Mechanical Engineering, and the Department of Computer Science. Careful attention is given to curriculum content and educational philosophy to keep all programs attuned to rapidly changing technology.

Programs in the college lead to the Bachelor of Science in the following disciplines: Biological and Agricultural Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Material Science and Engineering, Mechanical Engineering, Computer Science, and Industrial Technology.

The following undergraduate programs in the College of Engineering are currently accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700.: Biological and Agricultural Engineering, Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Material Science and Engineering, and Mechanical Engineering. The computer science program is accredited by the Computing Accreditation Commission of ABET. Minors are offered in several programs but we do not pursue accreditation of minors.

Most of the courses taken by freshmen and sophomores are the same in all curricula. The student may postpone a final decision on a branch of study for a year or more with little, if any, consequence, thus allowing ample opportunity for professional orientation. The junior and senior years are devoted to application of basic principles and design in the various fields of practice.

Courses of study leading to the degrees of Master of Science (M.S.), Master of Engineering (M.Engr.), and Doctor of Philosophy (Ph.D.) are offered in biological and agricultural, chemical, civil, electrical, geological, and mechanical engineering. The M.S. and M.Engr. degrees are available in computer engineering and environmental engineering, and the M.S. and Ph.D. degrees are available in computer science. Master of Science degrees are available in geological engineering, material science and engineering, and technology management. The PhD degree is also available in Material Science and Engineering. The Master of Engineering in engineering management is also available. The M.S., M.Engr., and Ph.D. degrees in nuclear engineering are available at the Idaho Falls Center.

Faculty

The faculty is the key to the quality of the engineering program. All faculty members in this college hold advanced engineering degrees and all but four hold the Ph.D. degree. Recognition in such publications as *Who's Who in America, Who's Who in the West, Who's Who in Engineering,* and *American Men and Women of Science* is common.

A distinguishing feature of the faculty is a blend of academic and practical experience. Many faculty members have extensive experience in practice that they bring into the classroom, preserving a balance between theoretical and practical aspects of engineering.

Facilities

The facilities of the College of Engineering are among the finest in the country. Work is centered in the two-block-square engineering complex, which includes the Allen S. Janssen Engineering Classroom Building, the J. E. Buchanan Laboratory, the Gauss-Johnson Engineering Laboratory, McClure Hall, and the Engineering/Physics Building. These facilities are supplemented by biological and agricultural engineering laboratories at other locations on the campus. In total, more than 250,000 square feet of floor space is used by the College of Engineering. Laboratories include modern equipment for teaching and research in all areas of instruction with recent additions for computerized drafting, CAD/CAM, computerized VLSI design, and robotics. Some of the equipment is of advanced design found in only a few institutional laboratories. Students also have access to over 20 general purpose open-access computer laboratories across the campus, with over 600 computers. There are over 100 software applications available, as well as the web, email, and other network services. An assortment of desk-top minicomputers and engineering work stations are available within the engineering complex. Wireless access is available in all of the engineering buildings.

Standing and Advantages

With a tradition of excellence dating from the founding of the University of Idaho, the College of Engineering has developed and maintained engineering degree programs on the Moscow campus that are noted for quality. For over 40 years, graduate programs in several disciplines have been available at off-campus sites as well. Since 1896, when it granted its first degrees, graduates of the college have spread throughout the world. The large number of firms and agencies throughout the country that send interviewers to the campus each year seeking to hire Idaho engineering graduates attest to the reputation of the university's engineering program.

The size of the college is near the median of engineering colleges in the country. While it is not so large that the importance of the student as an individual is lost, it is large enough to support the faculty and facilities needed for top quality education.

Attention is given to both undergraduate and graduate programs. New concepts and knowledge resulting from the graduate program feed into the undergraduate program to keep it up to date. Undergraduate students have an opportunity to observe and/or contribute effort to graduate research projects to help them determine their interest in graduate work.

Engineering Experiment Station

The function of the Engineering Experiment Station is to encourage and coordinate the College of Engineering's research and extension programs that are integral parts of the college's academic and service efforts.

The research program in engineering is conducted by the faculty, staff, and students of the college. There is neither a separate research facility nor a separate research staff. The College of Engineering requires that any research it undertakes have academic significance. A large part of the college's research program deals with developing new knowledge that is applicable to Idaho's economy or devising new methods or applications for using existing knowledge to the benefit of the state of Idaho. Most of the funds in support of research come from sources other than legislative appropriations. These funds are the result of research contracts and grants with various local, state, and federal agencies and private industry. Information regarding research capabilities is available upon request.

Believing that education is a never-ending need of mankind, the College of Engineering, through the means of short courses, workshops, seminars and forums, and pertinent publications, attempts to ascertain and meet the specific continuing education needs of Idaho's graduate engineers, computer scientists, and the technical community. Staff members also endeavor to provide information to the entire population of Idaho that may contribute to the successful solving of societal problems.

Off-Campus Programs

To fulfill its charge to provide engineering education to the people of Idaho, the College of Engineering provides several degree programs off campus. Graduate degrees in most disciplines are available through the Resident Instructional Centers at Boise, Idaho Falls, and Coeur d'Alene, using a combination of resident faculty, real-time video, and web-supported DVD courses. The Engineering Outreach program uses a variety of technologies to provide graduate and advanced undergraduate course work, including some complete master's degrees, at any location. For more information, see "Resident Instructional Centers."

General College Requirements for Graduation

University Requirements. See regulation J for requirements that all students in the university must meet.

College Requirements. The minimum credit requirement for university curricula is 128 credits for an undergraduate degree. Some engineering curricula require a greater number of credits.

Note: In calculating the credit total for each degree, the College of Engineering does not include credits that a student may have been required to earn in Engl 101, Math 143, and any courses taken to remove deficiencies.

Major Curricula

The curriculum for each major is listed in the individual department section. Each curriculum provides for electives to be arranged in consultation with the student's advisor in accordance with the student's interest and consistent with current department and college policies. The electives are intended to provide flexibility in the student's program. Undesignated electives will usually be taken outside of the student's major field of study.

College of Graduate Studies

Jie Chen, Dean; Jerry R. McMurtry, Associate Dean (104 Morrill Hall; 208/885-6243).

The College of Graduate Studies was formally organized in 1925 (then designated as the Graduate School) but the university has awarded advanced degrees since 1897. The College of Graduate Studies encompasses all graduate programs of the university but does not supervise programs in the College of Law. This coverage of all regular disciplines and professional fields provides a wide variety of academic programs. Enrollments are large enough to make possible the vital interchange of ideas among students and between students and faculty that is necessary for graduate programs and yet enrollments are sufficiently small to permit close faculty-student relationships. Interdepartmental cooperation is an important factor on the Idaho campuses. The university is the chief research center for the state and as such operates active graduate programs in most areas providing a broad research base upon which graduate programs have been built.

Graduate Council

The Graduate Council is the representative body of and is empowered to act for the Graduate Faculty. It is responsible to and reports to the Graduate Faculty, which retains the authority to review actions of the council. Its function is to promote graduate instruction and research, to formulate policies and long-range plans for the graduate programs, and to review and act on student appeals and petitions that involve exceptions to accepted regulations and procedures of the College of Graduate Studies.

The Graduate Council is constituted of one member elected by and from the constituent graduate faculty of each of the colleges that offer programs leading to graduate degrees (except the J.D. degree), four members of the Graduate Faculty appointed by the president of the university, two graduate students, the dean of the College of Graduate Studies, who serves as chair, and the assistant or associate dean of the College of Graduate Studies, who serves as vice chair.

Undergraduate Enrollment in the College of Graduate Studies

A senior who has a cumulative grade-point average of 3.00 or higher may register for 500-level courses. Courses will automatically be recorded on the undergraduate transcript. However, seniors desiring to have courses placed on a graduate transcript must submit to and have approved by the College of Graduate Studies a "Course Level Adjustment Form" that specifies the courses to be placed on the graduate transcript, thereby allowing a separate graduate transcript to be established. Capable students who are in their last year can thus begin limited graduate work, up to a total of 12 credits, at an earlier date than would otherwise be possible. The Course Level Adjustment Form must be processed and accepted by COGS prior to the student applying for the bachelors degree. No courses will be moved to the graduate transcript once the baccalaureate degree is awarded. Students who have courses placed on a graduate transcript and later wish to be admitted to the College of Graduate Studies for work toward a degree must apply for admission to the College of Graduate Studies following the usual procedures. All courses placed on the graduate transcript, regardless of course level, will be assessed graduate fees.

General Graduate Regulations

The regulations described in this section are the minimum standards established by the faculty of the College of Graduate Studies. Graduate programs may establish additional regulations, including additional residence requirements, above the minimums set by the College of Graduate Studies.

Appointment of Major Professor and Committee for All Degree Seeking Graduate Students. The major professor must be a member of the UI Graduate Faculty. All master's degree seeking graduate students are required to select or be assigned a major professor within the first year following enrollment in the program. (For the M.F.A. program, within three semesters of registration, the student and the departmental administrator or graduate coordinator nominates the major professor.) For non-thesis master's students or specialist students, students are strongly encouraged to select or be assigned a major professor no later than the end of the first semester and it is required by the end of the first year. It is important to note that the Interdisciplinary Studies major requires at least four members on a student's committee, whether the student is thesis or non-thesis. A committee will consist of at least one member from each of the two principal disciplines involved in the student's program, one from a supporting discipline, and one member recommended to or appointed by the College of Graduate Studies.

Doctoral students are required to select or be assigned a major professor no later than the end of the third semester in the program.

The committee, if required, is recommended by the major professor and the student and approved by the graduate program's administrator and the dean of the College of Graduate Studies. At least one-half of the members of the committee must be members of the UI Graduate Faculty. A faculty member may not serve on a committee for a student who is seeking a degree higher than the faculty member has attained. A graduate program's member who has an affiliate appointment to another program cannot be considered an outside committee member for a student in the faculty member's primary program. (For the M.F.A. program, the committee consists at least of the major professor, a second faculty member from the major field and a member from a discipline outside the major department's discipline(s).)

Periodically, a qualified person with a particular expertise is requested to serve on a student's committee on a one-time appointment. The person must have written approval from the dean of the College of Graduate Studies in advance of the individual's committee participation. In this case, the person would not have to meet the rules of appointment and would be considered an outside member to the committee. Should the person be recommended for multiple committees, he/she would need to be approved as an adjunct faculty member and, therefore, would then be considered a member of the program recommending adjunct membership and would serve as an inside member on that program's students' committees. It is the intent of the Graduate Council that this privilege be used sparingly and only when the situation indicates its necessity.

Removal of Faculty from a Committee. A faculty member can be removed as a major professor or a committee member if it is determined that continued membership is not in the best interest of the graduate program's or the student's. Such a request would be initiated by the student and advanced only if the remaining committee supports such request. The determination of action will be made through deliberation between the program's dean and the dean of the College of Graduate Studies. This policy is not designed to question or remove a faculty's inherent right to minority opinion regarding research or academic standards.

A faculty member who has separated from the university, other than those with emeriti status, must be replaced as the major professor or a committee member on all of his or her student committees.

Exceptions to the above policy must be approved in advance of committee participation and in writing by the dean of the College of Graduate Studies. Reasons for considering an exception could include, but are not limited to: the anticipated completion date of the student; if the student is better served without committee disruption; if the separated faculty member becomes adjunct faculty; or if there are intellectual property issues to be considered.

Qualifying Examination. If such an examination is required, it is conducted according to the program's procedures and is a prerequisite to the preparation of a study plan. A report of this examination is not submitted to the College of Graduate Studies.

Graduate Reviews for the M.F.A. Graduate reviews may be conducted annually by department graduate faculty members. The initial graduate review may normally be conducted within the first two semesters of registration and serves to assess the background of the student in both major and supporting fields and to provide in part the basis for the preparation of the student's study plan.

Preparation and Submission of Study Plan. Early in the student's academic career, the student prepares in conference with the major professor (and committee, if applicable) a study plan outlining all course work to be completed to fulfill the requirements for the degree. Normally, the study plan will include some work to be taken outside of the major department. The study plan is submitted for the approval by the student's

major professor, the program administrator, and the dean of the College of Graduate Studies. Any subsequent changes in the study plan must receive the same approvals.

All degree seeking graduate students must have a study plan on file with the College of Graduate Studies. Study plans cannot be processed without an assigned major professor. All masters and specialist degree seeking students are required to file a study plan with the College of Graduate Studies by the end of the first year of attendance. (For the M.F.A. program, students must prepare a study plan within two semesters of registration (or two summer sessions for those attending in the summer only.) Doctoral degree seeking students are required to file a study plan with the College of Graduate Studies by the end of the third semester in the program.

Research Approval. Prior to beginning any research projects, approval must be granted by one or more of the following groups, if it applies to the research that is being conducted: the Human Assurance Committee for research involving human subjects; the Animal Care and Use Committee for research using vertebrate animals; the Biohazards Committee for research using any biological agents or recombinant DNA; the Idaho Research Foundation for research that has the possibility of patent or license outputs; the University Research Office for research involving agents or federal controls on the development, use and distribution of technology; or the Office of Sponsored Programs for activities funded through external grants and contracts. Should the research methodology or source of funding change, the appropriate group must be notified.

Student Responsibilities. The student is responsible for complying with all rules, procedures, and time limits as established by the graduate faculty.

Petitions. Students and major professors are advised that the right of petition exists to waive or modify some university regulations. University academic petitions (see Academic Appeals Process) request waiver or modification of university regulations. College of Graduate Studies petitions request waiver or modification of regulations in this section. Favorable action can be expected only when circumstances and the presentation clearly justify an exception. Precedents are not set by previous actions and may not form the basis of a petition; rather the situation concerning the student involved is given consideration on an individual basis.

Once a College of Graduate Studies petition is submitted, the Chair of the Graduate Council will appoint a committee to hear the petition. The committee will consist of current Graduate Council members, when possible. The committee will review materials specifically related to the petition from both the student and College of Graduate Studies. The student's presence is not required but may be requested by the committee. The committee's recommendation of action is then forwarded to the Graduate Council for review. Graduate Council will decide to support or reject the committee's recommendation and render a decision on the petition. Graduate Council may request a hearing to review all of the information related to the petition. The final decision of the Graduate Council may be appealed to the Provost. (See Faculty Staff Handbook 2500)

A $10 fee is charged for each petition submitted to the Academic Petitions Committee or Graduate Council.

Registration and Enrollment Requirements. Graduate students engaged in **ANY** activity requiring faculty or staff time and consultation, or the use of any UI facilities, must register for the number of credits appropriate to the degree of activity involved during the semester of activity. Such activity includes, but is not limited to: writing, defending, or submitting a thesis or dissertation; working on or completion of a non-thesis requirement; or taking a preliminary examination. A student who was appropriately registered during a previous term and did not complete all the requirements by the end of that term but does so before the official opening date of the new term, is awarded the degree at the end of the following term without further registration.

Annual Enrollment Policy. Annual enrollment is required for all degree seeking graduate students. Annual enrollment is defined as registering for at least one credit at the 300 or higher level every 12 months (summer, fall or spring semester).

If annual enrollment is not maintained and the absence has been five or fewer terms, a request for reenrollment in the program is required prior to any future registration by completing the Request for Reenrollment form available on the College of Graduate Studies website. The reenrollment decision is made at the program level with final approval through the College of Graduate Studies and should be requested well in advance of the requested semester of return.

If annual enrollment is not maintained and the absence has been for more than five terms, a request for readmission to the program is processed through the Graduate Admissions Office as well as reenrollment through the College of Graduate Studies. The **readmission** decision is made at the program level and forwarded to the Graduate Admissions Office. The **reenrollment** decision is made at the program level and forwarded to the College of Graduate Studies.

A student may request approval of a planned leave if the anticipated absence will be longer than one year but for no more than five terms. Approval must be given in advance of the time of absence by completing the Approval of Planned Leave form with signatures from the major professor, program administrator, and the dean of the College of Graduate Studies.

A reenrollment fee of $30 is charged each time a reenrollment application is processed. Any appeals to this policy are to be made to the dean of the College of Graduate Studies.

Change of Program. A student is admitted for work in a specified program and may not change without approval of the new program's administrator. Such procedure is formalized by a Change of Curriculum form signed by the chair of the program the student is leaving and the chair of the program in which the student wishes to enroll. The form must be approved by the dean of the College of Graduate Studies before it is forwarded to the Registrar's Office.

Credit Requirements for Full Time Students. A student is considered full time academically when registered for 9 or more credits. Students pay per credit when enrolling for 1-9 credits and are charged full time fees when enrolled in 10 or more credits of course and/or thesis/dissertation work. See also specific credit guidelines under "Student Financial Aid Services."

Regular Semester or Summer Session. The credit limit for a graduate student is 16 credits per semester or summer session (excluding courses taken for audit). With a successful petition to the College of Graduate Studies, a student may enroll in up to 22 credits in the fall and spring semesters and 18 credits in the summer session.

Correspondence Courses. Credits earned in University of Idaho correspondence courses are applied to a graduate program only with the prior written approval of the dean of the College of Graduate Studies. Correspondence courses do not satisfy the residence requirements for final semester registration and a limited amount of such work can be applied toward a degree. Subject to approval by the appropriate program's administrator, correspondence credits from other institutions that are accepted for graduate credit by that institution may be accepted toward degree requirements. Grades earned in correspondence courses are not calculated into the student's GPA.

Probation, Disqualification, and Reinstatement. Graduate students remain in good standing if the semester GPA and the cumulative GPA are 3.00 or higher. A graduate student is placed on academic probation after any semester or summer session in which a GPA of less than 3.00 is earned in courses placed on the graduate transcript, regardless of the student's cumulative GPA. Students on academic probation who attain a semester GPA of 3.00 or higher during the next or subsequent semester or summer session after being placed on probation, but whose cumulative GPA is still below a 3.00, will remain on academic probation until the cumulative GPA is a 3.00 or higher.

The student will be disqualified if a semester GPA of less than 3.00 (regardless of cumulative GPA) is earned on courses placed on the graduate transcript during the second, consecutive semester or summer session in which regular grades of A, B, C, D, or F are received.

If a graduate student who is on probation receives an Incomplete during a semester, the revert grade listed for the Incomplete will be used to calculate the GPA for that semester. If the calculated semester GPA is 3.00 or higher, the student will be allowed to register for a current or future semester. If the calculated semester GPA is less than a 3.00 GPA, the student will be disqualified and will not be allowed to register for current or future semesters or sessions. If the student has registered pending receipt of the revert grade, the student will be disenrolled. Once the work is completed and a final grade is given, the GPA will be automatically recalculated.

A graduate student may be reinstated after disqualification under the following conditions: the student may not enroll as a graduate student for at least one semester (fall or spring), must get the positive recommendation of his or her program's administrator, and must get College of Graduate Studies permission. Reinstatement is granted for a specific semester only. The student must receive at least a 3.00 GPA the first semester back in the College of Graduate Studies. If a student does not

register for that semester, he or she must again seek College of Graduate Studies permission for reinstatement. A student will remain on probation as long as the cumulative GPA is below a 3.00.

Grade Requirements. In order to be eligible for graduation, a candidate for an advanced degree must have a cumulative GPA, based on all grades on his or her graduate transcript, of at least 3.00 (A = 4.00). The relevant GPA is calculated as stated in regulation E. Courses in which grades of D or F are received may not be counted toward the satisfaction of degree requirements; however, those grades are included in the GPA.

Deficiencies. Courses that are needed to provide background for the student's program may be taken for audit or under the pass/fail option, unless the program advises otherwise. See rules for the pass/fail option under regulation B-11. When deficiency courses are taken for regular credit the resulting grade will be included in the computation of the GPA.

Foreign Language. There is no College of Graduate Studies foreign language requirement for a graduate degree; however some programs require a language examination or special course work.

Catalog Issue. The pertinent requirements for graduate degrees are those contained in the most recent UI catalog issue that was in effect at the time of, or subsequent to, the candidate's admission into a specific graduate program as a degree seeking student. A catalog issue is valid for a maximum of seven years from its effective date. The effective date of a catalog issue is the first Monday following spring graduation.

Application for Advanced Degree. The Application for Advanced Degree is submitted to the College of Graduate Studies office according to the deadline outlined in the academic calendar. Before filing the application, the candidate and the major professor must jointly ascertain that the candidate has met all degree requirements or will do so by completion of the semester in which graduation is intended.

Non-thesis Requirement (Non-thesis Master's and Specialist Degrees). This exit requirement (an examination, presentation, portfolio, recital, project, or any requirement other than a thesis) is completed by non-thesis master's and specialist students after the completion of most or all of the degree requirements. The program establishes the format and time frame and reports the results of the non-thesis requirement to the College of Graduate Studies using the Non-Thesis Report form. The exit requirement, if failed, may with the program's approval be repeated once. The interval before the second attempt may not be less than three months or longer than one year. Up to one credit received for completing the exit requirement may be used toward the degree. If a student fails the exit requirement twice, or the program does not allow the student to repeat the exit requirement after the first failure, or the student does not retake the exit requirement within a year, the student is automatically moved to unclassified enrollment status and is no longer in the degree program.

Final Defense (Master's thesis, Ph.D., Ed.D., and D.A.T. Degrees). The final defense must be completed three weeks prior to the last day of the term in which the student plans to graduate. Before the final defense, the "Request to Proceed with Final Defense" form (see www.uidaho.edu/cogs/forms) must be submitted to the College of Graduate Studies. Ph.D., Ed.D., and D.A.T. students are required to submit the form at least 10 working days prior to the defense. Thesis students must have the form submitted at least one day prior to the defense. The defense is usually oral but part may be written. The candidate is required to defend his or her work and show a satisfactory knowledge of the program and supporting fields. A majority vote of the committee is necessary for a candidate to pass this defense. The defense, if failed, may with the programs approval be repeated once. The interval before the second attempt may not be less than three months or longer than one year. Following a successful defense of his or her thesis, the candidate must submit the final copies to the College of Graduate Studies within six months; otherwise, the candidate must defend the thesis again and may be required to revise it or write an entirely new one. If a student fails the final defense twice, or the program does not allow the student to repeat the defense after the first failure, or the student does not repeat the defense within a year, the student is automatically moved to unclassified enrollment status and is no longer in the degree program.

Theses and Dissertations. The "Graduate Handbook for Preparing Theses and Dissertations," which outlines the procedures to follow and required format of the document can be obtained through the College of Graduate Studies website (www.uidaho.edu/cogs). All theses and dissertations are to be submitted through the Electronic Thesis and Dissertation web portal (www.uidaho.edu/etd) for initial format review through final submission. All thesis and dissertations must be uploaded into the ETD system in final form with all approvals, except the COGS dean, two weeks before the last day of the term in which the student plans to graduate. One additional full copy on bond paper is required by the UI Library and should be delivered to COGS one week prior to the end of the term.

Satisfactory Academic Progress and Performance. Enrollment in the College of Graduate Studies allows students to continue graduate study and research through the University of Idaho only as long as they maintain satisfactory academic standing and are maintaining satisfactory progress and performance toward completion of their graduate degree program.

Satisfactory academic standing is defined under the rules of probation and disqualification and provisional admission and may or may not have an effect on the use of this policy.

Programs are required to have a written policy distributed to all students that states the standards for satisfactory progress and performance. Examples of the program's requirements that may be used to measure progress or performance toward the degree are, but not limited to, the timely completion of: required course work, filing of appropriate paperwork, failure to complete the annual review process, the program's qualifying, preliminary or other examinations; attendance at seminars or other professional activities; or using acceptable safety or security standards in performance of duties.

Annual Review. The annual review process is initiated by the student and completed by the major professor using the form provided by the College of Graduate Studies. If a major professor has not been appointed, the program's administrator will conduct the review. When completed, the reviewer will recommend that the student continue in the program, receive a warning, or be dismissed from the program.

- **Warning.** Should a warning be given, the student must be informed in writing of the concern, the current program policy, the length of the warning period, and expectations that must be met to be removed from a warning status. The associate dean of the College of Graduate Studies is notified of this action. An appeal of a recommendation for a warning may be made to the dean of the College of Graduate Studies.
- **Dismissal.** This process may or may not be preceded by a warning period. If dismissal is recommended, the program's administrator forwards the recommendation and documentation to the associate dean of the College of Graduate Studies. The dean of the College of Graduate Studies will review the recommendation for dismissal and, if appropriate, a review committee will be appointed by the College of Graduate Studies and will convene for review. The student, the major professor, and the program's administrator will be allowed to appear before a review committee. The committee will make a recommendation for action to the dean of the College of Graduate Studies who will make the final decision. Dismissal is from the student's degree, program and from the College of Graduate Studies.
- **Appeals.** Students may appeal the dean's decision directly to the Graduate Council. No action will appear on the transcript unless the Graduate Council recommends it.

General Requirements for Master's Degrees

Credits. All master's degree programs require a minimum of 30 credits. Some master's degree programs may require more. Additional work may be stipulated in individual cases to meet particular objectives or need for additional background. Courses used toward an undergraduate degree, professional development courses or courses on a professional development transcript are not available to be used toward a graduate degree.

No more than three credits of workshop or workshop equivalent courses may be used toward the graduate degree.

Credit in course 500 (Master's Research and Thesis) cannot be counted toward a non-thesis master's degree. Although no limit is imposed on the number of credits that may be earned in course 500 for degrees with thesis, only a maximum of 10 credits in course 500 in the major of the degree can be used to fulfill master's degree requirements (a lower limit may be set by the program). Up to five credits of course 599 (Non-thesis Research) are allowed to count towards a non-thesis master's degree; however, if a thesis option exists for the program, no more credits of course 599 are allowed toward the non-thesis master's degree than half the number of credits allowed for course 500 toward the program's master's degree.

Transfer, Correspondence Study, Non-degree Credit, and Over-aged Credit Limitation. The combined total of transfer credits, correspondence credits, non-degree credits, credits moved from an undergraduate transcript that were not used toward an undergraduate degree, and approved credits more than eight years old at the time the degree is awarded shall not exceed 12 credits for master's programs designated as re-

quiring 36 or fewer credits, and shall not exceed one-third of the total credits in designated programs requiring more than 36 credits. The student's program may set a lower limitation. Credits can be transferred to UI, with the consent of the student's committee and the dean of the College of Graduate Studies, only if the institution from which the course credits are being transferred has a graduate program in the course's discipline or, should there be no graduate program in the course's discipline, if an exception has been granted by the dean of the College of Graduate Studies. All credits used toward graduate degrees must be from regionally accredited American institutions or from non-US institutions recognized by the appropriate authorities in their respective countries. Transfer credits are subject to all other Graduate College rules and regulations. Also refer to Subsequent Graduate Degree section.

Second Master's Degrees. A student who has a master's degree or is working on a master's degree may obtain a second master's degree only in a different major, subject to the approval of the dean of the College of Graduate Studies. Up to six credits of course work used to satisfy the requirements for the first degree may be applied to the second; all other catalog requirements and credit requirements in UI courses must be fulfilled. If the courses are transfer courses, they are counted as a part of the credits that are allowed for transfer, correspondence, non-degree, over-aged credits and credits moved from an undergraduate transcript.

With department approval, a student in the M.F.A. Theater Arts program may use up to 30 credits from a M.A. Theater Arts program toward the M.F.A. A student who is enrolled in a doctoral program or who has a doctorate may obtain a master's degree in a different field and use a number of common credits subject to approval by the Graduate Council. A student who has a doctorate may not subsequently obtain a master's degree in the same field.

Concurrent Graduate/Law Degrees. UI law courses used toward an approved UI concurrent graduate degree must be approved by the College of Graduate Studies and included on the graduate student's approved study plan. Courses with grades and credits earned in these approved law courses will be posted to the student's graduate academic transcript as a pass (P) upon receipt of the Course Level Adjustment form in the UI Registrar's Office. See the Accounting, Environmental Science and Water Resources sections in the individual department section for additional information on concurrent degrees.

Awarding M.F.A. Degrees to Members of the Faculty. A UI faculty member with rank of senior instructor or above may not be awarded an M.F.A. degree through the department or corresponding program in which he or she is employed, unless that faculty member had been admitted to that degree program before attaining such academic rank.

Specific Requirements for Master's Degrees

Master of Accountancy. The M.Acct. degree is 30 credits. At least 18 must be in courses at the 500 level and the remainder may include one 400 level course in the major and 300 and 400 level courses in supporting areas, to be approved by the major professor. A non-thesis requirement must be met. Students enrolled in the concurrent M.Acct./J.D. may use 15 credits of law courses toward the M.Acct. degree only if the law degree is completed.

Master of Architecture. The M.Arch. degree requires a design project. Refer to the Art and Architecture section of this catalog for a definition of specific admission and degree requirements. Of the minimum 30 credits required for the degree, 18 must be at the 500 level; the remainder may include 400 level courses in the major and 300 or 400 level courses in supporting areas. All credits toward the degree must be earned in residence at UI or during internship and study abroad. A final design project must be accepted.

Master of Arts. In some fields, all candidates for the M.A. degree are required to present a thesis; in others the thesis is optional or not required. Consult the departmental section for specific descriptions. Of the minimum 30 credits required for the degree, at least 18 credits must be at the 500 level; the remainder may include 400 level courses in the major and 300 or 400 level courses in supporting areas. For the thesis student, a thesis is required. For the non-thesis student, a non-thesis requirement must be met.

Master of Arts in Teaching. The M.A.T. is primarily for certified teachers who wish to strengthen their subject-matter preparation. Enrollment in this program of study requires the consent of the chair of the subject-matter department. The major professor is from the subject-matter department; the co-advisor is from the College of Education. The general requirements of the College of Graduation Studies apply except that, of the minimum 30 credits required, only six must be in courses at the 500 level, at least six must be in courses offered by the College of Education at the 400/500 level, excluding workshops, and at least 20 must be in courses in the subject field. These courses may be at the 300 or 400 level, including 300 level courses in the major field if they are a part of the logical sequence of study. A non-thesis requirement in the subject field must be met.

Master of Business Administration. The M.B.A. is a professional fee program that is delivered in an executive format in northern Idaho. This non-thesis program consists of 42 credits at the 500 level. Consult the College of Business for specific details.

Master of Education. To complete the M.Ed., a non-thesis degree program, the student must fulfill the program's non-thesis requirement. Of the minimum 30 credits required, at least 18 must be in courses at the 500 level; the remainder may include 400 level courses in the major and 300 or 400 level courses in supporting areas.

Master of Engineering. The M.Engr. is a non-thesis degree. A minimum of 30 credits is required; at least 18 must be in courses at the 500 level and the remainder may include 400 level courses in the major and 300 or 400 level courses in supporting areas. A non-thesis requirement must be met. Majors are offered in agricultural, chemical, civil, computer, electrical, mechanical, and (at the University of Idaho Center, Idaho Falls only) nuclear engineering. The prospective student should consult the specific department for special entrance requirements.

Master of Fine Arts. The M.F.A. is the professionally recognized terminal degree in fine arts including art, creative writing, and theatre arts. See the specific department for credit requirements.

Master of Music. The M.Mus. degree, depending on the concentration selected, requires a thesis, public graduate recitals, or a final project. No credit is granted for the final project in a non-thesis degree plan and the project is subject to approval of the supervisory committee. Both written and oral non-thesis requirements must be met in all degree options. Of the minimum 30 credits required for the degree, at least 18 must be in courses in the School of Music at the 500 level; the remainder may include 400 level courses in the School of Music and 300 or 400 level courses in other areas.

Master of Natural Resources. The M.N.R. program provides broad-based, advanced training in natural resource management and administration. The M.N.R. degree requires 30 semester credits beyond the bachelor's degree. Only courses at the 400 or 500 level counts toward the degree. At least 18 of the 30 credits must be at the 500 level. A comprehensive non-thesis requirement must be met.

Master of Public Administration. The M.P.A. program includes thesis and non-thesis options. Of the minimum 30 credits required for the degree, at least 18 must be in courses selected from prescribed core areas and 12 in designated optional areas of emphasis as described in the Department of Political Science section of this catalog; at least 18 of the 30 credits must be in courses at the 500 level. A public service internship is required of students with no appropriate work experience. For the thesis student, a thesis is required. For the non-thesis student, a non-thesis requirement must be met.

Master of Science. In some fields, all candidates for the M.S. degree are required to present a thesis; in others the thesis is optional or not required. Consult the departmental section for specific descriptions. Of the minimum 30 credits required for the degree, at least 18 credits must be at the 500 level; the remainder may include 400 level courses in the major, and 300 or 400 level courses in supporting areas. For the thesis student, a thesis is required. For the non-thesis student, a non-thesis requirement must be met.

Master of Science in Athletic Training. The M.S.A.T. is a non-thesis degree with a minimum of 88 credits at the 500-level required. Students may be admitted to the program through two methods: either by admission after completion of a bachelor's degree from a regionally accredited institution or by early admission after the completion of the junior year in the UI Athletic Training track in Exercise Science and Health (B.S.P.E.) or by completion of the junior year in an approved program at an institution with an articulated agreement with UI. Students offered early admission to the graduate program must meet all admissions and prerequisite course work requirements for the Master of Science in Athletic Training degree, as well as all undergraduate requirements excluding the first 30 credits of the graduate program. Upon successful completion of the first 30 graduate credits, students may use these credits in transfer towards their undergraduate degree requirements. There is a professional fee for the M.S.A.T. program; consult the program coordinator for details.

Professional Science Master. Contact the Director of the Environmental Science and Water Resources Program for information regarding this

degree. Of the minimum 35 credits required for the degree, at least 26 credits must be at the 500 level; the remainder may include 400 level courses.. This is a non-thesis program.

Education Specialist Degrees

The University of Idaho awards the degree of Education Specialist for students who want an organized program of graduate studies beyond the master's degree but who may not wish to pursue a doctoral program. Programs are available leading to the degrees of Education Specialist in Adult/Organizational Learning and Leadership, Education Specialist in Educational Leadership, and Education Specialist in Curriculum and Instruction. General requirements for the Education Specialist degree are described in this section.

Requirements for Education Specialist Degree

Credit Requirements. An acceptable program of at least 60 upper-division and graduate level semester credits beyond the bachelor's degree is required. Additional credits may be required for those who have master's degrees in other areas of emphasis or who have deficiencies. Credits listed on an undergraduate transcript, professional development courses, or courses on a professional degree transcript are not available to be used toward a specialist degree. No more than three credits of workshop or workshop-related courses may be used toward a specialist degree. Thesis or dissertation credits cannot be used towards a specialist degree. Each student, following advising, will submit the study plan for approval to the major professor, the appropriate program administrator, and the dean of the College of Graduate Studies for approval.

Transfer, Correspondence Study, and Non-degree Credit Limitation. No more than 12 of the last 30 credits may be taken as transfer courses, correspondence courses (with prior written approval of the dean of the College of Graduate Studies), or non-degree courses. Transfer credits must be from institutions offering graduate programs in the discipline(s) of the course(s) being transferred. All credits used toward graduate degrees must be from regionally accredited American institutions or from non-US institutions recognized by the appropriate authorities in their respective countries.

Time Limit. The last 30 credits must have been taken in the eight years preceding the semester in which the degree is awarded.

Procedures for Education Specialist Degree

See the General Graduate Regulations section regarding appointment of major professor, study plans, application for advanced degree, final semester registration, and non-thesis requirement.

Doctoral Degrees

The University of Idaho awards the degree of Doctor of Philosophy in recognition of high achievement in scholarly and research activity. The degree of Doctor of Education is granted for high scholarly attainment and in recognition of the completion of academic preparation for professional practice. See Procedures for Doctor of Philosophy and Doctor of Education Degrees for more details. The Doctor of Athletic Training is offered through the College of Education and the Department of Movement Sciences. See Procedures and Requirements Specific to the Doctor of Athletic Training for more details.

The major professor and program offering a particular doctoral program indicate the general philosophy of the degree program, the objectives of courses and seminars, the research specialties available, and requirements unique to the department. Admission to the doctoral program is granted only to those who have a recognized potential for completing the degree. In order to effect an integration of course and research work, students are advised to begin research shortly after entering the program and not wait until much of the course work has been completed.

Requirements for Doctoral Degrees

Credit Requirements. For the Ph.D. and Ed.D., a minimum of 78 credits beyond the bachelor's degree is required; of these, at least 52 credits must be at the 500 level or above and at least 33 of the 78 credits must be in courses other than 600 (Doctoral Research and Dissertation). A maximum of 45 credits in dissertation and 5 credits of 599 (Non-thesis Research) may be used toward the degree. For the D.A.T., a minimum of 66 credits are required (including all dissertation work).Courses numbered below 300 may not be used to fulfill the requirements for a doctoral degree; courses numbered 300-399 may be used only in supporting areas. Individual programs may require additional course work. Applicants having a doctoral degree may obtain a second doctoral degree subject to the approval of the Graduate Council. The Graduate Council will establish the requirements for the second degree.

Credit Limitations for Transfer, Correspondence Study, and Non-degree. For the Ph.D. and Ed.D. degrees, a student must complete at least 39 of the 78 required credits at UI while matriculated in the College of Graduate Studies. Credits can be transferred to UI, with the consent of the student's major professor, the committee (if required by the program), the program's administrator, and the dean of the College of Graduate Studies. Credits can be transferred only if the institution from which the credits are being transferred has a graduate program in the course's discipline. All credits used toward graduate degrees must be from regionally accredited American institutions or from non-US institutions recognized by the appropriate authorities in their respective countries. Transfer credits are subject to all other College of Graduate Studies rules and regulations. Correspondence study courses may be applied to the degree only with the prior written approval of the College of Graduate Studies. Courses used toward an undergraduate degree, professional development courses, and courses on a professional development transcript are not available to be used toward a doctoral degree.

Time Limits. Of the credits submitted to satisfy the requirements for a Ph.D. or Ed.D. degree, a maximum of 30 may be more than eight years old when the degree is conferred, provided the student's committee and program administrator determine that the student has kept current in the subjects concerned. Graduation must occur no later than five years after the date on which the candidate passed his or her preliminary or general examination. These time limitations can be extended only on recommendation of the committee and approval by the Graduate Council.

Awarding Doctoral Degrees to Members of the Faculty. Regulations are outlined in Section 4920 of the Faculty-Staff Handbook.

Particular Requirements for the Ed.D. Degree. A period of professional practice is required for the Doctor of Education degree; the period involved is determined by the student's supervisory committee. While the Ed.D. is a College of Education degree, you should consult with the departments in the College of Education to learn of specific emphasis requirements.

Procedures for Doctor of Philosophy and Doctor of Education Degrees

Appointment of Major Professor and Committee. Refer to the "Appointment of Major Professor and Committee for All Degree Seeking Graduate Students" in the preceding General Graduate Regulations section. In addition, a supervisory committee consists *at* least of four people: the major professor as chair and a second UI faculty member both from the major's program, one faculty member from a minor or supporting area, and a faculty member from a discipline outside the major.

Qualifying Examination. The qualifying examination is a program option and serves to assess the background of the student in both the major and supporting fields and to provide partially the basis for preparation of the student's study program. A particular program may or may not require a master's degree as a prerequisite for the qualifying evaluation. As soon as the program's qualifications are met, a supervisory committee is appointed.

Preparation of Study Plan. Refer to the "Preparation and Submission of Study Plan" in the preceding General Graduate Regulations section.

Preliminary Examination for Ph.D. Degree. The preliminary examination should be scheduled only after the student has completed the majority of the courses on his or her study plan. The student is required to be registered during the semester the preliminary examination is taken. The student's committee certifies to the College of Graduate Studies the results of the preliminary examination and if passed, the student is advanced to candidacy. Graduation must occur no later than five years after the date on which the candidate passed his or her examination. If the preliminary examination is failed, it may be repeated only once; the repeat examination must be taken within a period of not less than three months or more than one year following the first attempt. If a student fails the preliminary examination a second time, or the program does not allow the student to repeat the examination after the first failure or the student does not retake the examination within one year, the student is automatically moved to unclassified enrollment status and is no longer in the degree program.

General Examination for Ed.D. Degree. When the student approaches the end of his or her course work, has completed the professional experience requirement and has outlined the dissertation subject in detail, the supervisory committee approves the holding of the general examina-

tion. The student is required to be registered during the semester the general examination is taken. The examination is both written and oral and is intended to assess progress toward degree objectives. The student's committee certifies to the College of Graduate Studies the results of the general examination and if passed, the student is advanced to candidacy. Graduation must occur no later than five years after the date on which the candidate passed his or her examination. If the general examination is failed, it may be repeated only once; the repeat examination must be taken within a period of not less than three months or more than one year following the first attempt. If a student fails the general examination a second time, or the program does not allow the student to repeat the examination after the first failure or the student does not retake the examination within one year, the student is automatically moved to unclassified status and is no longer in the degree program.

See the General Graduate Regulations section regarding application for advanced degree, registration requirements, final defense and dissertation requirements.

Procedures for Doctor of Athletic Training

The Dissertation of Clinical Practice Improvement. Students enrolled in the Doctor of Athletic Training (D.A.T.) complete a Dissertation of Clinical Practice Improvement which has been adapted from the traditional theoretical Ph.D. and Ed.D. formats and altered to meet the demands of the changing healthcare landscape. The Dissertation of Clinical Practice Improvement incorporates not only original research but additional evidential measures of the development of advanced practice (e.g. patient outcomes, plan of advanced practice, etc.).

The Dissertation Team (Committee). All D.A.T. dissertation committees will have at least four committee members: two members of the athletic training faculty (all with graduate faculty status), the student's Attending Clinician (who is the student's on-site mentor during the student's residency), and an expert in the student's chosen area of clinical research. The AT faculty members will always chair the dissertation, provide research guidance, and serve as the experts in the development of advanced practice in Athletic Training. A situation may arise in which one or both of the members of the committee that are outside of the AT program faculty may have a degree less than that of which the student is seeking, however, the intent of the third and fourth D.A.T. committee membership is to provide outside validation of the student's progress toward advanced practice and clinical utility of action research studies.

Preliminary Exams. All students will successfully complete preliminary exams (in the second summer of the cohort) before being admitted to candidacy. The format of these exams will be decided at the committee and committee chair's discretion but will include the Plan of Advanced Practice and at least one of the following options.

1. Comprehensive Exam in the student's area of advanced practice (may include both oral and written items).
2. Publication quality manuscript (committee approved).

Dissertation Hours. The D.A.T. has been designed to allow the students to complete their dissertation as efficiently and efficaciously as possible. All components of the dissertation are developed within specific didactic, research and clinical courses that are integrated throughout the curriculum. Therefore, formal "dissertation hours" are not required as these "hours" are already contained in the curriculum design.

Assistantships and Research Fellowships

Assistantships are open to domestic and international students who are regularly enrolled students in the College of Graduate Studies.

Students in the provisional enrollment category or in the unclassified enrollment category are NOT eligible to receive assistantships.

An inquiry for a position or award should be addressed to the administrator of the graduate program in which the applicant plans to enroll for graduate study. Appointments include a work requirement of up to 20 clock hours per week. Assistants are considered students. Assistants who provide primary teaching responsibilities, grading assignments, assisting with the delivery of instruction through technology, and providing other assistance related to instruction under the active supervision of a member of the university faculty are teaching assistants. Assistants who provide support of research, scholarship, or creative activity are research assistants. (See FSH 1565 H-2 for full definitions.) Those appointed to assistantships supported by the university are advised that the appointments are tenable only in the program of the major field of study, except where prior written exceptions are made. Annual leave, sick leave, and health insurance benefits are not available for graduate assistants.

Continuation of the assistantship after the first semester is contingent upon satisfactory performance, progress toward your degree, and abiding by the program and University's policies and procedures. UI policies are available online in the Faculty-Staff Handbook.

Assistants are required to sign a Terms of Employment form and a Patent and Copyright Agreement for University of Idaho Employees. All assistants are required to have personal health insurance coverage or enrollment in the Student Health Insurance Program. Teaching assistants are required to attend training sessions during the first year in attendance.

Salaries for assistantships vary depending upon the graduate program, length of graduate service and whether they are for an academic year or for 12 months. Contact program for current salary levels.

In addition, nonresident tuition will be waived for persons holding full appointments and a pro rata portion of nonresident tuition will be waived for persons holding partial appointments. However, **each person who holds a full appointment as an assistant is required to pay the uniform student fees and tuition charged to registered full time students, regardless of the number of credits for which the student is registered.** Persons accepting part-time assistantships will be required to pay the uniform student fees and tuition based on the number of credit hours for which the person is registered.

Students on an assistantship cannot use a staff or staff spouse fee waiver or senior scholar waiver.

Research fellowships are awarded by various colleges. Research conducted on fellowships may or may not be used for dissertation purposes. Credit enrollment and stipends vary according to the particular fellowship. Fees and tuition are charged, but in some cases may be remitted, depending on the type of fellowship and the availability of funds. Inquiries should be addressed to the program administrator in which the applicant plans to enroll.

College of Law

Michael A. Satz, Interim Dean; Richard H. Seamon, Interim Associate Dean for Faculty Affairs; Jeffrey A. Dodge, Associate Dean of Students and Administration; Lee B. Dillion, Associate Dean for Boise Affairs (101 Law Bldg.; 208/885-4977).

The College of Law was organized in 1909 and is the only accredited law school in the state of Idaho. The College is a member of the Association of American Law Schools and is fully accredited by the American Bar Association.

Purpose of the College

The role of the College of Law is to educate students for the legal profession with its many facets and its involvement in the whole range of society and to prepare students to engage in law-related endeavors in business, government and non-governmental organizations. The curriculum is designed to provide instruction over three academic years in principles generally applicable in the United States and international courts. The responsibilities assumed by professionals are emphasized, as are solutions to ethical problems. The study of law is also an asset to those who wish to hold positions of leadership in government, business or non-profit organizations.

Methods of instruction are adapted to the development of each student's highest potential and vary with the professor and the course. Teaching and learning approaches that encourage individual initiative and develop perception and communication abilities are emphasized. Practical Skills education is emphasized throughout the curriculum. Students are also required to participate in volunteer, law-related service as a condition of graduation. Because law changes rapidly, mere accumulation of information is subordinated to the more important ends of individual development and training in critical habits of thought.

Admission to the Bar

The College of Law is fully accredited by the American Bar Association and is a member of the Association of American Law Schools, and its degree is accepted by all state bar associations. Educational prerequisites vary among states, and the secretary of the bar examiners in the state in which the applicant intends to practice should be contacted to determine the existence of special requirements.

Suggestions for Pre-legal Study

The subject matter of pre-legal education is less important than the quality of work performed. Although the most common pre-law majors are

English, social sciences, or business, law students are drawn from a broad range of undergraduate programs from agriculture and engineering to English and philosophy. The study of law requires logical analysis and effective written and oral communication. Any rigorous course of study that develops these skills is good preparation for law school. Beyond this, a well-rounded education is best. American government and western political philosophy are important in public law; economic and accounting concepts are basic to much business and commercial law; history, literature, philosophy, and psychology all provide useful insights into cultural tradition and human motivation that are important to the interpretation and application of law.

Most universities have a pre-law advisor, often through the Political Science Department, to advise students in selecting appropriate pre-law courses. At Idaho, a pre-law advisor is available through the Political Science Department to guide students in selecting courses within the particular college or university that will meet these objectives. The Admissions Office at the College of Law is also available for general consultation in program planning.

Application for Admission

Admission Requirements. Applicants for admission must have a bachelor's degree from an accredited four-year college or university by the date of enrollment at the College of Law. In special cases, it may be possible to be admitted after three years of undergraduate study: contact the College of Law for more information. Applicants must also arrange for a complete Law School Data Assembly Service (LSDAS) report, which consists of a Law School Admission Test (LSAT) score, copies of transcripts, and other relevant information.

Arrangements for taking the LSAT must be made by the individual applicant directly with the Law School Admission Council (LSAC) well in advance of the dates set for the LSAT. The dates and places for the test, application forms, and a bulletin of information about the test may be obtained by writing directly to LSAC, 662 Penn St., Newtown, PA 18940, by calling LSAC at 215/968-1001, or on their web site at www.lsac.org. This information may also be obtained from the pre-law advisor of most colleges and universities.

Commercial materials on the LSAT are available at most bookstores, and LSAT preparation courses may be found in many locations. Applicants are advised to study for the test ahead of time. Old LSAT scores are acceptable as long as an LSDAS Report can be assembled by the testing service.

Registration with the LSDAS is required of all applicants. Instructions on registration for the LSDAS report and an application form for the purpose are contained in the same bulletin that describes the LSAT. Applicants should accomplish this registration at the same time they register for the LSAT. **It is the applicant's responsibility to assure that LSDAS has all required information and that the applicant's LSDAS Report is complete for release to the College of Law.** Be advised that it may take up to six weeks for an LSDAS Report to reach the College of Law.

Application Deadline. While the College of Law considers applications upon completion, all required admission credentials listed below should be postmarked no later than **February 15** to be assured timely consideration for admission in the fall. The College of Law will request an LSDAS Report from LSAC on receipt of an application and application fee. The college is unable to consider the application until an LSDAS Report has been received. This requires applicants to take the LSAT no later than the preceding December. However, in order to assure timely application, the October LSAT, almost a year before admission, is recommended. The college cannot be responsible for delays in the mail or at the LSDAS.

Decision on Admission

Admissions decisions are made by a faculty committee. The college receives many more applications than it can accept. Consequently, the Admissions Committee must deny admission to many who are qualified to study law. In general, offers of admission are extended to those judged to present the greatest promise for success in law school. Matters relating to character are also considered in the admissions process.

Although undergraduate grade point average and LSAT scores are the most important factors used to arrive at this judgment, the committee will consider any additional information that an applicant believes is important in assessing his or her ability to perform law school work. A personal statement often provides insight into an applicant's motivation for attending law school, as well as functioning as a sample of writing ability, and is probably the most helpful additional item for most applicants. Graduate work and/or work experience may provide evidence of achievement and capabilities inadequately addressed by standard credentials. Letters of recommendation and prior written work may also help in assessing an applicant's relative promise. Letters of recommendation should be limited to three, and should address the applicant's ability to engage in critical analysis and to communicate orally and/or in writing. The cultural and socioeconomic background of applicants is also considered to ensure the College of Law remains open to all students, as well as provides an environment in which diverse viewpoints are represented.

As a state-supported institution, the College of Law extends a preference to timely applicants who are Idaho residents. It is possible to establish Idaho residency for tuition purposes either prior to or after enrolling at the College of Law. Residency determinations are made by the University of Idaho Registrar's Office; inquiries about residency should accordingly be directed to that office at 208/885-6731.

Admission to the College of Law is very competitive. The median undergraduate grade point average for enrolled students is typically around 3.40, and the median LSAT score was 152 for the Class of 2016. Statistics for the current year can be found at www.law.uidaho.edu/admissions.

Every effort is made to notify timely applicants of a decision by early April. A small percentage of applicants may be placed in the "standby pool" and may not receive a final decision until late summer, subject to space available in the incoming class.

Upon acceptance, a $500 deposit is required to secure a place in the fall entering class. This deposit will be applied to student fees upon registration. In cases of special need, the deposit may be waived.

Transfers from Other Schools

Space in each law school class is limited. Therefore, only a few transfers into the second year class can be accommodated. Special standards apply, and within these standards, a degree of preference is extended to residents of Idaho. Students transferring into our program are expected to complete at least three semesters at Idaho. Students desiring to study here for a lesser period should arrange to have credits at Idaho accepted toward a degree from the law college in which they are currently enrolled. Before a transfer applicant is considered, we must have a final transcript of all work that will have been undertaken at other law schools on file by the time of transfer. We also require a letter from the dean or associate dean following the completion of all such work that states that the applicant remains in good standing, is eligible to continue without any condition or qualification, and ranks in the top 50 percent of his or her law school class. Consequently, for an applicant currently enrolled in a law school, no decision on transfer will be possible until June or later, when all grades from current work are available. If an applicant attends a summer session of a school of law, it will not be possible to process a final acceptance until the close of the summer session. If an applicant needs some guidance before results of his or her spring semester's work become available, a tentative opinion about probable admissibility may be given.

Non-degree Candidates

Students who are not degree candidates in the College of Law but are enrolled elsewhere at the University of Idaho are permitted to register for law courses if they receive permission from both the course instructor and the Associate Dean of Students and Administration. Such courses cannot be credited toward a law degree even if the student is later admitted to the College of Law.

Fees

See the section on "Fees and Expenses".

Grading System

Grades for courses taken in the College of Law shall be awarded on the basis of A, A-, B+, B, B-, C+, C, C-, D+, D, D-, and F; provided, however, that by resolution the law faculty may designate any course, or courses, to be graded on a pass-fail or pass-no pass basis. Any approved course work taken at any other law school will be recorded on the transcript as a "P," if the student earned a "C" or better in that course. No credit will be awarded for work done at another law school if the student earned less than a grade of "C." Up to 6 credit hours of UI graduate level courses may be taken with special permission of the associate dean. Credits will be recorded as "P" for course work in which the student earns a "B" or better. Grades of "P" are not included in calculating a student's grade-point average or class ranking in the College of Law. Exceptions to the above

may be made for UI graduate level courses used in the approved UI law/graduate concurrent degree programs.

Grade-point averages of students in the College of Law shall be computed by assigning the following numerical point values per semester hours: A = 4.00; A- = 3.67; B+ = 3.33; B = 3.00; B- = 2.67; C+ = 2.33; C = 2.00; C- = 1.67; D+ = 1.33; D = 1.00; D- = 0.67; F (or "fail" under the pass-fail basis) = 0.00. The cumulative grade-point average is the quotient of total points assigned, divided by total hours undertaken. Courses in which marks of I, W, P (pass) or NP (no pass) have been given shall be disregarded in the computation. All course grades shall be included on the transcript and (except for marks of I, W, P or NP) in the calculation of the grade-point average, even if courses have been repeated. (For further information about repeating courses, see below.)

This grading system applies in determining: (a) eligibility for continuing study in the College of Law; (b) compliance with requirements for the Juris Doctor degree; and (c) class ranking within the College of Law.

Grades in most courses offered by the College of Law are awarded on the basis of performance in a single written examination conducted at the end of the semester. In courses where it is so announced, grades on written projects or classroom participation may be included.

Unless arranged in advance by the professor, students receiving an "incomplete" grade for a course must remove that grade within six weeks after the first day of classes of the following fall or spring semester. Incompletes not made up before that date automatically revert to the grade indicated by the professor as the "permanent" grade, usually an "F." The grade ultimately given will be computed in the GPA for the semester in which the class was begun.

Repeating Courses for Credit: A student who has completed a law school course in which s/he has received a grade of C-, D+, D, or D- may repeat that law school course once (the "repeated course"), subject to the following conditions:

1. The credit hours earned by the student upon completion of the repeated course shall appear on the law school transcript, but shall not be applied toward the total number of required credit hours for award of the Juris Doctor degree by the College of Law.
2. The grade earned by the student upon completion of the repeated course shall appear on the student's law school transcript, but shall not be calculated as part of the student's law school grade point average.

Repeating Failed Courses

1. A student who has completed a law school course in which s/he has received a grade of F (the "failed course") shall receive no credit hours for application toward the total number of required credit hours for award of the Juris Doctor degree by the College of Law, but the grade shall be calculated as part of the student's law school grade point average.
2. If the failed course is a course required for graduation the student must repeat the course and receive a grade above an F, in order to satisfy the graduation requirements. If the failed course is not required for graduation, the student may repeat the course one time only. If a student repeats a failed course and passes the course, the credit hours and grade received in the repeated course shall be treated as follows:
   a. The credit hours earned by the student upon completion of the repeated course shall appear on the law school transcript and shall be applied toward the total number of required credit hours for award of the Juris Doctor degree by the College of Law.
   b. The grade earned by the student upon completion of the repeated course shall appear on the student's law school transcript, but shall not be calculated as part of the student's law school grade point average.

Law (J.D.)

Required course work includes the College of Law requirements and the following:

Law 805	Civil Procedure and Introduction to Law (3 cr)
Law 806	Civil Procedure II (3 cr)
Law 807	Property (4 cr)
Law 809	Torts (4 cr)
Law 812	Criminal Law (3 cr)
Law 813	Contracts (4 cr)
Law 815	Legal Research and Writing (0 or 5 cr, max 5)
Law 816	Constitutional Law I (4 cr)
Law 820	Statutory Reading and Interpretation (3 cr)
Law 905	Constitutional Law II (3 cr)
Law 962	Professional Responsibility (3 cr)

Two credits chosen from the following (2 cr):

Law 912	Civil Mediation (2 cr)
Law 913	Family Mediation (2 cr)
Law 914	Dispute Resolution (1 cr, max 4)
Law 917	Negotiation and Appropriate Dispute Resolution (3 cr)
Law 954	Trial Skills (3 cr)
Law 956	Moot Court (1-2 cr)
Law 957	Mock Trial (2 cr)
Law 958	Trial Advocacy (2 cr)
Law 966	Legal Drafting (2 cr)
Law 967	Advanced Legal Writing (2 cr)
Law 970	Advanced Legal Research (2 cr)
Law 971	Lawyering Process Seminar (2 cr)
Law 974	Legal Aid Clinic (1-3 cr, max 6)
Law 975	Classroom Credit Public Service Externship (1-5 cr, max 10)
Law 976	Semester in Practice (1-12 cr, max 12)
Law 977	Clinical Lab (1 cr, max 4)
Law 978	Small Business Legal Clinic (1-3 cr, max 6)
Law 986	Judicial Clerkship Seminar (1 cr)
Law 987	Law Practice Management (1-2 cr)
Law 991	Skills Practicum (cr arr)
Law 993	Appellate Clinic (1-3 cr, max 6)
Law 994	Economic Development Clinic (1-3 cr, max 6)

One Upper-Division Writing Course
40 Hours of uncompensated law related pro bono service
Courses to total 90 credits for this degree

Students may choose to complete one of the following four emphases. To complete a J.D. with any of the listed emphases a student must complete the above general J.D. requirements and the requirements of one of the emphases.

A. Business Law & Entrepreneurship Emphasis

Students pursuing this emphasis must earn a minimum grade of 'C' in each course taken to satisfy Business Law & Entrepreneurship emphasis requirements, plus a cumulative 2.50 grade point average over all courses used to satisfy Business Law & Entrepreneurship emphasis requirements.

Law 919	Business Associations (4 cr)
Law 925	Property Security (3 cr)
Law 930	Taxation (3-4 cr)

One class chosen from the following:

Law 912	Civil Mediation (2 cr)
Law 917	Negotiation and Appropriate Dispute Resolution (3 cr)
Law 932	Estate Planning (3 cr)
Law 976	Semester in Practice (1-12 cr, max 12)

One class chosen from the following:

Law 981	Critical Legal Studies Journal (1-4 cr, max 4)
Law 982	Law Review (1-4 cr, max 4)
Law 983	Directed Study (1-2 cr, max 4)

One of the following groups of courses:

Group A.
Twelve credits chosen from the following (12 cr):

Law 903	Introduction to Intellectual Property (3 cr)
Law 907	Administrative Law (3 cr)
Law 908	Workplace Law (4 cr)
Law 910	Antitrust (3 cr)
Law 920	Securities Regulation (3 cr)
Law 921	Accounting for Law Students (2 cr)
Law 922	Trademarks and Trade Dress (2 cr)
Law 924	Sales (3 cr)
Law 927	Business Entities Taxation (4 cr)
Law 984	Real Estate Transactions (2-3 cr)

Group B

Law 923	Negotiable Instruments, Bank Collections and Deposits, and Other Payment Systems (3 cr)
Law 924	Sales (3 cr)

Six credits chosen from the following (6 cr):

Law 907	Administrative Law (3 cr)
Law 911	Principles of Suretyship (2 cr)

Law 926 Bankruptcy (3 cr)
Law 927 Business Entities Taxation (4 cr)
Law 984 Real Estate Transactions (2-3 cr)
Law 990 Consumer Law (3 cr)

Group C
Law 903 Introduction to Intellectual Property (3 cr)

Two classes chosen from the following:
Law 922 Trademarks and Trade Dress (2 cr)
Law 931 Patents (2 cr)
Law 980 Copyrights (2-3 cr)

Five credits chosen from the following (5 cr):
Law 907 Administrative Law (3 cr)
Law 910 Antitrust (3 cr)
Law 918 Cyberlaw (2-3 cr)
Law 922 Trademarks and Trade Dress (2 cr)
Law 931 Patents (2 cr)
Law 980 Copyrights (2-3 cr)
Law 989 Mass Media Law (2 cr)

Courses to total 90 credits for this degree

B. Litigation & Alternative Dispute Resolution Emphasis

A minimum of one doctrinal class in Law 904, Law 907, Law 930, Law 952, Law 953, Law 960, or Law 985 is required.

A minimum of one practice class in Law 914, Law 955, Law 966, Law 967, Law 970, Law 971, Law 974, Law 975, Law 976, Law 977, LAw 993, Law 995, Law 996, Law 997, or Law 998 is required.

Students pursuing this emphasis must earn a minimum grade of 'C' in each course taken to satisfy Litigation & Alternative Dispute Resolution emphasis requirements, plus a cumulative 2.50 grade point average over all courses used to satisfy Litigation & Alternative Dispute Resolution emphasis requirements.

Law 917 Negotiation and Appropriate Dispute Resolution (3 cr)
Law 950 Evidence (3 cr)

One class chosen from the following:
Law 954 Trial Skills (3 cr)
Law 958 Trial Advocacy (2 cr)

One class chosen from the following:
Law 912 Civil Mediation (2 cr)
Law 913 Family Mediation (2 cr)

One class chosen from the following:
Law 956 Moot Court (1-2 cr)
Law 957 Mock Trial (2 cr)
Law 974 Legal Aid Clinic (1-3 cr, max 6)

Ten credits from the following (10 cr):
Law 904 Federal Courts (3 cr)
Law 907 Administrative Law (3 cr)
Law 914 Dispute Resolution (1 cr, max 4)
Law 930 Taxation (3-4 cr)
Law 952 Remedies (3 cr)
Law 953 Criminal Procedure (3 cr)
Law 955 Appellate Advocacy Program (2 cr)
Law 960 Conflict of Laws (2 cr)
Law 966 Legal Drafting (2 cr)
Law 967 Advanced Legal Writing (2 cr)
Law 970 Advanced Legal Research (2 cr)
Law 971 Lawyering Process Seminar (2 cr)
Law 974 Legal Aid Clinic (1-3 cr, max 6)
Law 975 Classroom Credit Public Service Externship (1-5 cr, max 10)
Law 976 emester in Practice (1-12 cr, max 12)
Law 977 Clinical Lab (1 cr, max 4)
Law 985 Immigration Law and Policy (3 cr)
Law 993 Appellate Clinic (1-3 cr, max 6)
Law 995 General Practice/Domestic Violence & Sexual Assault Clinic (1-3 cr, max 6)
Law 996 Immigration Law Clinic (1-3 cr, max 6)
Law 997 Mediation Clinic (1-3 cr, max 6)
Law 998 Tax Clinic (2-3 cr, max 6)

Courses to total 90 credits for this degree

C. Native American Law Emphasis

Students pursuing this emphasis must earn a minimum grade of 'C' in each course taken to satisfy Native American Law emphasis requirements, plus a cumulative 2.50 grade point average over all courses used to satisfy Native American Law emphasis requirements.

Law 979 Native American Natural Resource Law (3 cr)

One class chosen from the following:
Law 928 Tribal Nation Economics and Law (3 cr)
Law 949 Native American Law (3 cr)

Students must complete one of the following tracks. Substitution from UI and WSU graduate courses allowed for one course in each track with pre-approval of Native American Law Emphasis Advisor:

Economics Development Track

Six credits chosen from the following (6 cr):
Law 903 Introduction to Intellectual Property (3 cr)
Law 907 Administrative Law (3 cr)
Law 908 Workplace Law (4 cr)
Law 910 Antitrust (3 cr)
Law 919 Business Associations (4 cr)
Law 921 Accounting for Law Students (2 cr)
Law 923 Negotiable Instruments, Bank Collections and Deposits, and Other Payment Systems (3 cr)
Law 925 Property Security (3 cr)
Law 926 Bankruptcy (3 cr)
Law 927 Business Entities Taxation (4 cr)
Law 930 Taxation (3-4 cr)
Law 931 Patents (2 cr)
Law 932 Estate Planning (3 cr)
Law 945 Community Property (2 cr)
Law 984 Real Estate Transactions (2-3 cr)

Family Law Track

Six credits chosen from the following (6 cr):
Law 913 Family Mediation (2 cr)
Law 940 International Human Rights (3 cr)
Law 941 Wills, Estates, and Trusts (3 cr)
Law 963 Family Law (3 cr)
Law 964 Children and the Law (3 cr)
Law 965 Elder Law (2 cr)
Law 985 Immigration Law and Policy (3 cr)

Governance Track

Six credits chosen from the following (6 cr):
Law 904 Federal Courts (3 cr)
Law 907 Administrative Law (3 cr)
Law 908 Workplace Law (4 cr)
Law 912 Civil Mediation (2 cr)
Law 916 Public International Law (3 cr)
Law 917 Negotiation and Appropriate Dispute Resolution (3 cr)
Law 934 Land-Use Law and Planning (3 cr)
Law 959 Critical Legal Studies (2-3 cr, max 3)
Law 960 Conflict of Laws (2 cr)

Natural Resource Management Track

Six credits chosen from the following (6 cr):
Law 906 Natural Resources Law Seminar (3 cr)
Law 934 Land-Use Law and Planning (3 cr)
Law 937 Wildlife Law and Policy (3 cr)
Law 938 International Environmental and Water Law (3 cr)
Law 939 Law, Science, and the Environment (2 cr)
Law 942 Water Law I (1 cr)
Law 946 Water and Energy Policy Seminar (2 cr)
Law 947 Environmental Law (3 cr)
Law 948 Natural Resource Law and Policy (3 cr)
Law 951 Environmental Policy (3 cr)
Law 969 Water Law II (2 cr)

Self Directed Track

Six credits in courses pre-approved by the Native American Law Advisor emphasis advisor

Courses to total 90 credits for this degree

D. Natural Resources and Environmental Law Emphasis

One class chosen from the following:
Law 912 Civil Mediation (2 cr)
Law 913 Family Mediation (2 cr)
Law 914 Dispute Resolution (1 cr, max 4)
Law 917 Negotiation and Appropriate Dispute Resolution (3 cr)

1,650 acres of forest land near McCall. The Frank Pitkin Forest Nursery site includes 40 acres and three greenhouses that produce 700,000 seedlings annually for student training and research purposes. On the university campus, the Shattuck Arboretum, with over 60 species of trees, provides an outdoor classroom for studies in dendrology. Other field facilities include the McCall Field Campus located on Payette Lake in the mountains of west-central Idaho, the Taylor Wilderness Research Station in the heart of the Frank Church River-of-No-Return Wilderness, and the Lee A. Sharp Range Experimental Area in southern Idaho. In addition, Idaho's 37 million acres of public forest and range lands constitute a vast natural laboratory for students in all of the college's curricula.

To take advantage of these facilities and implement "hands-on" training, the college employs student logging, surveying, planting, and controlled burning crews.

Standing of the College

To assure high professional standards, several curricula in the college are periodically evaluated and rated as accredited or not accredited. Forest resources curricula at UI have been accredited since the Society of American Foresters first began accreditation in 1935. Similarly, in 1985 the rangeland ecology and management curriculum became one of the first in the nation to be accredited by the Society for Range Management. The curriculum of the Department of Conservation Social Sciences is accredited by the National Recreation and Parks Association. The curriculum in renewable materials is accredited by the Society of Wood Science and Technology.

Departments

The college has three departments: Conservation Social Sciences, Fish and Wildlife Sciences, and Forest, Rangeland and Fire Sciences. Although these departments are separate administrative entities, they share a common philosophy, integrated resource management. Many college faculty hold joint appointments in more than one department; degree programs include courses from multiple departments; and the teaching, research, and service missions of all the departments are integrated and coordinated at the college level. This integration is enhanced by the Forest, Wildlife and Range Experiment Station, described below.

Degrees

Curricula leading to the following degrees are offered by the college: Bachelor of Science in Ecology and Conservation Biology (B.S.Ecol.Cons.Biol.) with options in natural resources ecology and conservation biology; Bachelor of Science in Fire Ecology and Management (B.S.Fire.Ecol.Mgmt.); Bachelor of Science in Fishery Resources (B.S.Fish.Res.); Bachelor of Science in Forest Resources (B.S.For.Res.); Bachelor of Science in Natural Resource Conservation (B.S.Nat.Resc.Consv.); Bachelor of Science in Rangeland Ecology and Management (B.S.Rangeland Ecol.-Mgt.); Bachelor of Science in Renewable Materials (B.S.Renew.Mat.); and Bachelor of Science in Wildlife Resources (B.S.Wildl.Res.); Master of Science (thesis and non-thesis options); Master of Natural Resources; Professional Science Master in Natural Resources and Environmental Science; and Doctor of Philosophy in Natural Resources, with dissertation topics in any of the college programs. Academic minors offered include conservation social sciences, forest operations, forest resources; fire ecology and management; fishery resources, wildlife resources, natural resource communication; natural resources; outdoor recreation leadership; parks, protected areas, and wilderness conservation; rangeland ecology and management; renewable materials, and sustainable tourism and leisure enterprises.

Admission Requirements

General. For a statement of undergraduate and graduate admission requirements, see the admissions portion of the catalog.

Transfer Students. Students who propose to complete a portion of their undergraduate studies at a junior college or elsewhere, before entering UI, should follow as closely as possible one of the curricula for the first two years set forth in the individual department section. A student whose program does not closely approximate one of these will not be able to graduate in four years. Transfer to UI before the end of the sophomore year is usually to the student's advantage. Correspondence with the dean of the college should be initiated at least three months before the date on which the student plans to enroll.

Undergraduate Program

The undergraduate curricula are designed to provide both a general and a professional education. The objective in the first two years is to provide students with a good foundation in the biological, physical, and social sciences and in writing and speaking skills. The basic philosophy of the college is to educate according to the principles of integrated natural resource management while providing specialization in the student's major area of interest. Because of the emphasis placed on the integrated approach, all curricula in the college, except one option in forest products, have incorporated a common 13-credit set of core courses as follows: Exploring Natural Resources, Ecology, Society and Natural Resources, Introduction to Spatial Analysis for Natural Resource Management, and Natural Resource and Ecosystem Service Economics.

The curricula and options in each program offer as many courses in common with those in other programs as possible, while ensuring that specific professional education requirements are met. Flexibility and individuality in each student's program are provided by curriculum choice, by options within curricula, and by elective credits. Provision is also made for advanced training leading to a military commission.

A variety of scholarships are available to undergraduate students based on need and merit.

Graduate Program

Programs leading to advanced degrees are offered in each of the fields represented by the undergraduate curricula of the college and in natural resources. Both the master's and the doctor's degree, with emphasis on conducting a research project and preparing a thesis or dissertation, are available. A non-thesis master's degree may be obtained in each department. The UI offers a Professional Science Master's degree in Natural Resources and Environmental Sciences. It is an innovative, interdisciplinary degree preparing graduates for science careers in business, government, or nonprofit sectors, focusing on sustainability science as it applies to natural resources and the environment. An interdisciplinary Master of Natural Resources degree focused on management and administration is also available.

Excellent facilities and opportunities are available for graduate study and research in the subject-matter areas. Research in the college is organized through the Idaho Forest, Wildlife and Range Experiment Station. Research is also supported by the Idaho Cooperative Fish and Wildlife Research Unit, the Cooperative Park Studies Unit, and by various state, federal, and private organizations.

Assistantships and fellowships are available to assist highly qualified students in their graduate programs. More information on graduate studies may be obtained by writing the dean of the College of Graduate Studies. Information on available specializations and current projects may be obtained by writing the College of Natural Resources.

Idaho Forest, Wildlife and Range Experiment Station

All members of the college faculty are on the staff of the experiment station. Other members of the station staff include full-time research associates and technicians, as well as graduate student appointees.

The program of the experiment station is closely connected with the graduate training program of the college. Many of the graduate students enrolled in the college are on assistantships associated with station projects.

The station staff conducts research on a wide variety of renewable natural resource management problems in the areas of forestry, forest products, range, resource-based recreation, resource-based tourism, wildlife, and fisheries. Several projects are interdisciplinary. Funds for the station are provided by the university, by some departments of the State of Idaho, and by grants from federal, other state, and private sources. Currently a majority of these funds comes from non-university sources. More information on station activities may be obtained by writing to the associate director, Idaho Forest, Wildlife and Range Experiment Station, College of Natural Resources.

Requirements College for Graduation

University Requirements. See regulation J for general university requirements for degrees.

College Requirements. The minimum credit requirement for a university baccalaureate degree is 120 credits. A minimum cumulative grade-point average of 2.00 in all courses taken in this college is required for gradua-

tion. Courses in the college numbered above 299 are not open to any undergraduate student who is on academic probation.

The college may permit substitutions or grant waivers of specified requirements. Thus, for a student with special aptitudes or interests, a program can be devised that will provide a foundation for advanced study or research or meet other acceptable and well-defined career objectives.

Internship, and Employment Requirements. Students in Fishery Resources, Ecology and Conservation Biology, and Wildlife Resources complete a senior thesis, senior project, or relevant summer employment as part of their degree requirements. Specific information is contained in the respective departmental sections.

College of Science

Paul Joyce, Dean; Mark J. Nielsen, Associate Dean (321 Mines Bldg,; 208/885-6195, www.sci.uidaho.edu; science@uidaho.edu)

The College of Science was established in 2002. The mission of the college is to provide a superior education in the sciences, to advance knowledge through research and scholarship, and to serve the university, state and nation.

Faculty and Staff

The college has some 140 faculty and staff supporting its academic and research programs. Approximately 700 undergraduate students and 215 graduate students are enrolled in programs offered by the College of Science.

Departments and Programs of Instruction

The college includes the departments of Biological Sciences, Chemistry, Geography, Geological Sciences, Mathematics, Physics, and Statistics. Cooperating units from other administrative divisions include the Department of Microbiology, Molecular Biology and Biochemistry in the College of Agricultural and Life Sciences, and the Department of Psychology and Communication Studies in the College of Letters, Arts and Social Sciences. Faculty from the College of Science participate in the interdisciplinary programs of Environmental Science, Neuroscience, Bioinformatics and Computational Biology, and Bioregional Planning and Community Design. The college also has affiliation with the Idaho Geological Survey.

Undergraduate Programs. The College of Science offers bachelor's degrees in biology, chemistry, geography, geology, mathematics and physics. While there is not a bachelor's degree offered by the Department of Statistical Science, there is a statistics option to the mathematics bachelor's degree. See departmental sections for details.

Graduate programs. The College of Graduate Studies offers advanced degrees in many disciplines in the College of Science. A master's degree is available in biology, chemistry, geography, geology, hydrology, mathematics, physics, and statistics. The degree of Doctor of Philosophy is available in biology, chemistry, geography, geology, mathematics, and physics. Please see the list of programs offered for details.

Certificate Programs. Certificate programs are offered in Reproductive Biology (through the Department of Biological Sciences); Geographic Information Systems (through the Department of Geography); Process & Performance Excellence, and Statistics (both through the Department of Statistical Science).

Preparatory Programs in Medicine and Dentistry. Students interested in preparing for postgraduate education in medicine or dentistry may, with proper advising and preparation, choose an undergraduate major in almost any field. Many programs in the College of Science are appropriate for the premedical or predental interests. Advising for students interested in premedical or predental preparation is available through the Health Studies Committee. See the Department of Biological Sciences section for details.

Teacher Education Program. Students preparing for secondary-school teaching in science can do so by completing one of the degree options in the College of Education (see the College of Education section of this catalog) or also through pursuing a major within the College of Science plus additional coursework to meet certification requirements. Students interested in this second option should consult with an advisor in their chosen discipline to plan the appropriate course selections.

Admission to the College

Students who would like to attend the College of Science should plan their high school electives carefully to ensure that they are adequately prepared to begin their study at the college level. Students should select subjects in science and mathematics that will provide a well-rounded preparation for further study. For a statement of general undergraduate and graduate admission requirements, see the admissions portion of the catalog.

Facilities and Equipment

The college is housed in several buildings across campus with most of the disciplines housed in their own facility. These facilities contain teaching and research laboratories, classrooms, and faculty and administrative offices. An extensive array of analytical and other scientific equipment ensures state-of-the-art hands-on training in all aspects of the sciences.

Scholarship and Loan Funds

Students interested in scholarships should refer to the "Student Financial Aid Services". Individual scholarships (totaling approximately half a million dollars) are awarded each year by the College of Science. In general, there is no application process for these awards - all students majoring in the college will be considered for merit-based scholarships for which they are eligible. To be considered for need-based scholarships, students must have completed the Free Application for Federal Student Aid (FAFSA). The deadline for priority consideration for scholarships is February 15. Details on specific awards can be obtained by writing to: Associate Dean, College of Science, PO Box 443025, University of Idaho, Moscow, ID 83844-3025 or by sending e-mail to science@uidaho.edu.

Undergraduate Research Opportunities

The college prides itself in providing opportunities for undergraduate students to work with our faculty on research projects. We believe the best way to experience the excitement of science is through hands-on research, and that these opportunities characterize an education at a research-active university. Each year the College of Science offers fellowships to support undergraduate research projects and hosts a student research exposition at which graduate and undergraduate students display their work.

General College Requirements for Graduation

Each student working toward a baccalaureate degree from the college must satisfactorily complete 128 semester credits (unless a higher number is specified in the particular curriculum), including at least 36 credits in courses numbered 300 and above, the Core requirements (see regulation J-3), and the departmental requirements for the degree sought. The departmental requirements applicable to the B.A. and B.S. degrees are listed in each department's section.

Major Curricula

Major Requirements. The departmental requirements are stated under the respective curricula.

Continuing Education

The University of Idaho offers a variety of courses for individuals to continue their education whether in Moscow or not. Continuing education courses fall into three categories: (1) conferences, courses, seminars, or workshops offered by academic departments; (2) credit and non-credit courses offered by the Engineering Outreach Program; and (3) Independent Study in Idaho courses. All are explained below.

Courses Offered by Academic Departments. Several academic departments offer conferences, courses, seminars, and workshops throughout the region where students can earn UI credit or Continuing Education Units (CEU) (see regulation D-5 for information on CEU's). These conferences, courses, seminars, or workshops are taught by UI faculty members or by qualified local instructors who are approved by the respective college in which the course is offered.

Students earning UI credit for these conferences, courses, seminars, and workshops must be admitted by the UI Admissions Office; students earning CEU's do not. In most cases, registration and payment is done at the initial class session of the conference, course, seminar, or workshop. In some cases, advance registration is necessary.

Each college and department is responsible for developing and administering these courses as well as registering students. Those interested in taking such courses should contact the respective college for courses available in their geographic area.

Cooperative Programs

The university participates in a number of cooperative arrangements in the state and region to extend resources and take advantage of special facilities.

Associated Western Universities Program

The university is a member of Associated Western Universities, which is a cooperative venture of certain institutions to make use of national laboratories located in the west. Financial support is available from the U.S. Department of Energy for graduate students and faculty to spend periods of time, up to one year, pursuing research projects at a number of these laboratories.

Cooperative Programs with Other Universities

Located only eight miles apart, the University of Idaho and **Washington State University,** in order to take advantage of unique strengths of each institution, have for some time operated a cooperative graduate and undergraduate course program. Courses available on either campus are identified in departmental listings, and offerings are listed in the *Class Schedule*. In addition, the two schools cooperate in programs in medicine, veterinary medicine, and food science and technology.

In 2002, the University of Idaho, in cooperation with **Lewis Clark State College** located in Lewiston, Idaho, began offering cooperative courses in Nez Perce language. Courses available on either campus are identified in departmental listings, and offerings are listed in the *Class Schedule*.

Engineering Outreach Program

Barry Willis, Associate Dean for Outreach, College of Engineering (875 Perimeter Dr MS1014, Moscow ID 83844-1014; phone (208) 885-6373; http://eo.uidaho.edu; outreach@uidaho.edu).

The Engineering Outreach (EO) program began in 1975 to meet the professional development needs of Idaho's just-developing high-tech industry. EO's first courses were delivered on videotape to regional corporations and educational centers. Today, EO delivers courses online for various academic departments, in addition to engineering, to hundreds of students worldwide each semester. In-class sessions are encoded in a high-resolution MP4 format and viewed by students through a secure Web portal. Engineering Outreach online study options include master's degrees, academic certificates, and nondegree course work for transfer credit, background study, and professional education.

Engineering Outreach delivers a variety of undergraduate courses, but it is not possible to earn an undergraduate degree completely at a distance through the program.

Master's Degree Programs. Engineering Outreach delivers courses for the master's degrees listed below. All required coursework may be completed at a distance, and most students visit the campus near the end of their program to take a comprehensive exam or defend a thesis.

- Civil Engineering (M.Engr.)
- Computer Engineering (M.S., M.Engr.)
- Computer Science (M.S.)
- Electrical Engineering (M.S., M.Engr.)
- Engineering Management (M.Engr.)
- Geological Engineering (M.S.)
- Mechanical Engineering (M.Engr.)
- Statistical Science (M.S.)
- Teaching Mathematics (M.A.T.)
- Technology Management (M.S.)

Academic Certificates. Academic certificates provide opportunities for professional advancement and build a strong foundation for future graduate study. EO course delivery is available for the following certificates:

- Analog Integrated Circuit Design
- Applied Geotechnics
- Communication and Control for Power Transmission and Distribution
- Electric Machines and Drives
- Power System Protection and Relaying
- Process & Performance Excellence
- Secure and Dependable Computing Systems
- Statistics
- Structural Engineering

Focus Areas. Select academic departments offer courses through Engineering Outreach that may be applied toward degrees at the university or used for transfer credit. Engineering Outreach delivers courses in the following focus areas:

- Business
- Nuclear Engineering
- Psychology — focus in human factors
- Water Resources

Admission. Engineering Outreach students must be admitted to the University of Idaho as undergraduate, nondegree or graduate students before registering for courses. EO students follow the same admission procedures as on-campus students.

Registration. Instructions for registering on VandalWeb are provided on the EO website; EO students follow the same registration and refund schedule as on-campus students. The EO student services coordinators will assist with the registration process.

Fees. Engineering Outreach students pay a per-credit fee, and nonresidents pay the same fees as residents. Fees include registration and online course access but do not include textbooks or software. Payment must be received by the first day of the semester to avoid late fees. Course fees are subject to change at any time by the Board of Regents of the University of Idaho, and the most current fees are posted on the EO website.

Textbooks. Textbooks are not included with the course materials supplied by Engineering Outreach. Textbook information is provided in the course syllabus and on the University of Idaho VandalStore website.

Military Benefits. University of Idaho programs are approved by the U.S. Department of Veterans Affairs (VA), and students may use GI education benefits or tuition assistance to help pay their Engineering Outreach course fees. The university's veterans adviser at the Office of the Dean of Students will assist with the VA education application process, and EO will accept payment vouchers.

Financial Aid. Engineering Outreach students are eligible for the same financial aid benefits as on-campus students. Graduate and undergraduate students may qualify for aid if they are enrolled at least half-time. Nondegree students are not eligible.

Online Course Delivery. In-class sessions are encoded in a high-resolution MP4 format for online delivery through the EO Portal and may be viewed or downloaded and saved one hour after production. Students also access handouts and graded materials in the portal. All course materials, including lectures, are provided for students' personal reference and may not be sold or redistributed; reproduction is prohibited under copyright law.

Internet Requirement. Internet access is required for all EO students. High-speed broadband access and a computer with at least a 2 GHz processor and 2 GB of RAM are required to access course sessions and other materials at the EO Portal.

Student Support Services. The EO student services coordinators assist with registration, fee payments, course material/exam delivery, policies and procedures; they work closely with other university departments to facilitate related services to EO students.

Instructor Contact. Instructors are available to grade coursework and answer questions throughout the semester. Instructors can be reached by email or phone; contact information is provided on the EO website.

Exams. Students select an exam proctor who will manage the exam files electronically and supervise the testing process throughout the semester. Prospective proctors are required to complete a certification form and be accepted by EO before exams are released to them. Proctoring services are available at the University of Idaho centers in Boise, Coeur d'Alene and Idaho Falls. Other acceptable proctors include faculty/staff at educational institutions, students' work supervisors or training coordinators, U.S. military education officers, and public librarians. Proctors must be impartial and cannot be students' personal friends, family members, work subordinates or other U-Idaho students.

VandalMail. All EO students are assigned a VandalMail account when they are admitted to the university, and all email correspondence from EO is sent to that address. In addition to important messages about registration and online session availability, EO also notifies students when exams are sent and received, and when graded work is posted on the EO Portal.

Email Confidentiality. VandalMail addresses are considered "directory information" and are not kept confidential unless students submit the Request to Prevent Disclosure of Directory Information form (available on the registrar's website). If students submit this form, they must also notify

EO directly; otherwise, their email addresses may be provided to their classmates on the 10th day of the semester, if requested by the instructor.

Library Services. University library services are available to EO students, and online tutorials are provided on the library's website. Students can access library materials from anywhere in the world by requesting a library barcode number, and librarians specializing in distance education are available to assist EO students.

Grades and Transcripts. Engineering Outreach course grades are accessible through the university's VandalWeb information system after being posted by the instructor. Students with extenuating circumstances that prevent them from finishing a course on time may request a grade of "incomplete" from the instructor. Students can download unofficial transcripts from VandalWeb or request official transcripts from the Office of the Registrar for a small fee. Official transcripts do not indicate that courses were delivered online, and diplomas granted to Engineering Outreach students are identical to those earned on campus.

Independent Study in Idaho

Sherrie Metlen, ISI Program Manager: phone (208) 885-9258 ISI office: (875 Perimeter Drive MS 3081, Moscow, ID 83844-3081; phone (208) 885-6641 or (877) 464-3246; fax (208) 885-5738; www.uidaho.edu/isi; indepst@uidaho.edu)

Independent Study in Idaho (ISI) was created in 1973 by the Idaho State Board of Education as a cooperative of four accredited Idaho institutions led by the University of Idaho (UI). Other cooperating members include Lewis-Clark State College (LCSC), Idaho State University (ISU), and Boise State University (BSU). The ISI office is located in Moscow, Idaho, on the U-Idaho campus. Each member-institution of the ISI cooperative is accredited by the Northwest Commission on Colleges and Universities (NWCCU), the region's accrediting agency.

Independent Study in Idaho courses, sponsored by the cooperating institutions, are delivered online and parallel their on-campus counterparts in content and completion standards. Idaho residency is not required. A complete list of ISI courses, course syllabi and ISI policies and procedures are available on the ISI website. Although ISI does not offer degrees, credits earned upon course completion transfer to most colleges and universities.

People from diverse backgrounds worldwide take ISI's online courses for various reasons (e.g., to begin college programs early, satisfy prerequisites, resolve on-campus scheduling conflicts, promote timely degree completion, and to pursue professional development and personal enrichment). Independent Study in Idaho courses are designed for students who work well independently with limited interaction with instructors. Students can enroll anytime and work at their own pace from anywhere. Students have up to one year from the registration date to complete ISI courses.

Focus Areas

ISI offers a number of courses in specific focus areas that support degree programs.

- Modern Languages and Cultures
- History
- Psychology
- Library Science

The University of Idaho sponsors library science courses that are only available through ISI. These courses are required for the Idaho Education Media Generalist Endorsement (K–12). Additionally, ISI offers courses applicable to the UI's library science teaching minor. These courses can also be taken for professional development and personal enrichment. The programs are as follows:

Education Media Generalist Endorsement (K–12). Certified teachers who are interested in school library and media positions and have a standard or advanced teaching certificate may earn an Education Media Generalist Endorsement (K–12) by taking library science courses through ISI. This endorsement requires 20 semester-hour credits in the general field of educational media (or library science) including at least three credits in literature for children or youth, and a passing score on the Idaho Praxis II Test number 10311. Courses that fulfill the 20 semester hours are LibS 420, LibS 421, LibS 423, LibS 425, either LibS 419 or LibS 424, and LibS 428 or LibS 429. These courses may be approved for endorsements in other states. Teachers outside the state of Idaho should check with their state's Department of Education to determine requirements and to obtain written confirmation that ISI credits are acceptable for their state's endorsement.

Library Science Teaching Minor for University of Idaho Students. To obtain a teaching minor in library science, students must be admitted to the UI. The teaching minor in library science requires 24 credits. At least 12 of these must be in the area of selection, organization and administration of library materials. This teaching minor qualifies students for the Idaho Education Media Generalist Endorsement (K–12). Since library science is not a teaching field, the teacher-librarian must also qualify for a standard Idaho elementary or secondary teacher's certificate.

Education Professionals (K-12). Independent Study in Idaho courses may be used toward renewing teaching credentials and for certification. Contact your state Department of Education to determine if ISI courses are applicable.

Course Delivery and Services

Online Course Delivery. Internet access is required for the majority of ISI courses. Upon registration, the student will receive a *Registration Confirmation Letter.* The *Registration Confirmation Letter* contains information pertinent to the course, including the student's vandal number (V number), the instructor's contact information, a list of course materials, lesson, exam and submission guidelines, and directions on how to access online ISI courses in Blackboard Learn (BbLearn). Students submit lessons to the instructor through BbLearn, email or mail.

VandalMail. All ISI students are assigned a VandalMail account upon registration.

Exams and Proctors. Students recommend an exam proctor who will manage the exam files and supervise the testing process. Proctor selection is subject to approval by both ISI and the course instructor. Some acceptable proctors include: educational institution faculty and staff, testing center staff, business education personnel, librarians, U.S. military education officers. View complete information concerning proctors and submit a *Proctor Information Form* on the ISI website.

Disability Support Services. Each of the four ISI cooperating institutions offers academic support services to students with temporary or permanent disabilities. Students requesting disability-related accommodations must contact the sponsoring institution's office of disability services. To determine the credit-granting institution, note the abbreviation listed in the course syllabus on the ISI website. Contact information for each disability office is listed on the ISI website.

Library Services. University of Idaho's library services are available to ISI students with a library barcode number. To request a library barcode number call (208) 885-6559.

Registration and Fees

Registration. Students can register for ISI courses online on the ISI website without applying for admission to any of the cooperating schools. Admission to any of these institutions is not granted upon registering for an ISI course. University of Idaho students working toward a degree are required to obtain written approval from their adviser and academic dean to register for an ISI course and to ensure that ISI course credits are applicable toward their degree. It is recommended that students at other institutions obtain signature confirmation that ISI credits will be accepted. A space for this signature is provided on the *Registration Form.*

Fees. Non-residents pay the same fee as residents. Fees included registration and online course access, but do not include print ISI course guides, textbooks and other course materials. Fees are subject to change, and the most current fees are posted on the ISI website.

Purchasing Course Materials. Course guides are required for all courses. Each course guide includes the course syllabus, a list of required course materials, assignments, exam information and lecture materials. An electronic course guide is accessible online through BbLearn at no additional cost. For most courses, a printed course guide may be purchased from the UI VandalStore. Textbook information is provided in the course syllabus available on the ISI website and on the VandalStore website. If textbooks are purchased at another outlet, carefully note the ISBN of the required edition.

Financial Aid. Financial aid is not offered by ISI. Federal and state agencies, businesses, student financial aid services, and veterans' organizations may offer financial assistance or aid to fund ISI course fees. Most tuition assistance payment forms are accepted by ISI. College students receiving financial aid are advised to check with their financial aid office to determine if anything is available for ISI courses. Courses taken through ISI do not count toward a student's credit-hour load and cannot

be used to establish full-time or part-time student status to determine eligibility for financial aid or loan deferment.

Military Benefits. The Veterans Assistance office at UI can help students apply for and receive education benefits whether a student is a serviceperson, guardsman, reservist, veteran or dependent of a veteran. University of Idaho programs are approved by the U.S. Department of Veterans Affairs (VA), and students may use GI benefits or tuition assistance to help pay their ISI course fees. The UI's veterans' adviser at the Dean of Student's office will assist with the VA education application process, and ISI will accept payment vouchers.

Drops and Refunds. To drop an ISI course, submit the *Drop Course Form* on the ISI website. The course will not appear on your academic transcript, and there will be no permanent academic record at any of the cooperating institutions.

Refund Schedule. Courses dropped within 45 days of registration qualify for a refund based on the following schedule: Full course credit fee refund: the drop request must be received by the ISI office within 21 days from the registration date; 50 percent course credit fee refund: the drop request must be received by the ISI office between 22 and 45 days from the registration date. The course credit fee will be refunded minus $15 for each lesson/exam already submitted. Refunds will be processed by credit card or check, depending on the original payment method. Cash payments will be refunded by check. There are no refunds after 45 days, regardless of lesson/exam submission or the student's progress in the course. Administrative fees are nonrefundable.

Exchanging Courses. Students may exchange one course for another within 45 days of registration. One exchange per registration is allowed. A non-refundable, $25 fee must be paid when exchanging a course, plus $15 for each lesson/exam submitted for the original course. View complete information concerning exchanges and submit a *Course Exchange Form* on the ISI website.

Course Extensions. If you are unable to complete an ISI course within one year from the registration date, a $75, nonrefundable, six-month extension may be purchased. View complete information concerning course extensions and submit a *Course Extension Form* on the ISI website.

Grades and Transcripts

Transcripts can be purchased upon written request from the credit-granting institution. To determine the credit-granting institution, note the university abbreviation listed in the course syllabus on the ISI website. Contact information for each transcript office is also listed on the ISI website.

Interuniversity Program in Public Administration

Donald W. Crowley, Chair, Department of Political Science (205 Admin Bldg; 208-885-6328)

The University of Idaho, with Idaho State University and Boise State University, offers a cooperative graduate program leading to the M.P.A. degree to provide present and prospective public administrators with a professional education and to prepare them to understand and adjust to a changing and challenging environment. Courses in core areas and in optional areas of emphasis, such as general public administration, natural resources administration, public works administration, and public finance, management, and budgeting, may be taken at any of the participating institutions without restriction. For further information, consult the Department of Political Science and Public Affairs Research.

Medical Education (WWAMI Program)

Joseph Cloud, Interim Director, WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) Medical Education Program (304 Student Health Services Bldg. 83844-4207; phone 208/885-6696; e-mail: marlanem@uidaho.edu). Faculty: Onesmo Balemba, Douglas Cole, Linda Fearn, Lee Fortunato, Peter Fuerst, Craig McGowan, (Biological Sciences, College of Science); Scott A. Minnich (Food Science, College of Agricultural and Life Sciences);, Jeff Seegmiller, Chantal Vella (Movement Sciences, College of Education), William Cone ,, Niels Nielsen (Counseling and Testing Center).

Adjunct Faculty of Medical Education : Ron Brosemer, Ph.D., Lane Brown, Ph.D., David Conley, Ph.D., Jon Mallatt, Ph.D., Philip Mixter, Ph.D. (all WSU)

WWAMI is a cooperative medical education program between the University of Washington School of Medicine and the five-state WWAMI region (Washington, Wyoming, Alaska, Montana, Idaho). WWAMI has the mission and goal of increasing the training and education of medical students in their home states or neighboring northwest states, with the intent of exposing them to the unique needs and opportunities for medical careers in the region. In Idaho, students can complete three of their four years of medical school in Idaho, at the University of Idaho for the first year, and in Boise and regional communities for the required third year clerkships and the required and elective fourth year courses. With small class sizes and individual clinical placements, Idaho WWAMI students have the opportunity to interact closely with the faculty and area physicians.

The WWAMI program allows access to medical education for Idaho residents by contract between Idaho and the UWSOM. Currently, 25 first-year students are admitted annually. The WWAMI program was developed in Idaho to train Idaho residents in medical studies, to address the need for more primary care physicians practicing in rural areas, to extend the resources and facilities of an excellent medical school into Idaho, to improve the quality of patient care, and to minimize the cost of medical education by the use of existing facilities. Eligibility for consideration as a WWAMI medical student requires certification as an Idaho resident. UI's Undergraduate Admissions Office is responsible for residency certification.

Students interested in WWAMI apply directly to UWSOM. Idaho residents take their first year of medical studies at UI. First-year courses are offered conjointly by UI and WSU in parallel with courses at UWSOM. All participating WWAMI faculty at UI and WSU hold adjunct faculty appointments at UWSOM and are eminently qualified scientists and teachers.

Many of the physicians in the Moscow-Pullman-Lewiston area are involved in the preceptorship program in which the students work a half a day each week with local physicians and observe/participate in their practice, either in the office or at the hospital.

Participants in the WWAMI program are matriculated students of the University of Washington Medical School. Upon completion of their studies, they receive the M.D. degree. Following graduation, a postgraduate (internship/residency) training period of three to five years is required for medical practice. Medical students may also be approved for graduate studies at the University of Idaho or UWSOM leading to the M.S. or Ph.D. degree. The UWSOM M.D.-Ph.D. program usually requires a minimum of six years of study.

Veterinary Medical Education (WI)

The University of Idaho cooperates with Washington State University in a program of veterinary medical education, research, and service. When accepted in the WI program, students from Idaho take the first three years and most of their fourth year of professional training in veterinary medicine at Washington State University. In the fourth year of the program, students also receive part of their training at the UI Caine Veterinary Teaching Center at Caldwell, Idaho, where they can specialize in food animal production medicine. Cooperative graduate programs leading to M.S. and Ph.D. degrees are also available. Idaho students seeking to enter the professional program must complete a Washington State University Uniform Undergraduate Application Form as well as a WI Program application. Both may be obtained from and returned to the Office of Student Services, College of Veterinary Medicine, Washington State University, Pullman, Washington 99164-7012. In addition, Idaho applicants must secure certification of Idaho residency status by completing and submitting the appropriate residency certification forms available through the University of Idaho Undergraduate Admissions Office.

Office of Community Partnerships

Director: Priscilla Salant (208) 364-4549; Associate Director: Darin Saul (208) 885-0124

Through outreach, the University of Idaho serves the state and, at the same time, develops engaged scholarship and student learning opportunities. Outreach adds value to our teaching and research activities by building partnerships with stakeholders in Idaho and beyond. Outreach occurs from every college on UI's Moscow campus, the UI Library, and from each of the University's physical locations around the state. Our outreach infrastructure includes 42 county Extension offices, UI Boise, UI Idaho Falls, UI Coeur d'Alene, multiple research and learning facilities, and the telecommunications infrastructure that bridges physical distance.

The Office of Community Partnerships supports Idaho communities through research and student projects focused on local priorities. We provide a front door for Idaho communities to access university resources, including UI Extension, the Service-Learning Center, and faculty throughout the university. Our projects aim to advance innovation and sustainability, build leadership, and create vibrant communities.

We can help your community or organization by:

- Connecting you with UI Extension and other faculty
- Developing service-learning, internship, and student volunteer projects
- Gathering and analyzing information on local trends and characteristics
- Partnering on grant proposals

Our office in Boise provides a link to state agencies, industry associations, and the university's southern and eastern Idaho regional centers. Our Moscow office links to faculty, students and staff on our main campus, as well as to our northern Idaho regional center.

Summer Session

Summer Session is an integral part of the year-round instructional program at the University of Idaho. A fourteen-week summer session begins about the third week of May. The flexible summer schedule includes a session that begins the Monday following Commencement, a second session that starts in mid-June, and a late session that starts mid-July. Summer session ends the Friday prior to the start of fall semester. The summer schedule of classes is designed to provide students with the opportunity to complete their academic programs in a timely manner. Special and innovative programs are offered to meet the needs of in-service professionals and other clientele throughout the state and nation.

Academic regulations included in this catalog are applicable during the summer session. For more information, call (208) 885-6237 or visit the web, www.uidaho.edu/summer.

University Honors Program

Stephan P. Flores, Director (315 Idaho Commons; phone 208/885-6147; www.uidaho.edu/honors_program); Alton G. Campbell, Associate Director; Cheryl Wheaton, Program Advisor.

Established in 1983, the University Honors Program (UHP) fosters academic excellence in undergraduate education by offering a stimulating course of study and the advantages of an enriched learning community for students from all colleges and majors.

The program's diverse curriculum serves a variety of student needs and interests. Through honors core courses in general education and innovative seminars, honors faculty work to enhance each student's knowledge, initiative, and creativity. Most honors classes are small, so that honors students benefit from close intellectual contact and discussion with their instructors and fellow students. As part of a dynamic, broad-based education, members are encouraged to participate in domestic or international exchange programs; appropriate credit is determined within the honors curriculum for academic work completed while on exchange so that students may apply three or four credits per semester (maximum of seven credits total over two semesters) toward the Honors Certificate requirements. Students also are encouraged to take advantage of opportunities to engage in laboratory or field-based research programs as well as internships and other forms of cooperative education. The program director, associate director, and program advisor act as supplemental academic advisors to all students who qualify for honors study.

Beyond the classroom, the program's extracurricular opportunities include concerts, plays, films, lectures, and other excursions that support cultural enrichment, friendship, and learning. The great majority of the approximately 500 students active in the program are able to participate without adding to the total number of credits needed for graduation.

Admission Process. Admission to the University Honors Program is selective. Initial application criteria for prospective freshmen are based on a correlation between the student's high school GPA and an ACT composite score or the SAT Reasoning scores for Critical Reading and Math. For example, students who have received a 28 ACT composite score, or a 1260 SAT combined Critical Reading and Math score, and a 3.77 high school GPA meet the initial minimum criteria. The correlation is based on a sliding scale: students with test scores higher than those noted may have GPAs below 3.77 and still meet the minimum criteria; students with higher GPAs may have test scores lower than the examples offered above. Students applying from high school also submit a two-page essay as part of the application. Each student admitted to the program receives specific comments on the admission essay from the UHP director and the associate director. The directors evaluate all applications to determine admission.

Students who do not meet the initial admission criteria, including those who may not be able to provide a GPA from an accredited high school, those who are home schooled, or those who do not have SAT or ACT scores, are encouraged to write to the honors director to express their interest in seeking admission to the program. Two former teachers also must send letters of recommendation to the director; students may then be asked to proceed with writing the admission essay. Current students who achieve a minimum 3.5 GPA at the University of Idaho (UI) also may apply for admission. Transfer students with a 3.5 GPA are considered for admission on a case-by-case basis. Students in good standing in an honors program at their previous school are considered for admission based on a review of their previous honors course work. Their transcripts are evaluated and appropriate credit given toward courses in the honors curriculum.

Participation Requirements. A member in good standing of the University Honors Program must be registered at the UI, maintain a 3.3 cumulative GPA, and complete a minimum of three graded honors credits in the first semester, and at least six graded honors credits by the end of the second semester; thereafter, students must complete, on average, one honors course every second semester. Students in the program who have averaged at least one graded honors course each semester and have a cumulative institutional GPA of 3.3 (credits earned at the UI) are allowed to register with the first group of seniors.

Students may use Honors sections of UI General Core Studies (GCS) courses to count toward satisfying university core requirements in general education. Depending on which courses students select, as many as 26 honors credits satisfy university core requirements in the humanities, social sciences, and natural and applied sciences. At present, honors seminars do not carry designated GCS Humanities or Social Science credits.

University Honors Program Core Award requirements: Three honors humanities credits, three honors social science credits, three honors science credits; additional credits, including up to two UHP volunteer service points, to total 19 credits/points: the 19 credits/points must include at least 16 credits with the HON course designation, with an average GPA of 3.0 or above in honors coursework completed, and an institutional cumulative GPA of 3.3 or above.

University Honors Program Certificate requirements: Within the requirements listed below, students must complete six upper division honors credits, and complete courses from at least three different disciplines within the social sciences and humanities. Either or both semesters of a Core Discovery sequence may count toward the three discipline requirement.

Requirements:

Three honors humanities credits;
Three honors social science credits;
Three honors science credits;
Three credits in analytical and quantitative reasoning, satisfied by honors Math 315, or via Honors Elective Agreement used in conjunction with Philosophy 202, Statistics 251, or Statistics 301;
Additional elective credits, including up to three UHP volunteer service points, to total 27 credits/points: the 27 credits/points must include at least 20 credits with the HON course designation, with an average GPA of 3.0 or above in honors coursework completed, and an institutional cumulative GPA of 3.3.

Members of the program may take honors courses even if they decide not to work for a certificate or core award. Most honors courses are designated with an "HON" on the transcript to indicate that the course work is of a special nature. Students who receive the "Honors Core Award" or the "University Honors Program Certificate" have these distinctions noted on their official UI transcripts.

Scholarship Availability. Each year scholarships are offered to a select number of students in the program—these awards are applied to resident fees. No additional application form is required. Likewise, a select number of UHP out-of-state tuition waivers are offered to non-Idaho residents. The awards are renewable, contingent on satisfactory progress toward and completion of specified course and credit requirements while maintaining an overall institutional GPA of 3.3. In addition, members of the University Honors Program have been successful in taking advantage of mentorship and advice regarding prestigious national scholarship opportunities.

Learning Outcomes. University Honors Program expectations for learning outcomes are aligned with the following University-Level Learning Outcomes affirmed by Faculty Council October 3, 2006. University level learning outcomes broadly describe expected and desired consequences of learning through integrated curricular and co-curricular experiences. The outcomes become an expression of the desired attributes of an educated person and guide coherent, integrated and intentional educational experiences. They provide the university with a basis for ongoing assessment to continuously improve teaching and learning.

1. Learn and integrate - Through independent learning and collaborative study, attain, use and develop knowledge in the arts, humanities, sciences, and social sciences, with disciplinary specialization and the ability to integrate information across disciplines.
2. Think and create - Use multiple thinking strategies to examine real-world issues, explore creative avenues of expression, solve problems, and make consequential decisions.
3. Communicate – Acquire, articulate, create and convey intended meaning using verbal and non-verbal methods of communication that demonstrate respect and understanding in a complex society.
4. Clarify purpose and perspective – Explore one's life purpose and meaning through transformational experiences that foster an understanding of self, relationships, and diverse global perspectives.
5. Practice citizenship – Apply principles of ethical leadership, collaborative engagement, socially responsible behavior, respect for diversity in an interdependent world, and a service-oriented commitment to advance and sustain local and global communities.

University-Wide Programs

Contact: Office of the Provost and Executive Vice President (208/885-6448)

A Board of senior academic administrators has been established to oversee key interdisciplinary, cross-college degree programs and related engagement activities. Board membership includes: the Provost and Executive Vice President; Vice President for Research and Economic Development; Director of the Office of Community Partnerships; Executive Director of Planning and Budget; and the academic deans.

The purpose of the Board structure is to implement efficient and effective organization and support for university-wide academic programs and to engage a broad set of administrators responsible for faculty and programs across the university by:

- Enhancing university-wide representation and participation;
- Aligning with research entities and engagement administrative structures;
- Increasing communication to strengthen collaboration and coordination;
- Providing a stable administrative and funding platform;
- Facilitating academic planning and implementation across all academic programs within and between colleges

Programs and Degrees Offered

Each academic program is managed by a Coordinating Committee constituted from among those administrators who have financial, faculty, staff, or student responsibilities for some portion of the program. Current university-wide programs benefitting from this structure include the following:

Bioinformatics

Director: Eva Top 208/885-5015

A Master's degree and a Ph.D. degree option are offered for the degree in Bioinformatics and Computational Biology with faculty participating from the Colleges of Science, Agricultural and Life Sciences, Engineering, and Natural Resources.

Building Sustainable Communities

Interim Director: Stephen Drown 208/885-7448

A Master's degree and Certificate options are offered for the M.S. degree in Bioregional Planning and Community Design with faculty participating from Art and Architecture, Education, Natural Resources, Science, Agricultural and Life Sciences, and Law. Concurrent J.D. program is also available. This program is currently applying for accreditation.

Environmental Science, Water Resources, and the Professional Science Masters

Director: Jan Boll 208/885-6113

A bachelor's degree, master's degree, and Ph.D. degree are offered in Environmental Science; a certificate is offered in Environmental Water Science and in Environmental Contamination Assessment; a Master's degree and Ph.D. degree are offered in Water Resources; a Professional Science Master's degree is offered in Natural Resources and Environmental Science; a concurrent J.D./M.S., J.D./Ph.D., and J.D./PSM is also offered. These degree programs include participation of faculty from Agricultural and Life Sciences, Art and Architecture, Business, Engineering, Law, Letters, Arts and Social Sciences, Natural Resources, and Science.

Neuroscience

Steffen Werner, Program Director (Student Health 008A; phone 208/885-9241; neuro@uidaho.edu ; www.grad.uidaho.edu/neuro/)

A Master's degree and a Ph.D. degree option are offered for the degree in Neuroscience with faculty participating from the Colleges of Engineering, Science, Letters, Arts and Social Sciences, and Education.

University of Idaho Centers

University of Idaho, Boise

Lee Dillion, Interim Center Executive Officer (322 East Front Street, Suite 190, Boise, Idaho 83702; 208/334-2999) www.uidaho.edu/boise, boise@uidaho.edu

The University of Idaho Boise is strategically located in the economic, governmental, and population center of Idaho. It is the gateway connecting southern Idaho to resources and services of the state's land-grant institution.

Strategic Focus

The University of Idaho Boise is uniquely suited to provide graduate program, research and professional development opportunities in a metropolitan setting. The University of Idaho Boise supports teaching, learning and research in:

- organizational development and leadership,
- water, natural resources and the environment,
- community sustainability, urban design and physical planning, and
- the professions of law, medicine, architecture, landscape architecture, engineering and education.

The University of Idaho Boise provides local access to alumni and university relations, development, marketing, legislative affairs, athletics promotion and student recruitment. Over 4,500 University of Idaho Boise students are served annually through degree programs and professional education.

Location

The University of Idaho established a presence in Boise with the Ada County Extension program in 1910. Today, the primary home of the University of Idaho Boise is at the intersection of Front Street and Broadway Avenue in the Idaho Water Center building, with other locations throughout the downtown. The Ada County Extension offices are located on Glenwood Street.

The Boise Center also has leadership and administrative responsibility for University of Idaho activity in south central Idaho, including the Magic Valley (see Twin Falls below) and Wood River Valley.

Academic Programs in the Boise Area

Consistent with the role and mission assigned by the State Board of Regents and the University of Idaho's land-grant designation, the University offers select Master's, Specialist's and Doctorate degree programs in Boise. Additional professional programs, certificates and courses are offered in response to needs of the community. Programs and courses are offered in many formats including traditional classroom, hybrid, and online. Students participate in degree and certificate programs in the following disciplines:

Agricultural & Life Sciences

- Agricultural Education: M.S.
- Dietetics: Moscow-based B.S. Food and Nutrition students have the option to complete the required senior year of supervised practice in Boise
- 2+2 at College of Western Idaho, Agricultural Science, Communication and Leadership: B.S.

Art & Architecture

- Moscow-based Architecture and Landscape Architecture students have the option of completing their M.Arch. or M.L.A. degrees in Boise, and qualified students with BS Arch. degrees from other universities may earn the M.Arch. in either Boise or Moscow.
- Architecture: M.S.
- Landscape Architecture: M.L.A

Education

- Adult Basic Education: Certificate
- Adult & Organizational Learning and Leadership: M.S., Ed. Specialist
- Career and Technical Education: Certification
  Business & Marketing Education - Secondary
  Occupational Education - Secondary
- Curriculum & Instruction: M.Ed. & Ed. Specialist
  Emphasis in
  Career & Technical Education
  Business & Marketing Education
  Engineering & Technology Education
- Education*: Ed.D., Ph.D
- Educational Leadership: M.Ed., Ed. Specialist
- Human Resource Development: Certificate
- Technical Workforce Training: Certificate
- Rehabilitation Counseling and Human Services: M.Ed.
- Special Education: M.Ed. and K-12 Certification Recommendation, Elementary or Secondary
  (Prereq: Certification in General Education)

**Doctoral degrees in Education are offered in emphasis areas.*

Engineering

- Biological & Agricultural Engineering: M.S., M.Engr., Ph.D.
- Civil Engineering: M.S., M.Engr., Ph.D.
- Engineering Management: M.Engr.
- Mechanical Engineering: M.Engr., M.S., Ph.D.
- Technology Management: M.S.

Interdisciplinary Degrees

- Environmental Science: M.S.
- Professional Science Master: M.S.
- Water Resources: M.S., Ph.D.

Law

College of Law students have the option of completing their 3rd year at the Boise Center. In addition to business-focused doctrinal classes, students have the opportunity to extern with a variety of courts, agencies, and firms. The 3rd year program in Boise also offers clinical experiences with the Small Business Legal Clinic, the Low Income Taxpayer Clinic, and the Economic Development Clinic. Students in Clinic, under the direction of their licensed supervisor, represent clients in addressing their legal needs.

Medicine

In partnership with the University of Washington School of Medicine, the Idaho WWAMI Clinical Education offices in Boise offer all required and elective clinical clerkships for 3rd and 4th year medical students throughout the State of Idaho.

Natural Resources

- Natural Resources: Master Degree (M.N.R.)
- Fire Ecology, Management & Technology: graduate certificate
- Restoration Ecology: graduate certificate

Academic Programs in Twin Falls

The University of Idaho partners with the College of Southern Idaho to deliver a complete BS degree in Agriculture and also a secondary certification in Education. Students can complete the University of Idaho courses at UI Twin Falls Research & Extension Center on the CSI Campus. Other degrees and programs are available through the University of Idaho's online programs.

Agricultural and Life Sciences (upper division offered in conjunction with CSI)

- Agriculture Science, Communication & Leadership: BS

Education (offered in conjunction with CSI)

- Career and Technical Education: Certification
  Emphasis in Engineering & Technology Education - Secondary

Research in the Southern Region

University of Idaho research units, including those in the Southern Region, are internationally recognized for their work. In the Boise area, these include the Idaho Water Resources Research Institute, the Center for Ecohydraulics Research, and the Integrated Design Lab. World-class laboratories, such as the Ecohydraulics River Simulation Laboratory, provide collaborative research opportunities among multiple state and federal agencies, private entities, multiple higher education institutions, as well as international government and educational institutions. The Parma Research and Extension Center develops methods to sustain and improve the crops grown in Idaho and the region. The Caldwell Research and Extension Center focuses on Beef Science, Dairy Science and Range Economics. In the Magic Valley area, the Aquaculture Research Institute addresses issues impacting the fish food industry, both nationally and internationally. The Kimberly Research and Extension Center focuses on food and plant genetics, storage, and soils research.

Community and Statewide Services

The University of Idaho Boise increases access to continuing education for the local population and extends outreach programs statewide. The following are examples of services and community engagement:

- Urban design, sustainability, and high performance building development and energy efficiency through the Idaho Urban Research Design Center and the Integrated Design Lab;
- Technical assistance for manufacturing firms through TechHelp;
- Resources for the educational needs of the deaf and blind as well as assessments and equipment loans for people who are physically disabled through the Center on Disabilities and Human Development;
- Resources and legal advice through the Small Business Legal, Tax, and Economic Development Clinics; and
- Expertise from county extension personnel and communities across the state specifically in agriculture and community development.

University of Idaho, Coeur d'Alene

Charles Buck, Associate Vice-President and CEO of University of Idaho Northern Idaho (1031 N. Academic Way, Suite 242, Coeur d'Alene, ID 83814-2277. Phone: 208.667.2588, Fax 208.664.1272; www.uidaho.edu/cda, cdactr@uidaho.edu).

The University of Idaho Coeur d'Alene was established to bring U-Idaho programs to the people of northern Idaho, eastern Washington and western Montana. Cooperative relationships with other Idaho institutions, as well as those in eastern Washington, allow our students to finish various degrees without leaving the area. Undergraduate, graduate and certificate programs are offered in Coeur d'Alene. Courses are taught on-site by resident and adjunct faculty or offered via videoconferencing and online. Many Coeur d'Alene programs are designed for working professionals seeking a college education or advanced degree.

Undergraduate degrees offered at U-Idaho Coeur d'Alene or through online course work include the following:

- Career and Technology Education
- Child, Family and Consumer Studies: Child Development and Family Relations

- Early Childhood Development and Education
- Elementary Education with K-8 credential. Certification in Elementary Education is available for those students who hold a bachelor's degree and seek a teaching certificate.
- English: Literature Emphasis
- Environmental Science
- Food & Nutrition: Nutrition Option
- General Studies
- Interdisciplinary Studies
- Organizational Sciences
- Psychology

Several Academic minors are available through live or on-line coursework.

Graduate degrees offered at U-Idaho Coeur d'Alene or through on-line course work include the following:

- Adult and Organizational Learning and Leadership
- Curriculum and Instruction
- Educational Leadership
- Environmental Science - Water Science Emphasis
- Executive Master of Business Administration
- Master of Natural Resources
- Professional Science Master's in Natural Resources and Environmental Science
- Rehabilitation Counseling and Human Services
- Special Education

Certificate programs offered at U-Idaho Coeur d'Alene or through on-line course work include the following:

- Diversity and Stratification
- Environmental Contamination Assessment
- Environmental Water Science
- Fire Ecology
- Geographical Information Systems (GIS)
- Organizational Dynamics
- Restoration Ecology

Engagement with local citizens, businesses and agencies in northern Idaho is a primary goal of the university. The role of the Center is to make university resources, expertise and facilities available throughout the region. In addition to academic program offerings, the Center promotes business development with corporate research, programs in support of business start-ups, and continuing education opportunities for area professionals. A major Center initiative, Dign'IT, aims to develop cultural awareness of the importance of software engineering and computer science. This industry-driven initiative provides services and promotes training in these areas for people of all ages. The Center hosts local and regional research projects in water quality and environmental science via its Community Water Resource Center that also serves as an outreach center for local tribes, agencies and advocacy groups. Laboratory facilities in the Center support diverse research activities.

The College of Education and University of Idaho Coeur d'Alene have a strong history of serving the needs of local school districts through professional development programs and non-credit program offerings to support local public school administrators, teachers and students.

Scholarly and creative activity and research are components of all faculty programs in northern Idaho. University of Idaho Coeur d'Alene faculty have established world class research programs in key areas including nutrition, child development, literacy, science education, and educational leadership.

The University of Idaho Coeur d'Alene houses the North Idaho Regional Special Education Office in cooperation with the Idaho State Department of Education. The Regional Special Education Consultant provides local communities with technical assistance, in-service education, and monitoring support. The Office also includes the North Idaho Regional Special Education Library, a collection of materials designed to be a resource and support for Special Education Teachers, directors, parents, and other professionals. The Center also houses the regional Assistive Technology Lending Library providing technologies for citizens in the region that are in need.

The Extension Northern District Office is located at U-Idaho Coeur d'Alene and provides support for ten northern Idaho counties. Extension non-credit programs are offered at the local level in competitive agriculture, community development, nutrition and food safety, family and youth, and natural resources.

University of Idaho, Idaho Falls

Robert Smith, Associate Vice President and Center Executive Officer, (1776 Science Ctr. Dr., Suite 306, Idaho Falls, Idaho 83402; 208/282-7960; www.uidaho.edu/idahofalls).

The University of Idaho, in partnership with Idaho State University, operates the Center for Higher Education at University Place in Idaho Falls. University Place serves over 3,000 undergraduate and graduate students in eastern Idaho. The center is ideally located on the banks of the Snake River and adjacent to the Idaho National Laboratory (INL). Yellowstone and Teton National Parks, scenic forests, pristine wilderness areas, and world-class recreational activities are located nearby.

Academics. Consistent with the role and mission assigned by the State Board of Regents and the University of Idaho's land-grant designation, the university offers select Undergraduate, Master's, Specialist's and Doctorate degree programs in Idaho Falls. Additional professional programs, certificates and courses are offered in response to needs of the community. Over 150 University of Idaho courses are offered at the center each semester. Courses are taught on-site by resident and adjunct faculty and are offered via interactive video, electronic media, and the Internet.

Undergraduate degrees are available in the following disciplines:

- Environmental science
- General studies
- Industrial Technology.

Graduate degrees are available in the following disciplines:

- Biological and Agricultural Engineering
- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science
- Computer Engineering
- Education (Ed.D.)
- Electrical Engineering
- Engineering Management
- Environmental Science
- Hydrology
- Industrial Safety
- Interdisciplinary Studies
- Materials Science & Engineering
- Mechanical Engineering
- Metallurgy
- Nuclear Engineering.

Research. The center is strategically located next to the Idaho National Laboratory (INL) and The Center for Advanced Energy Studies (CAES). This location is ideal for research collaboration opportunities. The Idaho Falls Center is focusing on delivering advanced education and research programs addressing state and national energy and security needs in partnership with the INL, industry, and university partners. The Idaho Falls Center houses the eastern Idaho branch of the Idaho Water Resources Research Institute (IWRRI).

Idaho National Laboratory. In operation since 1949, the INL is a science-based, applied engineering national laboratory dedicated to supporting the U.S. Department of Energy's missions in nuclear and energy research, science, and national defense. The laboratory works with national and international governments, universities and industry partners to discover new science and develop technologies that underpin the nation's nuclear and renewable energy, national security and environmental missions.

The Center for Advanced Energy Studies. CAES is focused on creating a unique and collaborative environment for our energy future, including cross-organizational and peer-to-peer technical collaboration. It will address science, engineering and technology development critical to U.S. and global energy needs. CAES research will focus on energy affordability, environmental safety, and technology research in nuclear, hydrogen,

fossil fuels (coal, oil and gas), plus the full spectrum of renewable energy sources. CAES' research agenda will foster collaborations and interdisciplinary studies and make its research and development facilities, and those of INL, available to a network of universities.

Idaho Water Resources Research Institute. IWRRI supports and directs water research for the State of Idaho and the region. IWRRI research results routinely lead to cutting-edge discoveries in such vital topics as water quality, water supply and water management. More importantly, these discoveries regularly lead to a greater understanding of our surroundings, offering sensible solutions toward maintaining a healthy balance between the economy and the environment.

Community and Statewide Services. The College of Agriculture District IV Research and Extension Office at the Idaho Falls Center provides extension programming and agriculture related activities.

DEPARTMENTS OF INSTRUCTION

Department of Accounting

Marla Kraut, Dept. Head (125A J. A. Albertson Bldg. 83844-3161; phone 208/885-7116). Faculty: Karin Hathaway-Dial, Teresa P. Gordon, Marla A. Kraut, Jason Porter, Robert R. Stone, Glen G. Utzman, Darryl Woolley.

The goal of the accounting program is to prepare graduates to enter the accounting profession in public accounting, industry, or the public sector. The department offers two degrees, a bachelor of science in business and a master of accountancy. The accounting program is fully accredited by the AACSB.

The department's mission is to provide a collaborative learning environment that prepares our students to be responsible accounting professionals. We prepare our students to succeed personally and professionally while exhibiting high ethical standards. As a land grant university we have a primary responsibility to serve the citizens of Idaho. We also recruit students regionally and we attract students from other states and other countries.

We accomplish this mission by:

- Delivering a high quality program of accounting studies that encompasses the relevant features of a dynamic accounting and business environment.
  - For undergraduate students, deliver general preparation in accounting to provide a foundation for future study or employment.
  - For graduate students, build upon the foundation to prepare for an accounting career.
- Providing experiential learning opportunities for our students.
- Engaging in research that makes meaningful contributions to accounting practice and accounting education.
- Delivering and supporting outreach programs that build on our competencies within the college and meet the needs of our stakeholders.
- Sharing our accounting expertise in support of our state, our professions and the academic community.
- The department has adopted the CBE Learning Goals for the undergraduate accounting majors (See College of Business and Economics Part IV of this catalog). Undergraduate accounting majors will also acquire specific knowledge in financial reporting, cost and managerial accounting, taxation, and auditing.
- The Master of Accountancy (MACCT) Learning Goals mirror the College of Business and Economics learning goals. These goals are: 1) Professional Accounting Knowledge - The MACCT students will acquire advanced accounting knowledge to prepare them for the accounting profession or further graduate work; 2a) Critical Thinking and Ethical Problem Solving. MACCT students will demonstrate critical thinking skills necessary for identifying and addressing complex situations in accounting-related areas including ethical dilemmas; 2b) Research Skills. MACCT students will be able to locate appropriate information, apply the rules or standards to a set of facts, and make an appropriate recommendation regarding a course of action; 3) Communication - MACCT students will enhance their ability to effectively communicate through oral presentations and professional writing assignments; 4) Clarify purpose and perspective - MACCT students will have opportunities for experiential learning, relationship development and appreciation of global perspectives; 5) Teamwork and Collaboration -MACCT students will have opportunities to enhance their ability to interact in teams.

The M.Acct. degree program has primary emphasis areas that include auditing and financial accounting, corporate accounting management and controllership, government and not-for-profit fiscal management, international accounting, accounting information systems analysis and design, and taxation. Other emphasis areas or tracks are permitted, subject to approval by the departmental graduate committee.

Admission to the M.Acct. degree requires (1) a B.S., B.A., or B.B.A. degree from an accredited college or university, (2) acceptable GMAT, GRE or LSAT examination score, (3) an undergraduate grade-point average of at least 3.00, and (4) a minimum TOEFL score of 550 (if applicable).

The department, in conjunction with the College of Law, offers a concurrent J.D./M.Acct. degree. See the College of Graduate Studies and the College of Law sections for additional information on graduate/law concurrent degrees.

Courses

See the course description section for courses in Accounting (Acct) and Business Law (BLaw).

Accounting Undergraduate Curricular Requirements

Accounting (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3) the general requirements for graduation from the College of Business and Economics, and:

Acct 305	Accounting Information Systems (3 cr)
Acct 315	Intermediate Financial Accounting I (3 cr)
Acct 385	Cost and Management Accounting (3 cr)
Acct 414	Intermediate Financial Accounting II (3 cr)
Acct 483	Fundamentals of Federal Taxation (3 cr)
Acct 492	Auditing and Controls (3 cr)

Accounting electives chosen from the following (6 cr):

Acct 415	Advanced Financial Accounting and Reporting (3 cr)
Acct 440	Fraud Examination (3 cr)
Acct 484	Federal Taxation of Entities (3 cr)
Acct 530	Accounting for Public Sector Entities (3 cr)
Acct 585	Estate and Elder Planning (3 cr)
BLaw 420	Commercial Law (3 cr)
BLaw 425	Law of Business Entities (3 cr)

One additional course in communication or writing beyond the UI general education requirements (3 cr):

Comm 235	Organizational Communication (3 cr)
Comm 332	Communication and the Small Group (3 cr)
Comm 335	Intercultural Communication (3 cr)
Comm 347	Persuasion (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 431	Applied Business and Professional Communication (3 cr)
Engl 207	Persuasive Writing (3 cr)
Engl 313	Business Writing (3 cr)
Engl 316	Environmental Writing (3 cr)
Engl 317	Technical Writing (3 cr)
Phil 201	Critical Thinking (3 cr)

Courses to total 120 credits for this degree

Accounting Academic Minor Requirements

Accounting Minor

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
Acct 315	Intermediate Financial Accounting I (3 cr)

Courses selected from the following to total at least 18 cr:

Acct 305	Accounting Information Systems (3 cr)
Acct 385	Cost and Management Accounting (3 cr)
Acct 414	Intermediate Financial Accounting II (3 cr)
Acct 415	Advanced Financial Accounting and Reporting (3 cr)
Acct 440	Fraud Examination (3 cr)
Acct 482	Enterprise Accounting (3 cr)
Acct 483	Fundamentals of Federal Taxation (3 cr)
Acct 484	Federal Taxation of Entities (3 cr)
Acct 492	Auditing and Controls (3 cr)
Acct 530	Accounting for the Public Sector Entities (3 cr)
Acct 585	Estate and Elder Planning (3 cr)
BLaw 420	Commercial Law (3 cr)
BLaw 425	Law of Business Entities (3 cr)

Courses to total 18 credits for this minor

Accounting Graduate Degree Program

The Master of Accountancy degree requires 30 semester credits beyond the bachelor's degree, and is designed to meet the 150-credit require-

ment for taking the CPA examination in Idaho. Completion of this degree qualifies students to enter the public accounting profession in auditing, tax, or other positions ultimately requiring a CPA license.

Candidates must fulfill the requirements of the College of Graduate Studies and the Department of Accounting. See the College of Graduate Studies section for the general requirements applicable to the M.S. degree.

Students seeking the M.Acct. degree will develop a degree plan in consultation with their advisors, complete at least 30 credits of course work, and successfully complete a comprehensive paper and portfolio.

If a student has earned a BS in Accounting (or equivalent), the required courses include Acct 561, 586, 590, and 592, plus one course chosen from Acct 515, 530, 584, 585, 586, 598, 599. In addition students must have taken at least one US tax class, and at least one Business Law class at the upper-division undergraduate level or at the graduate level. An additional 15 credits are chosen from approved options. Those electing the thesis option include 6 credits of Acct 500 in the additional 15 credits (must still complete comprehensive paper and portfolio).

If a student has not earned a BS in Business (or equivalent), in addition to the above mentioned courses, the student must take or have taken at least 24 credits of business, economics, statistics, and business law courses at the undergraduate level or at the graduate level. These courses must include at least two business disciplines (e.g. management, marketing, and finance).

Aerospace Studies

Colonel Gregory Cain, Dept. Head (Washington State University, Kruegel Hall, phone 509/335-5598; www.afrotc.wsu.edu). Faculty: Gregory Cain, Richard Partain, Adam Starkey, and Brittany Starkey.

The Air Force Reserve Officer Training Corps (AFROTC) offers eligible students education and training that leads to a commission as a second lieutenant in the U.S. Air Force. Air Force ROTC students may major in any degree program offered at UI; they supplement their major curricula with the specialized aerospace studies courses to prepare for active commissioned service.

Four-Year Program (General Military Course and Professional Officer Course). A formal application is not required for students entering the four-year program. They may register for the program at the same time and in the same manner as they enroll in their other college courses. During their freshman and sophomore years, students enroll in the General Military Course (GMC), and there is NO MILITARY OBLIGATION. They then may compete for entry into the Professional Officer Course (POC), which is normally taken during the last two years of college. Selection into the POC is highly competitive and is based on qualification on an Air Force medical examination, a physical fitness test, scores achieved on the Air Force Officer Qualifying Test (AFOQT), successful completion of a paid four-week field training course at an Air Force base, and the recommendation of the professor of aerospace studies.

Air Force ROTC also offers financial assistance to selected students in the form of scholarships and subsistence allowances. The students compete for the scholarships through a national screening process. The Air Force offers 1- to 4-year scholarships that cover tuition, fees, and a book allowance, and also provide a stipend allowance ($300-$500 per month, depending on their level in the program) for each school year a student is on scholarship. Students interested in applying for scholarships should get in touch with this department. Nonscholarship students receive a stipend allowance ($450-$500 per month) while in the POC.

Air Force places a strong emphasis on physical fitness, and all ROTC cadets are required to participate at least three times a week in an organized, early morning fitness program with other cadets as part of the Leadership Laboratory requirements.

Field Training. Air Force ROTC field training is offered during the summer months at Maxwell Air Force Base, Alabama. Students in the four-year program participate in four weeks of field training, usually between their sophomore and junior years. Field Training is a mandatory program for all individuals qualified to pursue an Air Force commission through AFROTC. The program is designed to evaluate military leadership and discipline, determine potential for entry into the POC, and stratify among peers.

Leadership Laboratory. Leadership Laboratory is taken an average of two hours a week throughout the student's enrollment in Air Force ROTC. Instruction is conducted within the framework of an organized cadet wing with a progression of experiences designed to develop each student's leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies, drill and ceremonies, career opportunities in the Air Force, and the life and work of an Air Force junior officer. Students develop their leadership potential in a practical, supervised laboratory, which typically includes field trips to Air Force installations throughout the U.S. In addition, students are required to participate at least three times a week in an organized, early morning fitness program with other cadets.

Courses

See the course description section for courses in Aerospace Studies (Aero).

Aerospace Studies Programs

The following programs are designed to provide students with a good military and leadership foundation so students completing them can serve as effective Air Force officers. They are not designed to be academic majors and thus no bachelor's degree is offered.

For a student to receive an Air Force commission, he or she must have completed either the Four-Year Program or the Two-Year Program. Students may enter the program at points other than the two and four year points, however this requires a specialized academic program and department head approval. Contact the department head for more information. Prior-service students should consult the department to find out what course of study will be required for them.

Four-Year Program

Aero 101	Foundations of the U.S. Air Force (1 cr)
Aero 102	Foundations of the U.S. Air Force (1 cr)
Aero 103	Leadership Laboratory I (2 cr, max 4)
Aero 201	Evolution of U.S. Air Force Air and Space Power (1 cr)
Aero 202	Evolution of U.S. Air Force Air and Space Power (1 cr)
Aero 205	Leadership Laboratory II (2 cr, max 4)
Aero 311	Air Force Leadership and Management (3 cr)
Aero 312	Air Force Leadership and Management (3 cr)
Aero 313	Leadership Laboratory III (2 cr, max 4)
Aero 411	National Security Affairs/Preparation for Active Duty (3 cr)
Aero 412	National Security Affairs/Preparation for Active Duty (3 cr)
Aero 413	Leadership Laboratory IV (2 cr, max 4)

Aerospace Studies Academic Minor Requirements

Aerospace Studies Minor

Courses selected from the following (at least 12 credits must be in courses numbered 300 and above) (20 cr):

Aero 101	Foundations of the U.S. Air Force (1 cr)
Aero 102	Foundations of the U.S. Air Force (1 cr)
Aero 201	Evolution of U.S. Air Force Air and Space Power (1 cr)
Aero 202	Evolution of U.S. Air Force Air and Space Power (1 cr)
Aero 311	Air Force Leadership and Management (3 cr)
Aero 312	Air Force Leadership and Management (3 cr)
Aero 313	Leadership Laboratory III (2 cr, max 4)
Aero 411	National Security Affairs/Preparation for Active Duty (3 cr)
Aero 412	National Security Affairs/Preparation for Active Duty (3 cr)
Aero 413	Leadership Laboratory IV (2 cr, max 4)

Courses to total 20 credits for this minor

Program in Aging Studies

Vacant, Coordinator (219 Student Health Center, 83844-3043). Faculty: Ginna M. Babcock, Annette L. Folwell, Jamie C. Nekich, Cynthia J. Schmiege.

The Aging Studies Minor connects different knowledge bases across many disciplines. The program offers an interdisciplinary approach that uses the concept of development in later life to examine such cultural variables as class, ethnicity, nationality, gender, and developmental processes and such behavioral concerns as relationship dynamics, health and lifestyle maintenance, work-retirement transitions and changes in family structures. The courses encourage students to develop critical thinking skills that will empower them as active learners and that will lead them to better understanding of what it means to grow old in a new age. Field and applied experiences enable students to demonstrate new knowledge and to refine their competence in working with real life community and family problems. Fields such as communication, recreation,

criminology, economics, health services, social work, law, psychology, education, and family and consumer studies are increasingly offering special career opportunities to students with a background in aging studies.

Academic units that cooperate to offer this minor include the School of Family and Consumer Sciences, the Department of Movement Sciences, and the Departments of Art and Architecture, Psychology and Communication Studies, and Sociology and Anthropology.

Aging Studies Academic Minor Requirements

Aging Studies Minor

Psyc 419	Adult Development and Aging (3 cr)
Soc 431	Personal and Social Issues in Aging (3 cr)
FCS 428	Housing America's Families (3 cr)

Additional courses selected from the following (if not taken above) or other courses with at least 50% aging content as approved by a co-coordinator or an advisor (9-10 cr):

Arch 498	Internship (3-6 cr)
FCS 346	Personal and Family Finance and Management (1-2 cr)
FCS 404	Special Topics (3 cr)
FCS 410	Growing Old in a New Age (3 cr)
FCS 428	Housing America's Families (3 cr)
FCS 498	Internship (3-6 cr)
H&S 150	Wellness Lifestyles (3 cr)
H&S 498	Internship (3-6 cr)
PEP 498	Internship in Exercise Science & Health (3-6 cr)
Rec 498	Internship in Recreation, Parks and Tourism (3-6 cr)
Soc 431	Personal and Social Issues in Aging (3 cr)
Soc 498	Internship (3-6 cr)

Courses to total 20 credits for this minor

Department of Agricultural Economics and Rural Sociology

Cathy Roheim, Dept. Head (39A Iddings Wing, Ag. Sc. Bldg. 83844-2334; phone 208/885-6264). Faculty: Stephen Devadoss, Levan G. Elbakidze, John C. Foltz, C. Wilson Gray, Joseph F. Guenthner, Lorie L. Higgins, Aaron J. Johnson, Paul Lewin, Larry D. Makus, Christopher S. McIntosh, Kate Painter, Paul E. Patterson, Neil R. Rimbey, Priscilla Salant, R. Garth Taylor, Philip S. Watson, J. D. Wulfhorst.

Agricultural economics is an applied branch of economics. It is a social science that deals with economic problems in agriculture, the food industry, rural communities, and the use and conservation of our natural resources. Economic principles and theories are used to determine maximum economic efficiency in the production and marketing of agricultural commodities and in the use of natural resources.

The Bachelor of Science program in Agricultural Economics prepares students to address problems faced by farmers and ranchers, agricultural marketing and supply companies, natural resource agencies, and rural communities. The department offers the B.S. degree in Agricultural Economics with majors in agribusiness and agricultural economics. Areas of study within the majors include agricultural finance, agricultural policy, marketing, farm and ranch management, rural community development, international trade and development, economic use of natural resources, and management of agribusiness firms. The department also offers two minors: agribusiness and natural resource economics.

The agribusiness major prepares students in the management functions of farms, ranches, and businesses involved with the production and marketing of farm commodities and farm production inputs. The agricultural economics major prepares students to become professional economists for commercial agricultural firms and governmental agencies or to pursue advanced degrees in this field before entering the profession.

The M.S. in Applied Economics encompasses agribusiness, natural resources, and rural development economics. Agricultural development and international trade are also emphasized.

Students initiating graduate work in applied economics should have a background in economics and quantitative methods. The following specific course areas are recommended: economic principles, six credits; intermediate microeconomics, three credits; statistics, three credits; mathematics, through introductory calculus; applied economics and/or agricultural economics, nine credits. Individual graduate programs are tailored to allow students to take courses and develop thesis proposals in line with their professional interests.

The department welcomes inquiries about its program and suggests that anyone interested in possible pursuit of a degree in agricultural economics should contact the department (telephone 208/885-6264) or visit the website at www.cals.uidaho.edu/cals/aers/.

Courses

See course description section for courses in Agricultural Economics (AgEc).

Agricultural Economics and Rural Sociology Undergraduate Curricular Requirements

The agricultural economics area has two programs designed to prepare students for careers in the agricultural economics profession. The agribusiness major provides students with training related to management, finance, and marketing in the agribusiness sector. The agricultural economics major provides students with the theory behind decisions concerning agricultural production, marketing, resource use, pricing, and policy. Both of these majors prepare students to pursue advanced degrees if they choose.

Core courses for B.S.Ag.Econ.

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
AgEc 101	The Business of Agriculture (1 cr)
AgEc 278	Farm and Agribusiness Management (4 cr)
AgEc 289	Agricultural Markets and Prices (3 cr)
AgEc 301	Managerial Economics: Production (3 cr)
AgEc 302	Managerial Economics: Consumption & Markets (3 cr)
AgEc 356	Agricultural and Rural Policy (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
Engl 317	Technical Writing (agribusiness majors may substitute Engl 313) (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (4-5 cr):

Biol 102, Biol 102L	Biology and Society and Lab(4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Biol 250, Biol 255	General Microbiology and Lab (5 cr)

Agribusiness (B.S.Ag.Econ.)

Required course work includes the university requirements (see regulation J-3), the agricultural economics core, and:

Acct 482	Enterprise Accounting (3 cr)
AgEc 478	Advanced Agribusiness Management (3 cr)
AgEc 481	Agricultural Markets in a Global Economy (3 cr)

Select from the following (3 cr):

AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
AgEc 477	Law, Ethics, and the Environment (3 cr)

Select two of the following (6 cr):

AgEc 333	Introduction to Sales (3 cr)
BLaw 265	Legal Environment of Business (3 cr)
Bus 321	Marketing (3 cr)
Bus 413	Organizational Behavior (3 cr)

One of the following (3-4 cr):

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Ag economics, economics, accounting, or business electives (12 cr)
Technical agriculture electives (12 cr)

Courses to total 120 credits for this degree

Agricultural Economics (B.S.Ag.Econ.)

Required course work includes the university requirements (see regulation J-3), the agricultural economics core, and:

AgEc 451	Applied Environmental and Natural Resource Economics

AgEc 478 Advanced Agribusiness Management (3 cr)
AgEc 481 Agricultural Markets in a Global Economy (3 cr)
Econ 351 Intermediate Macroeconomic Analysis (3 cr)
Econ 352 Intermediate Microeconomic Analysis (3 cr)
Agricultural economics electives (3 cr)
Economics electives (6 cr)
Technical agriculture electives (12 cr)

One of the following (4 cr):
Math 160 Survey of Calculus (4 cr)
Math 170 Analytic Geometry and Calculus I (4 cr)
Courses to total 120 credits for this degree

Academic Minor Requirements

Agribusiness Minor

AgEc 278 Farm and Ranch Management (4 cr)
AgEc 289 Agricultural Markets and Prices (3 cr)
AgEc 356 Agricultural and Rural Policy (3 cr)

One of the following courses (3 cr):
AgEc 301 Managerial Economics: Production (3 cr)
AgEc 302 Managerial Economics:Consumption & Markets (3 cr)

Seven credits of upper division Agricultural Economics electives (7 cr)
Courses to total 20 credits for this minor

Natural Resource Economics Minor

Required Courses (12 cr):
AgEc 356 Agricultural and Rural Policy (3 cr)
AgEc 451 Applied Environmental and Natural Resource Economics (3 cr)
AgEc 477 Law, Ethics, and the Environment (3 cr)

One of the following (3 cr):
AgEc 301 Managerial Economics: Production (3 cr)
AgEc 302 Managerial Economics: Consumption & Markets (3 cr)

Electives: Choose 8 credits from the following courses (if not taken above):
AgEc 301 Managerial Economics: Production (3 cr)
AgEc 302 Managerial Economics: Consumption & Markets (3 cr)
AgEc 410 Experiencing the Idaho Public Policy Making Process (1 cr)
AgEc 419 Development and Analysis of Enterprise Budgets (1 cr)
CSS 235 or For 235 Society and Natural Resources (3 cr)
CSS 364 or PolS 364 Politics of the Environment (3 cr)
CSS 383 Natural Resource and Ecosystem Service Economics (3 cr)
CSS 462 or PolS 462 Natural Resource Policy (3 cr)
Econ 202 Principles of Microeconomics (3 cr)
Econ 385 Environmental Economics (3 cr)
EnvS 225 International Environmental Issues Seminar (3 cr)
EnvS 400 Seminar (1 cr)
Geog 411 Natural Hazards and Society (3 cr)
REM 456 Integrated Rangeland Management (3 cr)
Courses to total 20 credits for this minor

Agricultural Economics and Rural Sociology Graduate Degree Program

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Agricultural Economics and Rural Sociology. See the College of Graduate Studies section for the applicable general requirements.

The M.S. program in applied economics is designed to prepare students for management, research, and policy positions in the public and private sectors of the economy, and for further graduate study. The M.S. thesis option is offered as a 32 credit stand-alone degree or as a 32 credit thesis degree with emphasis areas which may be selected in any of the following three areas: Agricultural Economics; Natural Resources; Agribusiness. Both thesis options include six thesis credits (AgEc 500) and 26 credits of course work including the following: AgEc 506 (0 cr), AgEc 525 (3 cr), AgEc 526 (3 cr), AgEc 527 (3 cr), AgEc 529 (2 cr), and 15 credits of AgEc electives. A student has the option to not pursue an emphasis in which case the student must complete as part of the 15 credits of AgEc electives, 6 credits chosen from the following courses: AgEc 532 (3 cr), AgEc 533(3 cr), AgEc 534 (3 cr), AgEc 535 (3 cr), AgEc 586 (3 cr) or AgEc 587 (3 cr). If an emphasis area is chosen, two courses must be selected from those specifically listed in that emphasis area, which will be used as part of the 15 credits of AgEc electives. Emphasis areas are: Agribusiness: AgEc 535 (3 cr) & either AgEc 533 or AgEc 534 (3 cr); Agricultural Economics: AgEc 534 (3 cr) & AgEc 535 (3 cr); or Natural Resources: AgEc 532 (3 cr) and one additional course (3 cr). More than one emphasis area may be completed as long as each emphasis area requirement is met, note however only the declared emphasis area will appear on the student's transcript. Students may take a non-thesis option M.S. degree. Under this option a student will take a minimum of 32 credits of course work including the 26 credits of departmental course requirements, which are the same as the stand-alone thesis option. For the non-thesis option, a three-credit paper will be written and presented by the student addressing a topic determined jointly by the student and the student's graduate committee. This option is available for students not receiving financial support from research funds.

Department of Agricultural Education and 4-H Youth Development

James J. Connors, Dept. Chair (Agricultural and Extension Education Bldg., P.O. Box 442040, 1134 West 6th, 83844-2040; phone 208/885-6358; ljconnors@uidaho.edu; aee.ag.uidaho.edu/). Faculty: James J. Connors, Lou E. Riesenberg, Allison J.L. Touchstone, Kattlyn J. Wolf, Jeremy Falk, Erik Anderson. Affiliate Faculty: Robert J. Haggerty. Adjunct Faculty: Michael G. Rush.

The mission of the Department of Agricultural Education and 4-H Youth Development includes teaching, research, and service. The specific objectives of the department are: (1) to prepare educators for employment in teaching agriculture and extension programs; (2) to provide service and direction to FFA in Idaho; (3) to prepare for careers in general learning/ranching or entry level positions in agricultural industry and agribusiness; (4) to provide an opportunity for graduate study in the areas of agricultural and extension education; (5) to assist in providing inservice education for agricultural educators in Idaho; (6) to provide service to related agencies and organizations for the support of education and the development of human resources; (7) to conduct quality research in agricultural and extension education; (8) to assist in maintaining viable agricultural education programs; and (9) to assist in the development of information and instructional materials for the support of agricultural educators and extension personnel.

Courses in animal science, agricultural economics, agricultural mechanics, entomological science, plant science, horticulture, and soil science will prepare graduates to teach these areas as secondary agriculture instructors or develop educational programs as county extension faculty. The agricultural education curriculum is approved by the State Board for Professional-Technical Education. Graduates who have completed a minimum of 28 credits in agricultural education and who meet the state certification requirements for a standard secondary teaching certificate are qualified to teach secondary agriculture. Government and agribusiness agencies that seek persons with training in agriculture and education provide employment opportunities for graduates of this curriculum. Courses provide students an opportunity to develop employment opportunities in teaching agriculture, cooperative extension, and agribusiness occupations.

The department provides opportunities for professional growth and development to agricultural educators through a planned program of graduate study. The pursuit of an M.S. degree allows for the development of problem-solving skills through scientific investigation of appropriate research topics. Graduate work in agricultural and extension education is offered with the opportunity for students to elect options in agricultural sciences, extension education, professional-technical teacher education, international agricultural education, or other areas that parallel their career goals. Because of the diversity of research efforts by departmental faculty members, a graduate student has a wide variety of specializations from which to choose a thesis topic. Students with this degree are well prepared to move into a job market or to pursue a Ph.D. program at another institution.

Admission to a graduate program requires an undergraduate degree with a major in agricultural education or a closely related field. The department may require the Graduate Record Examination if there is insufficient information available to indicate that the student will be successful in graduate work.

The department welcomes inquiries about its programs and suggests that anyone interested in possible pursuit of a degree in agricultural and

extension education should contact the department (telephone 208/885-6358).

Courses

See course description section for courses in Agricultural Education (AgEd) and Agricultural Science and Technology (Ag).

Agricultural Education and 4-H Youth Development Undergraduate Curricular Requirements

Agricultural Education (B.S.Ag.Ed.)

Required course work includes the university requirements (see regulation J-3) and the following:

This major is approved by the State Board of Professional-Technical Education for the preparation of high school agriculture instructors. Graduates who have completed at least 28 credits in agricultural education, and who meet the state certification requirements for a Standard Secondary Teaching Certificate, are eligible to teach secondary agricultural science and technology in Idaho. Students must be admitted to the Teacher Education Program, which requires a grade-point average of at least 2.75, before being allowed to enroll in upper-division teacher education courses and participate in student teaching. The Idaho teaching certificate transfers to most states in the US. In addition, government and business agencies and the Cooperative Extension System that seek persons with education in both agriculture and education provide employment opportunities for graduates of this curriculum.

AgEd 180	Introduction to Agricultural Education (1 cr)
AgEd 351	Principles and Philosophy of Professional-Technical Education (3 cr)
AgEd 358	Supervising FFA and SAE Programs (3 cr)
AgEd 451	Communicating in Agriculture (3 cr)
AgEd 452	Methods of Teaching Agriculture (4 cr)
AgEd 453	Program Planning in Secondary and Adult Ag Education (3 cr)
AgEd 454	Facilities Organization and Management (2 cr)
AgEd 460	Practicum: Secondary School Teaching in Agriculture (10 cr)
AgEd 461	Student Teaching Portfolio (2 cr)
AgEd 470	Proseminar in Agricultural Education (1 cr)
AgEd 471	Senior Capstone in Agricultural Education (1 cr)
ASM 107	Beginning Welding (2 cr)
ASM 202	Agricultural Shop Practices (2 cr)
ASM 210	Small Engines (2 cr)
ASM 407	Advanced Welding (1 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Microeconomics (3 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 453	Phonics, Phonological Awareness, Fluency, and Assessment (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
Psyc 101	Introduction Psychology (3 cr)

Ag electives, which include a minimum of 6 cr in Ag Econ, 6 cr in Animal Sci, 6 cr in Plant Sci, 3 cr in Horticulture, and 4 cr in Soils (25 cr)

One of the following (4 cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3 cr):

Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One course from the following (3-4 cr):

Math 137	Algebra with Applications (3 cr)
Math 143	Pre-calculus Algebra & Analytical Geometry (3 cr)
Math 160	Survey of Calculus (4 cr)
Math 170	Analytical Geometry & Calculus I (4 cr)

One of the following (4 cr):

Phys 100, Phys 100L	Fundamentals of Physics and Lab (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)

Courses to total 128 credits for this degree

Agricultural Science, Communication and Leadership (B.S.Ag.L.S.)

Required course work includes the university requirements (see regulation J-3) and:

Agricultural and Life Science Core

AgEd 406	Exploring International Agriculture (3 cr)
Soil 205, Soil 206	The Soil Ecosystem and Lab (4 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (2-3cr):

ASM 305	GPS and Precision Agriculture (3 cr)
ASM 412	Agricultural Safety and Health (2 cr)
PlSc 207	Introduction to Biotechnology (3 cr)

One of the following (4cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3-4cr):

Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 207	Persuasive Writing (3 cr)
Engl 313	Business Writing (3cr)
Engl 316	Environmental Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3-4cr):

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Agricultural Science, Communication and Leadership Courses

Acct 201	Introduction to Financial Accounting (3 cr)
AgEc 278	Farm and Agribusiness Management (4 cr)
AgEc 289	Agricultural Markets and Prices (3 cr)
AgEd 180	Introduction to Agricultural Education (1 cr)
AgEd 406	Exploring International Agriculture (2 cr)
AgEd 450	Developing Leaders (2 cr)
AgEd 451	Communicating in Agriculture (3 cr)
AgEd 498	Internship (5-10 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Econ 202	Principles of Microeconomics (3 cr)

Additional Natural and Applied Sciences (4cr)

Upper-Division Agricultural Economics elective (3 cr)

One of the following (18 cr)

Nine credits in two different subject areas chosen from Agricultural System Management (ASM), Animal and Veterinary Science (AVS), Entomology (Ent), Family and Consumer Science (FCS), Food Science (FS), Plant Science (PlSc), and Soils (Soil).

12 credits in one subject area chosen from Agricultural System Management (ASM), Animal and Veterinary Science (AVS), Entomology (Ent), Family and Consumer Science (FCS), Food Science (FS), Plant Science (PlSc), and Soils (Soil) **and** Six credits from a Foreign Language.

Communication Electives including one upper-division course (12 cr):

Comm 233	Interpersonal Communication (3 cr)
Comm 235	Organizational Communication (3 cr)
Comm 332	Communication and the Small Group (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 431	Applied Business and Professional Communication (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 252	Introduction to Public Relations (3 cr)

Leadership Electives (12 cr):

AgEd 181	Introduction to Extension Education (1 cr)
AgEd 252	Developing Community and Collegiate Organizations (3 cr)
AgEd 359	Developing 4-H Youth Programs (2 cr)
AgEd 448	Foundations of Extension Education (2 cr)
Bus 311	Introduction to Management (3 cr)
Bus 413	Organizational Behavior (3 cr)
Bus 418	Organization Design and Changes (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
MS 101, MS 111	Introduction to Military Science and Leadership Lab (2 cr)
MS 102, MS 112	Fundamentals of Leadership and Management and Leadership Lab (2 cr)

MS 201, MS 211	Applied Leadership and Management and Leadership Lab (3 cr)
MS 202, MS 212	Applied Leadership and Management and Leadership Lab (3 cr)
Rec 254	Camp Leadership in Recreation and Sport (3 cr)

Courses to total 120 its for this degree

Agricultural Education and 4-H Youth Development Academic Minor Requirements

Agricultural Extension Education Minor

AgEd 180	Introduction to Agricultural Education (1 cr)
AgEd 181	Introduction to Extension Education (1 cr)
AgEd 359	Developing 4-H Youth Programs (2 cr)
AgEd 447	Adult Education in Agriculture (2 cr)
AgEd 448	Foundations of Extension Education (3 cr)
AgEd 450	Developing Leaders (2 cr)
AgEd 451	Communicating in Agriculture (3 cr)
AgEd 498	Internship (6 cr)

Courses to total 20 credits for this minor

Agricultural Education and 4-H Youth Development Graduate Degree Program

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Agricultural Education and 4-H Youth Development. See the College of Graduate Studies section for the general requirements applicable to the M.S. degree.

Both thesis and non-thesis options are offered. The M.S. (non-thesis) is a terminal program designed to provide a broader preparation than the M.S. with thesis. Of the minimum of 30 credits required under the non-thesis option, at least 18 must be in courses at the 500s level and the remainder may include 400s level courses in the majors and 300s and 400s level courses in supporting areas. A professional paper is optional at the discretion of the candidate's supervisory committee. A comprehensive examination is required which may be written and/or oral.

Program in American Indian Studies

Janis (Jan) Johnson, (224 Brink Hall 83844-1102; phone 208/885-7743; janjohn@uidaho.edu; www.uidaho.edu/class/interdisciplinary/aist). Faculty: Yolanda J. Bisbee, Ian Chambers, Harold Crook, Angelique EagleWoman, Rodney Frey, Marcos Ed Galindo, Georgia Johnson, Janis Johnson, John Lawrence, Steve Martin, R. Lee Sappington, Rebecca Tallent, Arthur Taylor, Aaron Thomas, J.D. Wulfhorst. Adjunct Faculty - Tribal Teachers: Felix Aripa, D'Lisa Penny Pinkham/

The American Indian Studies Program is based on the following objectives:

1. **Recruitment and retention** – enhance the recruitment and retention of Indian students, as well as other students of ethnic heritage, attending and graduating from UI.
2. **Intercultural communication** – provide an opportunity for face-to-face Indian/non-Indian exchange of ideas, perceptions, and misperceptions about Indian and Euro-American culture, including a meaningful context for intercultural communications and understanding, and solution of problems of bias and stereotyping.
3. **Cultural appreciation** – foster a better understanding of and appreciation for the vitality, breadth, depth, and rich diversity of components of contemporary Indian cultures (e.g., arts, economics, literature, government, and social and religious life), as well as their histories.
4. **Rigorous curriculum with an interdisciplinary approach** – enable students to acquire the knowledge, critical methods, and research skills of the academic fields that comprise the minor, including but not limited to anthropology, English, history, sociology, and teacher education.
5. **Application** – provide an Indian pedagogy and knowledge base, i.e., an Indian perspective, that would complement and be integrated with students' other academic fields of study (e.g., business, education, engineering, forestry and natural resources, health care, humanities, or social sciences), better preparing students with the skills and expertise to address and successfully meet the various issues and challenges faced in Indian communities.
6. **Collaboration** – build partnership relationships between UI and regional tribes (Idaho and adjacent western states), especially the Coeur d'Alene and Nez Perce Tribes, improving communications, educational delivery, the sharing of expertise, and ability to address common concerns and problems.
7. **Institutional growth** – advance the concerns and issues faced in Indian communities, as well as an Indian pedagogical and knowledge perspective within the university and academic communities.
8. **Inclusivity** – serve both Indian and non-Indian students and communities alike. Through the offered curriculum and sponsored activities, the overarching objective of the American Indians Studies Program is to provide a transformational educational experience for students.

Acknowledging the vital role native languages continue to play in American Indian communities and the need for their preservation, a curriculum in Nez Perce language is offered and upon completion of two years of study can be used to satisfy the Bachelor of Arts language requirement at the University of Idaho.

Students enrolled in the academic minor in American Indian Studies will be required to complete an academic service learning internship in collaboration with an area tribe. This internship helps fulfill the program's vision and objectives of application and collaboration through the American Indian/Indigenous value of reciprocity.

Courses

See the course description section for courses in American Indian Studies (AIST).

American Indian Studies Academic Minor Requirements

American Indian Studies Minor

AIST 401	Contemporary American Indian Issues (3 cr)
AIST 422	or Anth 422 Plateau Indians (3 cr)
Engl 484	American Indian Literature (3 cr)

One of the following (3 cr):

AIST 426 or Hist 426	Red Earth White Lies: American Indian History 1840-Present (3 cr)
AIST 431 or Hist 431	Stolen Continents, The Indian Story: Indian History to 1840 (3 cr)

Elective courses selected from the following (6 cr):

AIST 320	The Celluloid Indian: American Indians in Popular Film (3 cr)
AIST 404	Special Topics (3 cr)
AIST 411	Native American Architecture (3 cr)
AIST 420	Native American Law (3 cr)
AIST 421	Native American Natural Resources Law (3 cr)
AIST 426 or Hist 426	Red Earth White Lies: American Indian History 1840-Present (3 cr)
AIST 431 or Hist 431	Stolen Continents, The Indian Story: Indian History to 1840 (3 cr)
AIST 478	Tribal Nation Economics and Law (3 cr)
AIST 498	Internship (cr arr)
AIST 499	Directed Study (cr arr)
Anth 329	North American Indians (3 cr)
Anth 436	North American Prehistory (3 cr)
Anth 443	Plateau Prehistory (3 cr)
NezP 101	Elementary Nez Perce I (4 cr)
NezP 102	Elementary Nez Perce II (4 cr)
Soc 427 or Anth 427	Racial and Ethnic Relations (3 cr)

Courses to total 18 credits for this minor

Program in American Studies

Patricia S. Hart, Coordinator (337 Administration Bldg 83844-3178; phone 208/885-6012); Co-Coordinator: Walter A. Hesford; Faculty: Katherine G. Aiken, Anna Banks, Kenton Bird, Stacey Camp, Ian Chambers, Donald W. Crowley, Kenneth Faunce, Rodney P. Frey, Dale T. Graden, Patricia S. Hart, Walter A. Hesford, Georgia Johnson, Janis Johnson, Jennifer Ladino, John A. Mihelich, Adam Sowards, Debbie A. Storrs, Mark S. Warner, Gary Williams, Pingchao Zhu, Dinah Zeiger.

This interdisciplinary program enables students to gain an understanding of U.S. history, society, and cultures, past and present. It centers on courses that promote a multiethnic perspective on the U.S.; students may also examine U.S. experience within the broader context of Canadian and Latin American experience and from an international perspective. With its choice of emphases in history, social science, or American literature, the

American Studies program gives students the flexibility to explore a variety of academic fields to widen their knowledge and prepare them for professional life or graduate study.

Courses

See the course description section for courses in American Studies (AmSt).

American Studies Undergraduate Curricular Requirements

American Studies (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3), general CLASS requirements for the B.A. or B.S. degree, and:

1. AmSt 301, and a three credit designated upper-division American Studies course or a three credit capstone course in a major area of emphasis; and
2. Completion of one of the following major areas of emphasis:

A. Literature Emphasis

Engl 343	Survey of American Literature (3 cr)
Engl 344	Survey of American Literature (3 cr)

Courses selected from the following list (12 cr):

AIST 320	The Celluloid Indian: American Indians in Popular Film (3 cr)
Engl 241	Introduction to the Study of Language (3 cr)
Engl 380	Introduction to U.S. Ethnic Literatures (3 cr)
Engl 427	Modern Fiction, 1900-1945 (3 cr)
Engl 429	Contemporary Fiction (3 cr)
Engl 473	American Regional Literature (3 cr)
Engl 483	African American Literature (3 cr)
Engl 484	American Indian Literature (3 cr)

Courses in history and social science, which include at least 6 cr in each (selected from courses listed under the social science emphasis and from upper-div courses listed under the history emphasis) (18 cr)

Courses to total 120 credits for this degree

B. History Emphasis

Hist 111	Introduction to U.S. History (3 cr)
Hist 112	Introduction to U.S. History (3 cr)

Four courses selected from the following list (12 cr):

Art 302	Modern Art and Theory (3 cr)
Hist 315	Comparative African-American Cultures (3 cr)
Hist 411	Colonial North America, 1492-1763 (3 cr)
Hist 412	Revolutionary North America and Early National Period, 1763-1828 (3 cr)
Hist 415	Civil War and Reconstruction, 1828-1877 (3 cr)
Hist 416	Rise of Modern America, 1877-1919 (3 cr)
Hist 417	United States, 1919-1960 (3 cr)
Hist 418	Recent America, 1960-Present (3 cr)
Hist 419	Topics in the American West (3 cr)
Hist 420	History of Women in American Society (3 cr)
Hist 423	Idaho and the Pacific Northwest (3 cr)
Hist 424	American Environmental History (3 cr)
Hist 425	Immigration and Ethnicity in the United States (3 cr)
Hist 428	History of the American West (3 cr)
Hist 430	U.S. Diplomatic History (3 cr)
Hist 431	Stolen Continents, The Indian Story: Indian History to 1840 (3 cr)
Hist 438	Modern Mexico and the Americas (3 cr)
Hist 439	Modern Latin America (3 cr)
Hist 440	Social Revolution in Latin America (3 cr)
Hist 441	Slavery and Freedom in the Americas (3 cr)

Courses in literature and social science, which include at least 6 cr in each (selected from courses listed under the social science emphasis and literature emphasis) (18 cr)

Courses to total 120 credits for this degree

C. Social Science Emphasis

Three of the following courses (9 cr):

Anth 329	North American Indians **or**
Hist 431	Stolen Continents, The Indian Story: Indian History to 1840 (3 cr)
Geog 330	Urban Geography (3 cr)
PolS 235	Political Research Methods and Approaches (3 cr)
Soc 230	Social Problems (3 cr)

Courses from at least two different academic disciplines (at least 12 cr must be upper division) (18 cr):

AIST 401	Contemporary American Indian Issues (3 cr)
Anth 100	Introduction to Anthropology (3 cr)
Anth 422	Plateau Indians (3 cr)
Anth 431	Historical Archaeology (3 cr)
Anth 436	North American Prehistory (3 cr)
Anth 443	Plateau Prehistory (3 cr)
Arch 483	Urban Theory and Issues (3 cr)
Dan 421	Dance History (3 cr)
Econ 201	Principles of Macroeconomics (3 cr)*
Econ 202	Principles of Microeconomics (3 cr)*
Econ 272	Foundations of Economic Analysis (4 cr)*
Econ 385	Environmental Economics (3 cr)
Econ 407	Public Finance (3 cr)
Econ 441	Labor Economics (3 cr)
Geog 165	Human Geography (3 cr)
Geog 360	Population Dynamics and Distribution (3-4 cr)
JAMM 100	Media and Society (3 cr)
JAMM 340	Cultural Diversity and the Media (3 cr)
JAMM 378	American Television Genres (3 cr)
JAMM 440	Critical Issues in Mass Media (3 cr)
JAMM 445	History of Mass Media (3 cr)
PolS 275	American State and Local Government (3 cr)
PolS 331	American Political Parties and Elections (3 cr)
PolS 332	American Congress (3 cr)
PolS 333	American Political Culture (3 cr)
PolS 338	American Foreign Policy (3 cr)
PolS 360	Law and Society (3 cr)
PolS 437	American Presidency (3 cr)
PolS 467	Constitutional Law (3 cr)
PolS 468	Civil Liberties (3 cr)
Soc 101	Introduction to Sociology (3 cr)
Soc 311	Development of Social Theory (3 cr)
Soc 313	Collective Behavior (3 cr)
Soc 427	Racial and Ethnic Relations (3 cr)
Soc 325	Family, Violence, and Society (3 cr)
Soc 423	Social Class & Stratification (3 cr)
Soc 424	Sociology of Gender (3 cr)

Three courses in literature and history, including at least 3 cr in each (selected from the literature and history emphases list) (9 cr)

Courses to total 120 credits for this degree

**Note: Student may elect to take Econ 201 and Econ 202 for a total of 6 credits or Econ 272 for 4 credits.*

American Studies Academic Minor Requirements

American Studies Minor

AmSt 301	Studies in American Culture (3 cr)

Five courses numbered 300 or above, chosen from the emphasis lists under the American Studies major (15 cr)

Courses to total 18 credits for this minor

Note: No course used toward an American Studies minor may also be used toward any major.

Department of Animal and Veterinary Science

Mark A. McGuire, Dept. Head (213 Ag. Sc. Bldg. 83844-2330; phone 208/885-6345). Faculty: Amin Ahmadzadeh, Gordon W. Brumbaugh, Mireille Chahine, Joseph C. Dalton, Matthew E. Doumit, Mary E. Drewnoski, James J. England, J. Benton Glaze, John B. Hall, Ronald W. Hardy, Rodney A. Hill, Mark A. McGuire, Gordon K. Murdoch, Richard J. Norell, Madison S. Powell, Pedram Rezamand, Ronald P. Richard,.

Animal agriculture has a major role in providing the supply of high quality food, not only for the people of the United States, but also for those of other nations. Food and fiber obtained from animals include meat, milk, eggs, wool, and many by-products. Knowledge and skills resulting from a college education in this field will permit the graduate to contribute to improved production and health of the nation's livestock including beef, sheep, dairy, swine, poultry, horses, and companion animals.

In addition to classrooms and laboratories located in the Agricultural Science Building, the department's facilities include production centers for dairy, beef, and sheep, as well as a meats laboratory and livestock judging pavilion. Several breeds of animals are maintained for instruc-

tional purposes. The academic program is designed to prepare students for a variety of important and rewarding career opportunities. For more specific information, get in touch with the department head (208/885-6345).

To prepare students for the varied types of occupations available in animal agriculture, the Department of Animal and Veterinary Science offers a bachelor of science degree in animal and veterinary science with four options: business, dairy science, production and science/preveterinary. Each of these majors, while attempting to provide the students with a sound background in animal biology, has its separate emphasis on complementary academic training. One of the strongest features of these programs is the flexibility provided. Each major permits the student to plan the precise course of study that will best prepare him or her for the area of work that he or she desires to enter. The department also offers a minor in animal science for students desiring a background in animal agriculture to complement their major field of study.

The B.S.A.V.S. business option is designed for students who desire a career as entry level into management positions in livestock-related industries. This option is oriented toward business, economics, and agricultural economics, in addition to a sound background in production animal agriculture. With appropriate choices of elective courses, students can also prepare themselves for positions with financial institutions involved with the animal agriculture industry.

An option in dairy science (B.S.A.V.S.) helps prepare students for careers in one of Idaho's fastest growing industries. This option offers introductory and advanced course work and "hands on training" at a modern dairy center. Specific courses are taught in dairy nutrition, forage crops, dairy reproduction and physiology, dairy cattle evaluation, dairy products and processing, physiology of lactation, herd health management, agriculture power and machines, and farm management. Students are eligible to participate in the cooperative of university dairy students (CUDS) program.

The option in production (B.S.A.V.S.) is designed for students who desire to pursue a career in livestock production, graduate work in one of the varied disciplines in animal sciences (nutrition, breeding, physiology, growth, endocrinology, meats, etc.), or for employment by companies that require intensive training in animal biology. This option is also excellent training for those interested in Cooperative Extension.

The science/pre-veterinary option (B.S.A.V.S.) is offered for students interested in veterinary school or a graduate program involving any of the disciplines of animal biology. It is typically a 4-yr program of study, but for a few students the 3+1 program will be of interest. If, after successful completion of 99 credits of required courses (first 3 years of the 4-yr program, the student is admitted to a recognized college of veterinary medicine and completes the first year of veterinary school (equivalent of at least 32 credits), that first year will constitute the senior year at UI and the student will be awarded a B.S. A.V.S. at UI.

The department offers a graduate program leading to the Master of Science degree with a major in animal science and a Doctor of Philosophy degree with a major in animal physiology. The department offers areas of specialization in nutrition, reproductive physiology, embryo physiology, animal growth and development, meat science, and animal diseases with orientation towards beef cattle, dairy cattle, horses, sheep, and fish. The department also participates in university interdisciplinary programs in reproductive biology, and molecular and agricultural genetic engineering.

Graduate work in the department is designed to prepare the student for work in research, extension, teaching, and industry. Thesis projects are diverse in scope and range in design from studying very fundamental biological questions to application of scientific knowledge to animal production and management. Facilities available for graduate student research include herds and flocks of major livestock breeds, ruminant nutrition and physiology laboratories, biomedical research laboratories, a university-operated dairy, meat science laboratory, and a 500-head experimental feedlot. Active cooperation is maintained with federal research agencies located on and off campus.

Graduate student assistantships are available on a competitive basis each year. Inquiries should be directed to the department's graduate program coordinator.

Courses

See course description section for courses in Animal and Veterinary Science (AVS).

Animal and Veterinary Science Undergraduate Curricular Requirements

Animal and Veterinary Science (B.S.A.V.S.)

Required course work includes the university requirements (see regulation J-3) and:

AVS 109	The Science of Animals that Serve Humanity (4 cr)
AVS 209	Science of Animal Husbandry (4 cr)
AVS 305	Animal Nutrition (3 cr)
AVS 371, AVS 373	Anatomy and Physiology and Lab (4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3 cr):

Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3 cr):

Math 143	Pre-calculus Algebra and Analytical Geometry (3 cr)
Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Complete one of the following four options:

A. Business Option

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
AgEc 278	Farm and Ranch Management (4 cr)
AgEc 289	Agricultural Markets and Prices (3 cr)
AVS 306	Feeds and Ration Formulation (4 cr)
AVS 363	Animal Products for Human Consumption (4 cr)
AVS 450	Issues in Animal Agriculture (1 cr)
BLaw 265	Legal Environment of Business (3 cr)
Chem 275	Carbon Compounds (3 cr)
Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)

Business electives (6 cr)
6 crs of Upper Division Ag Econ

One of the following (3 cr):

AgEc 301	Managerial Economics: Production (3 cr)
AgEc 302	Managerial Economics: Consumption & Markets (3 cr)

One of the following (3 cr):

AgEc 301	Managerial Economics: Production (3 cr)
AgEc 302	Managerial Economics: Consumption & Markets (3 cr)

One of the following (3-4 cr):

AVS 222	Animal Reproduction and Breeding (3 cr)
AVS 452	Physiology of Reproduction (4 cr)

One of the following (4 cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3 cr):

AVS 472	Dairy Cattle Management (3 cr)
AVS 474	Beef Cattle Science (3 cr)

One of the following (3 cr):

AVS 466	Equine Science and Management (3 cr)
AVS 468	Companion Animal Biology & Management (3 cr)
AVS 472	Dairy Cattle Management (3 cr)
AVS 474	Beef Cattle Science (3 cr)

Courses to total 120 credits for this degree

B. Dairy Science Option

AgEc 278	Farm and Ranch Management (4 cr)
AgEc 289	Agricultural Markets and Prices (3 cr)
AVS 172	Principles and Practices of Dairy Science (2 cr)
AVS 306	Feeds and Ration Formulation (4 cr)
AVS 330	Genetics of Livestock Improvement (3 cr)
AVS 363	Animal Products for Human Consumption (4 cr)
AVS 411	Ruminant Nutrition (3 cr)
AVS 450	Issues in Animal Agriculture (1 cr)
AVS 463	Growth and Lactation (3 cr)
AVS 471	Animal Disease Management (3 cr)
AVS 472	Dairy Cattle Management (3 cr)
AVS 475	Advanced Dairy Cattle Management (3 cr)
Chem 275	Carbon Compounds (3 cr)
Econ 202	Principles of Microeconomics (3 cr)

One of the following (3-4 cr):
AVS 222 Animal Reproduction and Breeding (3 cr)
AVS 452 Physiology of Reproduction (4 cr)

One of the following (4 cr):
Chem 101 Introduction to Chemistry I (4 cr)
Chem 111 Principles of Chemistry I (4 cr)

One of the following (3 cr):
Biol 250 General Microbiology (3 cr)
MMBB 154 Introductory Microbiology (3 cr)

One of the following (1-2 cr):
Biol 255 General Microbiology Lab (2 cr)
MMBB 155 Introductory Microbiology Laboratory (1 cr)

Courses to total 120 credits for this degree

C. Production Option
AgEc 278 Farm and Ranch Management (4 cr)
AgEc 289 Agricultural Markets and Prices (3 cr)
AVS 222 Animal Reproduction and Breeding (3 cr)
AVS 306 Feeds and Ration Formulation (4 cr)
AVS 330 Genetics of Livestock Improvement (3 cr)
AVS 363 Animal Products for Human Consumption (4 cr)
AVS 411 Ruminant Nutrition (3 cr)
AVS 450 Issues in Animal Agriculture (1 cr)
AVS 471 Animal Disease Management (3 cr)
Chem 275 Carbon Compounds (3 cr)
Econ 202 Principles of Microeconomics (3 cr)
REM 221 or For 221 Ecology (3 cr)
300 or 400 level Life science elective (chosen from Biol, Ent, Fish, MMBB, PlSc, REM, Soil, or WLF) (3 cr)

One of the following (3-4 cr):
AVS 222 Animal Reproduction and Breeding (3 cr)
AVS 452 Physiology of Reproduction (4 cr)

One of the following (4 cr):
Chem 101 Introduction to Chemistry I (4 cr)
Chem 111 Principles of Chemistry I (4 cr)

One of the following (3 cr):
Biol 250 General Microbiology (3 cr)
MMBB 154 Introductory Microbiology (3 cr)

One of the following (1-2 cr):
Biol 255 General Microbiology Lab (2 cr)
MMBB 155 Introductory Microbiology Laboratory (1 cr)

One of the following (2-3 cr):
REM 151 Rangeland Principles (2 cr)
REM 456 Integrated Rangeland Management (3 cr)

One of the following (3 cr):
AVS 472 Dairy Cattle Management (3 cr)
AVS 474 Beef Cattle Science (3 cr)

One of the following (3 cr):
AVS 466 Equine Science and Management (3 cr)
AVS 468 Companion Animal Biology & Management (3 cr)
AVS 472 Dairy Cattle Management (3 cr)
AVS 474 Beef Cattle Science (3 cr)

Courses to total 120 credits for this degree

D. Science/Preveterinary Option
AVS 452 Physiology of Reproduction (4 cr)
Biol 116 Organisms and Environments (4 cr)
Chem 111 Principles of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
Chem 277, Chem 278 Organic Chemistry I and Lab (4 cr)
Phys 111, Phys 111L General Physics I and Lab (4 cr)
Phys 112, Phys 112L General Physics II and Lab (4 cr)

One of the following (3-4 cr):
Biol 310, Biol 315 Genetics and Lab (4 cr)
Gene 314 General Genetics (3 cr)

One of the following (3 cr):
Biol 250 General Microbiology (3 cr)
MMBB 154 Introductory Microbiology (3 cr)

One of the following (1-2 cr):
Biol 255 General Microbiology Lab (2 cr)
MMBB 155 Introductory Microbiology Laboratory (1 cr)

One of the following (3-4 cr):
Biol 300 Survey of Biochemistry (3 cr)
Biol 380 Biochemistry I (4 cr)

First Year in Veterinary School (32 cr) or the following courses:
AVS 306 Feeds and Ration Formulation (4 cr)
AVS 330 Genetics of Livestock Improvement (3 cr)
AVS 450 Issues in Animal Agriculture (1 cr)
AVS 471 Animal Disease Management (3 cr)
Biol or MMBB elective, 300-level or above (3 cr)

One of the following (3 cr):
AVS 451 Endocrine Physiology (3 cr)
AVS 463 Growth and Lactation (3 cr)
Biol 423 Comparative Vertebrate Physiology (3 cr)
Biol 432 or MMBB 409 Immunology (3 cr)
Biol 447 or MMBB 432 Virology (3 cr)
Biol 474 Principles of Developmental Biology (3 cr)
Biol 483 Mammalogy (3 cr)
Chem 372 Organic Chemistry II (3 cr)
MMBB 460 Microbial Physiology (3 cr)

One of the following (3 cr):
AVS 472 Dairy Cattle Management (3 cr)
AVS 474 Beef Cattle Science (3 cr)

One of the following (3 cr):
AVS 466 Equine Science and Management (3 cr)
AVS 468 Companion Animal Biology & Management (3 cr)
AVS 472 Dairy Cattle Management (3 cr)
AVS 474 Beef Cattle Science (3 cr)

Courses to total 120 credits for this degree

Animal and Veterinary Science Academic Minor Requirements

Animal Science Minor
AVS 109 The Science of Animals that Serve Humanity (4 cr)
AVS 209 Science of Animal Husbandry (4 cr)

One of the following (3 cr):
AVS 222 Animal Reproduction and Breeding (3 cr)
AVS 452 Physiology of Reproduction

Six credits from the following AVS 300-level or higher courses:
AVS 305 Animal Nutrition (3 cr)
AVS 306 Feeds and Ration Formulation (4 cr)
AVS 363 Animal Products for Human Consumption (4 cr)
AVS 330 Genetics of Livestock Improvement (3 cr)
AVS 363 Animal Products for Human Consumption (4 cr)
AVS 411 Ruminant Nutrition (3 cr)
AVS 471 Animal Disease Management (3 cr)

Three credits of the following:
AVS 466 Equine Science and Management (3 cr)
AVS 472 Dairy Cattle Management (3 cr)
AVS 474 Beef Cattle Science (3 cr)

Courses to total 20 credits for this minor

Animal and Veterinary Science Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Animal and Veterinary Science. See the College of Graduate Studies section for the general requirements applicable to all degrees.

Master of Science. The M.S. degree may be earned in animal science. To qualify for full admission, candidates must fulfill the requirements of the Graduate College and have an overall grade-point average of 3.0 or better (4.0 scale) for their undergraduate study. Acceptance of students not having this minimum grade-point average is possible, subject to recommendation by the department's Graduate Committee. Applicants must submit scores received on the Graduate Record Examination general (aptitude) test.

The M.S. degree requires a minimum of 30 credits, at least 18 of which must be in courses numbered 500 and above. No more than 10 of the

500-level credits may be from research and thesis. Courses at the 300 level in supporting fields may be used as part of the M.S. degree program. All graduate students are required to complete the departmental graduate seminar twice during the degree program. Students are also required to assist with teaching during their graduate training.

Applicants for the M.S. degree program in animal science who have completed their undergraduate program in fields that are not closely related to animal science will be required to complete deficiency courses as determined by the candidate's committee and approved by the department's Graduate Committee. The following are considered essential in an applicant's undergraduate program: chemistry and biochemistry (minimum of 12 credits); calculus; animal nutrition; animal breeding; physiology and/or endocrinology; one products course; and one animal production and management course. Specific animal production courses may be required as determined on an individual candidate basis.

Doctor of Philosophy. The Ph.D. degree may be earned in animal physiology. To qualify for admission, candidates must fulfill the requirements of the Graduate College and have an overall grade-point average of 3.25 or better (on a 4.00 scale) for their undergraduate and graduate work. Applicants must submit scores received in the Graduate Record Examination (aptitude test).

Applicants who have completed their previous degrees in fields not closely related to animal and veterinary science may be required to complete deficiencies as determined by the candidate's committee and approved by the department's Graduate Committee.

The Ph.D. degree in animal physiology requires a minimum of 78 credits beyond the B.S. or professional degree, at least 52 credits of which must be in courses numbered 500 and above. Thirty-nine credits of the 78 must be in courses other than AVS 600 (doctoral research and dissertation). Courses at the 300 level may not be used as part of the Ph.D. degree program. Doctoral students are required to complete the departmental graduate seminar each semester it is offered during the degree program. Students are also required to assist with teaching during their graduate training. Doctoral students must demonstrate competence in experimental design and data analysis prior to completion of the degree.

Art and Architecture

Architecture Faculty: Diane M. Armpriest, Matthew T. Brehm, Bruce T. Haglund, Xiao Hu, Frank R. Jacobus, Anne L. Marshall (Interim Program Head), Sherry McKibben (Boise), Wendy R. McClure, Phillip G. Mead, Román Montoto, Randall Teal, Kevin Van Den Wymelenberg (Boise). Affiliate Faculty: Gary Austin, C. Brian Cleveley, Stephen R. Drown, Tom Gorman. Adjunct Faculty: John R. Smith. Visiting Faculty: Ken Carper.

Art and Design Faculty: Marco R. Deyasi, J. Casey Doyle, Rachel Fujita, David F. Giese, Lynne Haagensen, Stacy Isenbarger, Delphine Keim, Sally Graves Machlis (Chair), Gregory Turner-Rahman. Senior Instructor: Val Carter Affiliate Faculty: Roger H. Rowley. Adjunct Faculty: John A. Larkin, Marilyn Lysohir, Jon Ochs, Miles Pepper, Melissa Rockwood.

Interior Design Faculty: Miranda S. Anderson, Rula Awwad-Rafferty, Shauna J. Corry (Interior Design Program Chair).

Landscape Faculty: Gary Austin, Stephen R. Drown (Chair), Elizabeth Graff, Toru Otawa. Temporary Faculty: Donald H. Brigham II, William MacElroy.

Virtual Technology and Design Faculty: Brian Cleveley, John Anderson, Greg Turner-Rahman (Interim Program Head). Temporary Faculty: Kelly Anderson, Steve Guynup, Sam Miller

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There are five programs within the College of Art and Architecture: Architecture, Interior Design, Art and Design, Landscape Architecture, and Virtual Technology and Design. Each program represents unique disciplines that are integrated throughout their curriculum, research and service mission. All undergraduate students majoring in any of the programs in art and architecture (architecture, interior design, art and design landscape architecture and virtual technology and design) are required to take the three classes that comprise the College Foundation Program.

Fees & Expenses. The State Board of Education has granted approval to charge a professional fee to all College of Art and Architecture students on a semester basis over and above general tuition and fees. This fee is used to directly support technology and computing for students and faculty, supplement operating budgets, hire temporary faculty, support the college's visual and design resource centers, cover professional accreditation costs, and partially support student field trips, clubs, and guest lecturers. See "Fees and Expenses" in this catalog.

Computer Technology. Students in architecture, interior design, art and design, landscape architecture and virtual technology and design are required to have their own computer and appropriate software for use in their studies. Specific technology requirements as well as guidelines and recommendations are posted on each program's web site.

IURDC. The Idaho Urban Research and Design Center (IURDC) is an educational and outreach function for the Programs of Architecture and Landscape Architecture, and the College of Art and Architecture. Graduate students in architecture, landscape architecture, bioregional planning and art and design are able to live and study in Boise for one or two years while completing graduate programs. In addition to course work in architecture, landscape architecture, sustainable urban landscapes, and urban design, students collaborate with architects, landscape architects and other design professionals, developers, urban planners and community and business leaders on projects and research that help shape Boise's cultural and metropolitan identity. Project partners include governmental agencies, arts and cultural organizations, businesses, nonprofits and residential communities.

IDL. The Integrated Design Lab, located in Boise, is dedicated to the development of high-performance, energy-efficient buildings in Idaho and eastern Oregon. Faculty, staff and student employees have opportunities there to work together on significant outreach and research projects and collaborate closely with faculty and students at the IURDC.

The Architecture and Interior Design Curriculum leads to a B.S. in Architecture (B.S.Arch.), Master of Architecture (M.Arch.), Bachelor of Interior Design (BID) and the MS Architecture.

Architecture. The Bachelor of Science in Architecture (B.S.Arch.), when combined with the Master of Architecture (M.Arch.) prepares students for a career as a licensed architect, as well as for careers in community design, urban design, consulting in energy and lighting, sustainable development and related fields. Students first earn the B.S.Arch., which qualifies them to seek non-professional positions, or to move seamlessly into the accredited two-year Master of Architecture program. Qualified students from other BS Arch. degrees are also encouraged to apply to the accredited M.Arch. degree at Idaho.

For undergraduate students, the pre-professional program (first two years) consists of foundation courses in art and architecture as well as university core requirements. The professional program includes courses in architectural design, history and theory of architecture, environmental controls, structures, construction, urban theory and programming. The accredited M. Arch. includes comprehensive architectural design and professional practice as well as the opportunity to pursue more specialized course work and complete a graduate project.

Undergraduate students from other colleges or universities may transfer into the program at various points in the curriculum – depending on course work completed elsewhere, and students holding an undergraduate degree may apply directly to the graduate program.

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a 6-year, 3-year, or 2-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre professional degree is not, by itself, recognized as an accredited degree.

The University of Idaho, College of Art and Architecture, Architecture Program offers the following NAAB-accredited degree program: Master of Architecture which includes the undergraduate B.S. Architecture. The next accreditation visit for all programs is in 2016 (full visit), with a focus report due in 2012.

Interior Design. The Bachelor of Interior Design (B.I.D.) is a professional degree, nationally accredited by the Council for Interior Design Accreditation (CIDA). It prepares students for a successful career as an interior designer including valuable interdisciplinary skills and knowledge in the closely related field of architecture as well as environmentally and social-

ly responsible design. Due to the unique configuration and relationship between Architecture and Interior Design, students in the interior design program graduate with a major in interior design and a minor in architecture. Students can also minor in other disciplines of their choice. Students have the option of majoring in interior design and architecture over a period of seven years, thus graduating with a B.I.D. and an M.Arch.

After the first year of study, academic achievement is reviewed to determine eligibility for continued study in interior design. Another review is conducted at the end of the second year of study.

Art and Design. The art and design curriculum at the University of Idaho leads to a Bachelor of Fine Arts, (B.F.A.) in Studio Art, a Bachelor of Science in Art Education (B.S.Art Ed.), a Bachelor of Arts (B.A.) in Art, a Master of Fine Arts (M.F.A.) or a Master of Arts in Teaching (M.A.T.) in art. This curriculum provides a broad base from which students may pursue a number of different career options. Students are required to complete a core of courses (the art core) designed to ensure an understanding of the historical and theoretical basis of art and design, while developing general competency in various media. They become strong visual thinkers equipped with both the creative and intellectual skills to succeed in a variety of careers in the global art and design communities. Students of art and design experience an integrated curriculum that fosters theoretical and professional growth, while promoting a profound understanding of the potential of visual work in its many contexts.

The B.F.A. degree is designed for those students who wish to develop professional careers in studio art and design. Requirements for the degree are stringent, and include intense involvement in studio work in the senior year, closely mentored by all faculty members, culminating in the development of a portfolio and written statement in support of a professional exhibition. Because the B.F.A. degree is a professional degree, often preparatory to pursuit of a Master of Fine Arts (M.F.A.) degree, students must maintain a minimum 2.75 GPA.

The B.S.Art Ed. degree is designed for those students intending to pursue a career of teaching in the public schools. In addition to the studio course requirements, students take a range of courses in the College of Education that lead to teacher certification. The B.S.Art Ed. is a rigorous degree specializing in studio art and design, students must maintain a minimum 2.75 GPA.

The B.A. degree with a major in art is designed to ensure a broad, liberal education with an emphasis in art. Students pursuing this degree must meet the B.A. degree requirements listed in the College of Letters, Arts, and Social Sciences section of this catalog, including a foreign language.

The Art and Design program offers two graduate degree programs: M.F.A. and M.A.T.

The M.F.A. degree is the terminal degree for studio artists and designers who want to deepen their current professional practice or teach at the college or university level. The M.A.T. degree is for certified teachers who want to enhance their professional practice in visual art and educational pedagogy. Graduate students are assigned studio space in the program's Graduate Art Studio (GAS House), as space and individual requirements permit. Priority is given to full-time graduate students. Admission requirements for the M.F.A. include a minimum grade-point average of 2.80 and an undergraduate degree in a studio area, or its equivalent as determined by the Art and Design program graduate faculty. Fewer than 60 credits in studio courses, and 12 in art history (or criticism, theory, or history in a related field) at the undergraduate level is considered a deficiency. Applicants with these deficiencies who are admitted to the M.F.A. program may be required to include deficiency course work as part of their graduate program. Deficiency courses are required but do not count towards satisfying degree requirements.

Admission to the M.A.T. degree requires an approved undergraduate degree, or its equivalent as determined by the Art and Design program graduate faculty, at least 20 credits of undergraduate art course work, and a minimum grade-point average of 2.80. Fewer than 20 credits in art courses at the undergraduate level is considered a deficiency. Applicants with these deficiencies who are admitted to the M.A.T. program may be required to include deficiency course work as part of their graduate program. Deficiency courses are required but do not count towards satisfying degree requirements.

All applicants to the graduate programs apply using the Graduate Admissions online application process. Applicants are required to submit a comprehensive portfolio of work, a written statement of career goals, three letters of recommendation and official transcripts from all previously attended colleges/universities. Portfolios may be in slide or CD form, 20 clearly labeled slides or images in a PDF file, and must include a postage-paid return envelope.

Art and Design is accredited by the National Association of Schools of Art and Design (NASAD).

Landscape Architecture. The practice of Landscape architecture is diverse with career opportunities in the traditional landscape architecture firm, interdisciplinary planning, engineering or architecture firms, urban, regional and national public agencies as well non-governmental organizations such as land and watershed trusts. Landscape architectural education at the University of Idaho is enhanced by the ecology of the Inland Northwest landscape, opportunities for integrated professional education in the College of Art and Architecture and the overall academic diversity of a land grant institution.

To achieve the professional M.L.A. degree a first year student must complete a five and one-half year seamless program that includes the Bachelor of Science, Landscape Architecture (B.S.L.A.) degree and the first professional Master of Landscape Architecture (M.L.A.) degree. After the second year of study, academic achievement is reviewed to determine eligibility for continued study in the program. Students are required to submit a portfolio of their work at this time.

Upon achieving senior standing, students apply for admission to the graduate professional M.L.A. In accordance with College of Graduate Studies requirements, these students must have a 3.0 GPA to be considered for admission. Once admitted to the M.L.A program, students work toward completion of both the B.S.L.A. & M.L.A., receiving both degrees upon completion of the five and one-half year curriculum.

Transfer students with baccalaureate degrees in a program other than landscape architecture may be admitted, based on their transcripts, directly into the M.L.A. professional program. The three-year program requires a minimum of 36 graduate level credits and 90 credits overall. Transfer students without an undergraduate degree are admitted to the B.S.L.A program before being considered for the M.L.A. program.

International Study. All students in the program are normally required to participate in a landscape architecture, international study abroad program. (Students are encouraged to work closely with their faculty advisor in planning for these programs as there are several options.) International study abroad is subject to national and international conditions that may impact the college's ability to offer or facilitate a program.

Program options and opportunities. Graduate students in landscape architecture have the opportunity to study at the University of Idaho, Moscow campus or at the College of Art and Architecture Idaho Urban Research and Design Center in Boise. Students in Boise work together with their peers in architecture in a year-long integrated design studio focusing on sustainable urban design and urban systems. Students at the Moscow campus have the opportunity to participate in an interdisciplinary studio focusing on community and rural design with graduate students in Art and, Design, Architecture and Interior Design and Bioregional Planning and Community Design. Individual faculty-directed off campus community internships in cooperation with a practitioner mentor are also available.

Elective Tracks. All landscape architecture students in both the B.S.L.A. and the M.L.A. program will work with their advisor to select an elective track that supports their specific interest in one of the project scales of the profession of landscape architecture. These normally include the site scale, neighborhood and community scale and the urban or bioregional scale. Electives may be chosen from the natural and social sciences as well as the humanities and the arts and will assist in gaining skills and knowledge that support the graduate studio or thesis.

Field Trips. All B.S.L.A. landscape architecture majors are required to take part in one field trip in the third or fourth year of the program. All M.L.A. majors are required to take part in one field trip in the first or second year of the program. These three to five day trips are usually to Northwest cites such as Portland, Seattle and San Francisco. Often one of these trips is a visit to the American Society of Landscape Architects (ASLA) national conference when the meeting is held in the western region of the country.

The Virtual Technology and Design (VTD) program offers a B.S. degree, which emphasizes an interdisciplinary education, through a curriculum that integrates emerging technologies with the process of design. VTD is accredited through the National Association of Schools of Art and Design.

VTD recognizes the demand for design professionals who have the interdisciplinary knowledge and skills necessary to conceive and construct electronically mediated solutions for an array of issues that give form and substance to our daily activities. As electronic media increasingly intersects with human interaction, the quality of access to information, services and the opportunity to participate fully in our emerging communities hinge in part on the kinds of solutions imagined and environments

planned by these virtual designers. The virtual designer serves both defined and yet to be defined industries. They bring a unique combination of experiential, spatial, critical thinking and technical skills to problems that range from the need to interactively visualize complex information systems to the multi-dimensional modeling requirements of virtual environments for commercial, entertainment, educational or social applications.

The VTD student is a person excited by the possibilities of combining design with emerging technologies. Like other design students, VTD students are intrigued with inquiry, discovery and the development of creative solutions that responds to human needs. However, they are further intrigued by the possibility of designing in a virtual or augmented reality rather than exclusively with bricks and mortar or more traditional media.

Graduates of the program will be prepared with the intellectual and management tools, as well as the technical and design skills, required of professionals who wish to contribute as leaders in the digital realm and design communities. Their understanding of the implications of electronically mediated information, communication and virtual environments on human activities will enable them to significantly influence the quality of everyday life. A VTD graduate is a designer who utilizes emerging technologies and theories.

Computer Technology

All Virtual Technology and Design majors are required to provide their own laptop computer and appropriate software available for use in all VTD classes. Specific technology requirements as well as guidelines and recommendations are posted on the VTD web site at www.caa.uidaho.edu/vtd.

Courses

See course sections in Architecture (Arch), Art (Art), Interior Design (ID), Landscape Architecture (LArc), and Virtual Technology and Design (VTD).

Architecture and Interior Design Undergraduate Curricular Requirements

Architecture (B.S.Arch.)

The four-year curriculum leading to a B.S.Arch. degree provides the undergraduate, pre-professional coursework that qualifies students to pursue a NAAB accredited, M. Arch degree. While the B.S.Arch. is not an accredited professional architectural degree, qualified students who earn this degree at the University of Idaho have the opportunity to proceed directly to the accredited M.Arch program Admission to the B.S. Arch program is competitive. After the first year of study, academic achievement is reviewed to determine eligibility for continued study in architecture. Only students with a 2.5 or higher grade-point average are eligible to continue in the architecture design studio sequence. Another review is conducted at the end of the second year of study. Applicants to the third year are required to submit a portfolio containing examples of graphic work in art and architecture. A portfolio of no more than 10 pages, should be submitted in an 8-1/2" x 11" format. The submission should also contain a transcript of any college work outside the UI. The deadline for third year applications is usually May 20. Results of the evaluation are made known to applicants by the first week of July.

Students accepted into the years three and four of the curriculum are required to maintain a minimum 3.0 GPA and to receive a grade of "C" or higher in architectural design courses. Students who do not meet these criteria are ineligible for acceptance to the M.Arch. degree program and the College of Graduate Studies. Provisional admittance to the M. Arch. program can be granted, with permission, for students with GPAs of 2.8 cumulatively, or 3.0 over the last 60 credit hours. See below for M.Arch. degree requirements.

College permission is required for admittance into Architecture design courses (ARCH 253, Arch 254, Arch 353, Arch 354, Arch 453, and Arch 454) and students must achieve a minimum grade of C in the previous studio course to enroll in the next sequential studio course.

Note: Students who have not been accepted into the third year curriculum may not enroll in architectural design courses. Students who have left the program may only re-enter the curriculum by application to the college admissions committee.

Required course work includes the university requirements (see regulation J-3) and:

Arch 151	Introduction to the Built Environment (2 cr)
Arch 154	Introduction to Architectural Graphics (3 cr)
Arch 243	Digital Design Tools for Architecture and Interior Design (2 cr)
Arch 244	Computer Aided Drafting and Modeling (2 cr)
Arch 253	Architectural Design I (3 cr)
Arch 254	Architectural Design II (4 cr)
Arch 266	Materials and Methods (3 cr)
Arch 353	Architectural Design III (6 cr)
Arch 354	Architectural Design IV (6 cr)
Arch 367	Building Technology I - Steel Structures (3 cr)
Arch 385	History of Architecture I (3 cr)
Arch 386	History of Architecture II (3 cr)
Arch 450	Architectural Programming (2 cr)
Arch 453	Architectural Design V (6 cr)
Arch 454	Architectural Design VI (6 cr)
Arch 462	Building Technology II - Concrete (2 cr)
Arch 463	Environmental Control Systems I (3 cr)
Arch 463L	Environmental Control Systems I Lab (1 cr)
Arch 464	Environmental Control Systems II (3 cr)
Arch 464L	Environmental Control Systems II Lab (1 cr)
Arch 466	Building Technology III - Seismic Design (2 cr)
Arch 483	Urban Theory and Issues (3 cr)
Art 110	Integrated Art and Design Communication (2 cr)
Art 112	Drawing as Integrated Design Thinking (2 cr)
Art 121	Integrated Design Process (2 cr)
LArc 251	Introduction to Principles of Site Design (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)
RMat 365	Wood Building Technology (3 cr)

One of the following (3-4 cr):

Math 160	Survey of Calculus (4 cr)
Phil 202	Intro to Symbolic Logic (3 cr)
Stat 251	Statistical Methods (3 cr)
CS 112	Intro to Problem Solving and Programming (3 cr)

Courses to total 128 credits for this degree (including at least 3 cr of 200-level or above courses taken outside the disciplines of architecture; landscape architecture; art and design; interior design; and virtual technology and design; and 3 cr of 200-level or above courses taken within the disciplines; and at least 3 credits of 200-level or above courses taken in any discipline. Credits earned in completion of an academic minor may be substituted).

Interior Design (B.I.D.)

The Interior Design program is a four-year professional program that leads to a Bachelor of Interior Design. Our mission is to serve as Idaho's only public, accredited, professional interior design program by providing a strong interdisciplinary design experience through a curriculum accredited by the Council for Interior Design Accreditation (CIDA), allied research, and outreach opportunities. We prepare our graduates to serve society through their professional and community work.

Due to the unique configuration and relationship between Architecture and Interior Design, students in the interior design program graduate with a major in interior design and a minor in architecture. Students can also minor in other disciplines

of their choice. Students have the option of double majoring in interior design and architecture over the period of seven years, thus graduating with a B.I.D. in interior design and an M.Arch. in architecture. Students must hold a minimum GPA of 2.50. A portfolio and transcript review will be conducted in the spring of the sophomore year. The portfolio, of no more than 10 pages, should be submitted in an 8-1/2" x 11" format. Results of the evaluation are made known to applicants by the first week of July.

College permission is required for admittance into Architecture and Interior Design studio courses (Arch 253, Arch 254, Arch 353, Arch 354, Arch 453, Arch 454 and ID 152, ID 254, ID 351, ID 352, ID 451, ID 452) and students must achieve a minimum grade of C in the previous Interior Design studio course to enroll in the next sequential studio course.

Required course work includes the university requirements (see regulation J-3) and:

Arch 151	Introduction to the Built Environment (2 cr)
Arch 154	Introduction to Architectural Graphics (3 cr)
Arch 243	Digital Design Tools for Architecture and Interior Design (2 cr)
Arch 244	Computer Aided Drafting and Modeling (2 cr)
Arch 253	Architectural Design I (3 cr)
Arch 266	Materials and Methods (3 cr)
Arch 385	History of Architecture I (3 cr)
Arch 386	History of Architecture II (3 cr)

Arch 463	Environmental Control Systems I (3 cr)
Arch 463L	Environmental Control Systems I Lab (1 cr)
Arch 464	Environmental Control Systems II (3 cr)
Arch 464L	Environmental Control Systems II Lab (1 cr)
Arch 475	Professional Practice (3 cr)
Art 110	Integrated Art and Design Communication (2 cr)
Art 112	Drawing as Integrated Design Thinking (2 cr)
Art 121	Integrated Design Process (2 cr)
ID 151	Introduction to Interior Design (3 cr)
ID 152	Interior Design I (3 cr)
ID 254	Architectural Design II (4 cr)
ID 281	History of Interiors I (3 cr)
ID 282	History of Interiors II (3 cr)
ID 332	Furniture Design and Construction (3 cr)
ID 351	Interior Design III (6 cr)
ID 352	Interior Design IV (6 cr)
ID 368	Materials and Specifications (3 cr)
ID 404	Special Topics (2 cr)
ID 443	Universal Design (3 cr)
ID 451	Interior Design V (6 cr)
ID 452	Interior Design VI (6 cr)

Courses to total 127 credits for this degree (including 3 cr from a list of advisor-directed electives)

Art and Design Undergraduate Curricular Requirements

Art Core

Art 100	World Art and Culture (3 cr)
Art 110	Visual Communication (2 cr)
Art 111	Drawing I (2 cr)
Art 112	Drawing II (2 cr)
Art 121	Design Process I (2 cr)
Art 122	Design Process II (3 cr)

Studio Art and Design (B.F.A.)

The B.F.A. is a four-year degree divided into two parts: the preprofessional program (freshman and sophomore years) and the professional program (junior and senior years). Majors are eligible to apply for the professional program when they have completed the art core, in the process of completing the 200-level art course requirements, and have earned a minimum 2.75 GPA. Applications for the professional BFA program will be requested each semester; students must be admitted to the professional BFA through the review process *before being admitted to 490 BFA Art/Design Studio and 495 BFA Senior Thesis.* Transcripts and a portfolio of the student's art work must accompany the application. Students accepted into the professional program must complete 15 credits of 300-level studio courses with at least 6 of the 15 credits in one sequential studio area and 12 credits of art history before enrolling in Art 490 and Art 495. Students must maintain a minimum GPA of 2.75 and receive a grade of C or better in the 300- and 400-level art courses. Students may reapply for entry into the professional program any semester after their sophomore year.

Computer Equipment: beginning with the first year of the program, all art and design students are required to have their own laptop computer and appropriate software for use in their courses. Please refer to the College of Art and Architecture's website for specifics.

Required course work includes the university requirements (see regulation J-3), the art core, and a studio emphasis (all the 200-level and 300-level courses in a specific studio area) in one of the following areas: graphic design, interaction design, painting, sculpture, printmaking, or photography/digital imaging and:

Art 303	Contemporary Art and Theory (3 cr)
Art 407	New Media (3 cr)
Art 410	Professional Practices (2 cr)
Art 490	BFA Art/Design Studio (12 cr)
Art 495	BFA Senior Thesis (4 cr)

Art History Electives selected with advisor approval (6 cr):

Art 205	Visual Culture (3 cr)
Art 208	Italian Renaissance Art and Culture (3 cr)
Art 213	History and Theory of Modern Design I (3 cr)
Art 302	Modern Art and Theory (3 cr)
Art 313	History and Theory of Modern Design II (3 cr)
Art 323	History of Typography (3 cr)
Art 382	History of Photography (3 cr)
Art 409	Visual Studies (3 cr)

200-level studio courses selected from the following (15 cr):

Art 211	Drawing III (3 cr)
Art 216	Digital Tools (3 cr)
Art 221	Introduction to Graphic Design (3 cr)
Art 222	Introduction to Typography (3 cr)
Art 231	Painting I (3 cr)
Art 241	Sculpture I (3 cr)
Art 251	Printmaking I (3 cr)
Art 261	Ceramics I (3 cr)
Art 271	Interaction Design I (3 cr)
Art 272	Interaction Design II (3 cr)
Art 280	Understanding Photography (3 cr)

300-400 level studio courses selected from the following (at least 6 cr must be taken in one studio area, i.e., Art 330, no more than 6 cr in one studio area may be counted toward this requirement) (15 cr):

Art 321	Graphic Design Concepts (3 cr, max 6)
Art 322	Graphic Design Studio (3 cr, max 6)
Art 330	Intermediate/Advanced Painting (3 cr, max 9)
Art 340	Intermediate/Advanced Sculpture (3 cr, max 9)
Art 350	Intermediate/Advanced Printmaking (3 cr, max 9)
Art 370	Intermediate/Advanced Interaction Design (3 cr, max 9)
Art 380	Digital Imaging (3 cr)
Art 390	Mixed Media (3 cr, max 6)
Art 491	Information Design (3 cr, max 9)

Courses to total 120 credits for this degree

No more than a combined total of 9 credits of the following courses may be applied toward a B.F.A. degree: Art 404, Art 488, Art 497, Art 498, and Art 499.

Art (B.A.)

Computer Equipment: beginning with the first year of the program, all art and design students are required to have their own laptop computer and appropriate software for use in their courses. Please refer to the College of Art and Architecture's website for specifics.

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, the art core, and a studio emphasis (all the 200-level and 300-level courses in a specific studio area) in one of the following areas: graphic design, interaction design, painting, sculpture, printmaking, or photography/digital imaging and:

Art 303	Contemporary Art and Theory (3 cr)
Art 407	New Media (3 cr)
Art 410	Professional Practices (2 cr)

Art History Electives selected with advisor approval (6 cr):

Art 205	Visual Culture (3 cr)
Art 208	Italian Renaissance Art and Culture (3 cr)
Art 213	History and Theory of Modern Design I (3 cr)
Art 302	Modern Art and Theory (3 cr)
Art 313	History and Theory of Modern Design II (3 cr)
Art 323	History of Typography (3 cr)
Art 382	History of Photography (3 cr)
Art 409	Visual Studies (3 cr)

200-level studio courses selected from the following (students pursuing a studio emphasis in graphic design must include Art 222; and interaction design majors must include Art 272) (15-18 cr):

Art 211	Drawing III (3 cr)
Art 216	Digital Tools (3 cr)
Art 221	Introduction to Graphic Design (3 cr)
Art 222	Introduction to Typography (3 cr)
Art 231	Painting I (3 cr)
Art 241	Sculpture I (3 cr)
Art 251	Printmaking I (3 cr)
Art 261	Ceramics I (3 cr)
Art 271	Interaction Design I (3 cr)
Art 272	Interaction Design II (3 cr)
Art 280	Understanding Photography (3 cr)

300-level studio courses selected from the following (at least 6 cr must be taken in one studio area, i.e., Art 330, no more than 6 cr in one studio area may be counted toward this requirement) (15 cr):

Art 321	Graphic Design Concepts (3 cr, max 6)
Art 322	Graphic Design Studio (3 cr, max 6)
Art 330	Intermediate/Advanced Painting (3 cr, max 9)
Art 340	Intermediate/Advanced Sculpture (3 cr, max 9)
Art 350	Intermediate/Advanced Printmaking (3 cr, max 9)

Art 370	Intermediate/Advanced Interaction Design (3 cr, max 9)
Art 380	Digital Imaging (3 cr)
Art 390	Mixed Media (3 cr, max 9)
Art 491	Information Design (3 cr, max 9)

Courses to total 120 credits for this degree

Art Education (B.S.Art Ed.)

Required course work includes the university requirements (see regulation J-3), the art core, a studio emphasis (all the 200-level and 300-level courses in a specific studio area) in one of the following areas: drawing, graphic design, interaction design, painting, sculpture, printmaking, photography/digital imaging, and the courses listed below.

Computer Equipment: beginning with the first year of the program, all art and design students are required to have their own laptop computer and appropriate software for use in their courses. Please refer to the College of Art and Architecture's website for specifics.

Note: For registration in upper-division courses in the field of education, students must have been admitted to the teacher education program and meet the teacher education GPA requirements. For admission criteria, refer to "Admission to the Teacher Education Program" in the College of Education section of this catalog.

Art 410	Professional Practices (2 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 302	Teaching Culturally Diverse Learners (4 cr)
EDCI 401	Internship Seminar (1 cr)
EDCI 410	Technology, Teaching and Learning (2 cr)
EDCI 436	Secondary Art Methods (3 cr)
EDCI 446	Secondary Art Practicum (1 cr)
EDCI 453	Phonics, Phonological Awareness, Fluency, and Assessment (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDCI 485	Secondary Internship (7-15 cr)
EDSP 300	Educating for Exceptionalities (2 cr)

200-level studio courses selected from the following (students pursuing a studio emphasis in graphic design must include Art 222; and interaction design majors must include Art 272) (15 cr):

Art 211	Drawing III (3 cr)
Art 216	Digital Tools (3 cr)
Art 221	Introduction to Graphic Design (3 cr)
Art 222	Introduction to Typography (3 cr)
Art 231	Painting I (3 cr)
Art 241	Sculpture I (3 cr)
Art 251	Printmaking I (3 cr)
Art 261	Ceramics I (3 cr)
Art 271	Interaction Design I (3 cr)
Art 272	Interaction Design II (3 cr)
Art 280	Understanding Photography (3 cr)

300-level studio courses selected from the following (at least 6 cr must be taken in one studio area, i.e., Art 330, no more than 6 cr in one studio area may be counted toward this requirement) (12 cr):

Art 321	Graphic Design Concepts (3 cr, max 6)
Art 322	Graphic Design Studio (3 cr, max 6)
Art 330	Intermediate/Advanced Painting (3 cr, max 9)
Art 340	Intermediate/Advanced Sculpture (3 cr, max 9)
Art 350	Intermediate/Advanced Printmaking (3 cr, max 9)
Art 370	Intermediate/Advanced Interaction Design (3 cr, max 9)
Art 380	Digital Imaging (3 cr)
Art 390	Mixed Media (3 cr, max 9)
Art 491	Information Design (3 cr, max 9)

Advisor Approved electives in art/design history/theory (9 cr)

Courses to total 120 credits for this degree

Landscape Architecture Undergraduate Curricular Requirements

Landscape Architecture (B.S.L.A.)

Students are typically accepted into the landscape architecture B.S.L.A. major as freshman or as transfer students. All new students whether freshman or transfer will be required to submit a portfolio of creative work at the end of their first year in the program. (Students are encouraged to include work from landscape architecture courses and any art or architecture courses they may have taken.) A committee of faculty will review this portfolio along with each student's cumulative GPA to determine their eligibility to continue in the program. Portfolios are due no later than the Monday of No Examination Week. All students will be notified of their eligibility for the coming fall semester no later than three weeks after the last day of classes of spring semester.

All majors in the program must maintain at least a 2.5 cumulative GPA in landscape architecture major courses. Failure to do so will require the student to meet with their advisor and repeat the landscape architecture major courses that impact this overall GPA before advancing in the program.

On registering for a course offered by the program, the student agrees that the college may retain work completed by the student for display, instruction, and accreditation purposes.

Computer Equipment: beginning with the first year of the program, all landscape architecture students are required to have their own laptop computer and appropriate software for use in their courses.

Required course work includes the university requirements (see regulation J-3) and:

Arch 483	Urban Theory and Issues (3 cr)
Art 110	Integrated Art and Design Communication (2 cr)
Art 112	Drawing as Integrated Design Thinking (2 cr)
Art 121	Integrated Design Process (2 cr)
Biol 102, Biol 102L	Biology and Society and Lab (4 cr)
Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
LArc 151	Introduction to the Built Environment (2 cr)
LArc 154	Landscape Architecture Representation and Media 1 (3 cr)
LArc 210	Landscape Architecture Representation and Media 2 (2 cr)
LArc 251	Introduction to Principles of Site Design (3 cr)
LArc 254	Origins of Landscape Form (2 cr)
LArc 268	Landscape Construction 1 (2 cr)
LArc 269	Landscape Construction 2 (2 cr)
LArc 288	Planting Design Studio 1 (3 cr)
LArc 289	Planting Design Studio 2 (3 cr)
LArc 310	Landscape Architecture Representation and Media 3 (2 cr)
LArc 353	Landscape Architecture Studio 1 (3 cr)
LArc 355	Landscape Architecture Studio 2 (3 cr)
LArc 358	Professional Office Practice, LA (2 cr)
LArc 363	Landscape Architecture Studio 3 (3 cr)
LArc 365	Landscape Architecture Studio 4 (3 cr)
LArc 368	Landscape Architecture Construction 3 (2 cr)
LArc 369	Landscape Architecture Construction 4 (2 cr)
LArc 380	Water Conservation Technologies (2 cr)
LArc 389	History of Landscape Architecture (3 cr)
LArc 395	GIS Applications in Land Planning 1 (3 cr)
LArc 453	Landscape Architecture Studio 5 (3 cr)
LArc 455	Landscape Architecture Studio 6 (3 cr)
LArc 463	Landscape Architecture Studio 7 (3 cr)
LArc 465	Landscape Architecture Studio 8 (3 cr)
LArc 480	The Emerging Landscape (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geom (3 cr)
Soil 205	The Soil Ecosystem (3 cr)
WLF 440	Conservation Biology (3 cr) or other related course approved by faculty committee

One of the following (3-4 cr):

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

Courses to total 128 credits for this degree

Recommended electives:

Art 380	Digital Imaging (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
Fish 430	Riparian Ecology and Management (3 cr)
For 235	Society and Natural Resources (3 cr)
Geol 335	Geomorphology (3 cr)
LArc 364	Summer Study Abroad Design Studio (6 cr)
LArc 382	Landscape, Language and Culture (2 cr)
LArc 390	Italian Hill Towns and Urban Centers (3 cr)
LArc 495	GIS Applications in Land Planning 2 (3 cr)
Phil 452	Environmental Philosophy (3 cr)
VTD 245	Advanced Modeling (3 cr)
VTD 266	Animation (3 cr)
VTD 271	Interactive Technologies (3 cr)

Virtual Technology and Design Undergraduate Curricular Requirements

Virtual Technology and Design (B.S.)

This is a four-year curriculum leading to a B.S. in Virtual Technology and Design. After the first year of study, academic achievement is reviewed to determine eligibility for continued study in VTD. Only students with a 2.5 or higher grade-point average are eligible to continue in the studio sequence. Another review is conducted at the end of the second year of study. Applicants to the second and third year are required to submit an electronic media based portfolio containing examples of their art and design work. Applicants should contact the program coordinator regarding acceptable media formats. The submission should also contain a transcript of any college work outside the UI. The deadline for third year applications is the close of the spring semester. Results of the evaluation will be made known to applicants by the end of June. Students accepted into the third and fourth years of the curriculum are required to maintain a minimum GPA of 3.0 and to receive a grade of 'C' or higher in all required VTD courses.

Note: Students who have not been accepted into the second year of the curriculum may not enroll in VTD 200 level design courses. Students who have not been accepted into the third year of the curriculum may not enroll in VTD 300 level design courses. Students who have left the program or fail a design studio course may only re-enter the curriculum by application to the program admissions committee.

Required course work includes the university requirements (see regulation J-3) and:

Art 110	Integrated Art and Design Communication (2 cr)
Art 112	Drawing as Integrated Design Thinking (2 cr)
Art 121	Integrated Design Process (2 cr)
CS 112	Introduction to Problem Solving and Programming (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Phys 111, Phys 111L	General Physics (4 cr)
VTD 152	Introduction to Virtual Design (2 cr)
VTD 244	Introduction to 3D Modeling (3 cr)
VTD 245	Advanced Modeling (3 cr)
VTD 246	Advanced Lighting and Materials (3 cr)
VTD 253	Virtual Design I (3 cr)
VTD 254	Virtual Design II (3 cr)
VTD 266	Animation (3 cr)
VTD 271	Interactive Technologies (3 cr)
VTD 355	Virtual Design III (4 cr)
VTD 356	Virtual Design IV (4 cr)
VTD 367	Advanced Animation (3 cr)
VTD 372	Advanced Interactive Technologies (3 cr)
VTD 400	Seminar (3 cr)
VTD 457	Capstone Design Studio I (6 cr)
VTD 458	Capstone Design Studio II (6 cr)

Two history or theory courses, that are associated with the disciplines of architecture, art, film, media, music or theatre, with approval of the VTD program (6 cr).

Three directed elective courses that allow a student to develop an emphasis area or breadth in a supporting discipline, with approval of VTD program (8-9cr).

Courses to total 120 credits for this degree

Art and Architecture Academic Minor Requirements

Architecture Minor

Arch 151	Introduction to the Built Environment (2 cr)
Arch 385	History of Architecture I (3 cr)
Arch 386	History of Architecture II (3 cr)

Courses selected from the following (10 cr):

Arch 154	Introduction to Architectural Graphics (3 cr)
Arch 253	Architectural Design I (3 cr)
Arch 254	Architectural Design II (4 cr)
Arch 266	Materials and Methods (3 cr)
Arch 463	Environmental Control Systems I (3 cr)
Arch 464	Environmental Control Systems II (3 cr)
Arch 483	Urban Theory and Issues (3 cr)
LArc 251	Introduction to Principles of Site Design (3 cr)

Courses to total 18 credits for this minor

Art Minor

Art 100	World Art and Culture (3 cr)
Art 110	Visual Communication (2 cr)
Art 111	Drawing I (2 cr)
Art 112	Drawing as Integrated Design Thinking (2 cr)
Art 121	Integrated Design Process (2 cr)
Art 122	Design Process II (3 cr)

200- and 300-level art studio classes and/or art history (6 cr)

Courses to total 20 credits for this minor

Note: Art courses used to meet the Art Minor cannot be taken under the pass/fail option.

Interior Design Minor

ID 151	Introduction to Interior Design (3 cr)
ID 281	History of Interiors I (3 cr)
ID 282	History of Interiors II (3 cr)
ID 368	Materials and Specifications (3 cr)
ID 443	Universal Design (3 cr)

Directed electives as approved by ID advisor (3 cr)

Courses to total 18 credits for this minor

Landscape Architecture Minor

LArc 151	Introduction to the Built Environment (2 cr)
LArc 288	Planting Design Studio 1 (3 cr)
LArc 389	History of Landscape Architecture (3 cr)
LArc 480	The Emerging Landscape (3 cr)

Courses chosen from the following (7 cr):

LArc 154	Landscape Architecture Representation and Media 1 (3 cr)
LArc 210	Landscape Architecture Representation and Media 2 (2 cr)
LArc 268	Landscape Construction 1 (2 cr)
LArc 269	Landscape Construction 2 (2 cr)
LArc 288	Planting Design Studio 1 (3 cr)
LArc 289	Planting Design Studio 2 (3 cr)
LArc 353	Landscape Architecture Studio 1 (3 cr)
LArc 355	Landscape Architecture Studio 2 (3 cr)
LArc 363	Landscape Architecture Studio 3 (3 cr)
LArc 365	Landscape Architecture Studio 4 (3 cr)
LArc 364	Summer Study Abroad Design Studio (6 cr) (with instructor's permission)
LArc 368	Landscape Architecture Construction III (2 cr)
LArc 369	Landscape Architecture Construction 4 (2 cr)
LArc 382	Landscape, Language and Culture (2 cr) (with instructor's permission)
LArc 390	Italian Hill Towns and Urban Centers (3 cr) (with instructor's permission)
LArc 395	GIS Applications in Land Planning 1 (3 cr)
LArc 495	GIS Applications in Land Planning 2 (3 cr)
LArc 499	Directed Study (3-6 cr)

Courses to total 18 credits for this minor

Architecture Graduate Degree Programs

Master of Architecture: Candidates must fulfill the requirements of the College of Graduate Studies and the Architecture and Interior Design program. Twenty-four of the 45 credits required for this degree must be at the 500 level, including the following courses: Arch 510 Graduate Seminar (2 cr), Arch 553 Architectural Design VII (6 cr), Arch 554 Architectural Design VIII (6 cr), and Arch 556 Architectural Design IX (6 cr). The remaining courses required to complete credits for this degree may be 400- or 500-level architecture courses or 300- or 400-level courses in supporting areas. Required courses include:

Arch 510	Graduate Seminar (3 cr)
Arch 553	Architectural Design VII (6 cr)
Arch 554	Architectural Design VIII (6 cr)
Arch 556	Architectural Design IX (6 cr)
Arch 568	Technical Integration in Design (2 cr)
Arch 575	Professional Practice (3 cr)

Graduate architecture electives selected from the following (6 cr):

Arch 502/504	Graduate Seminars and Special Topics (e.g. Urban Morphology, Non-Western Architecture, Urban Design[Boise] and, Environment and Behavior) (cr arr)
Arch 511	Native American Architecture (3 cr)
Arch 512	Identity and Place in Global Space (3 cr)

Arch 513	Architectural Theory: Modernism into Postmodernism (3 cr)
Arch 520	Architecture Research Methods (3 cr)
Arch 570	Natural Lighting (3 cr)
Arch 571	Building Performance Evaluation (3 cr)
Arch 572	Integrated Design Seminar (1 cr, max 4)
Arch 573	Daylight Design and Simulation (3 cr)
Arch 574	Building Performance Simulation for Integrated Design (3 cr)
Arch 580	British Green Architecture (2 cr)
Arch 581	Eco Urban Design (3 cr)
Arch 582	Housing Typologies and Issues (3 cr)
Arch 583	Sustainable Development (3 cr)
Arch 584	Urban Design and Morphology (3 cr)

Equivalents must be approved by the graduate program coordinator. Graduate students without an undergraduate architecture degree may also earn an accredited M.Arch. degree. Those students are placed in the program according to their academic qualifications, and depending on the background of the transfer student, up to six years of study may be required to complete the degree requirements. Candidates must fulfill the requirements of the College of Graduate Studies and the Architecture program. Master of Architecture degree requirements are listed above.

Master of Science, major in Integrated Architecture and Design. The Master of Science offers a research program open to candidates who hold a non-professional degree in any design discipline and/or a professional degree in architecture (B.S.Arch. or M.Arch.), B.S.Arch., or other degree holders who desire to embark on a career in architectural consulting, research, and/or scholarship. The program is designed for independent study within one or more of the following areas of specialization: Visualization, Environment and Behavior, Urban Design, Community Design and Planning, Universal Design, Landscape Design, Media Design, and Sustainable Architecture and Planning. Graduate students work closely with their graduate committee to develop a detailed program of study that borrows from three disciplines within the College of Art and Architecture as well as studies with other programs throughout the university. Acceptance into the program is contingent on the Graduate Program Committee's review of the candidate's statement of intent describing the area of specialization in which the candidate will focus, three letters of recommendation, and a portfolio. The Graduate School requires a completed application, university transcripts, a resume, and an official TOEFL score, when appropriate. Prospective students are encouraged to first correspond with the Chair of the Graduate Program about their interests. The chair will then direct the applicant to further sources if needed. The M.S. degree with a major in Integrated Architecture and Design requires the completion of 30 credits of course work in either a thesis or non-thesis (project-based) option.

Thesis option:

Arch 500 Master's Research and Thesis (8-10cr)
Arch 520 Architectural Research Methods (3 cr)
Graduate Seminars in three disciplines (Two disciplines from within the College of Art and Architecture and one discipline from outside the college) (12 cr)
Electives (5-7 cr)

Non-thesis option:

Graduate Studios (12 cr)
Graduate Seminars in three disciplines (Two disciplines from within the College of Art and Architecture and one discipline from outside the college) (12 cr)
Electives (6 cr)

Joint B.I.D. Interior Design & M.Arch. Program. Students who fulfill the requirements for the B.I.D. in interior design may apply for matriculation in the Master of Architecture program. Several architecture course requirements may be waived in lieu of interior design course work. This degree track may be completed in no less than seven years. Details are available from the Architecture program.

Art and Design Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and the Art and Design program. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Fine Arts. The Master of Fine Arts degree is a 60-credit degree designed for students wishing to prepare themselves for a career as a professional artist or art teacher at the college or university level.

The M.F.A. is the terminal degree in studio art and requires a thesis. The major portion of the student's thesis consists of a one-person exhibition of professional quality work supported by a written statement on the nature of the work. The statement includes an explanation of the evolution of the conceptual or theoretical basis for the work (including historical and contemporary examples and influences), and a discussion of the experiments, processes, and technical experiments that were used in the evolution of the work.

Areas of concentration are: painting, drawing, sculpture, ceramics, graphic design, printmaking, and interface design, or a direction may be developed that combines two or more of these areas. Students wishing to work in an area other than those listed above must clearly state their intention in their statement of goals or intent upon application for admission to the M.F.A. program.

A final oral examination is required (and may be supplemented with a written examination at the discretion of the graduate committee).

Master of Arts in Teaching – Major in Art. The Master of Arts in Teaching degree is a 30-credit degree designed for those students who are certified teachers wishing to strengthen their experience in studio art.

Of the 30-credit total, 20 credits must be in art courses and 9 in professional courses in education. At least 6 credits must be at the 500 level.

300- and 400-level courses in art may be counted towards the degree. M.A.T. students are encouraged to prepare themselves to take at least 6 credits, in 500-level art studio (Art 515, Art Faculty Studio), and to participate fully in graduate activities.

Areas of concentration are: painting, drawing, sculpture, ceramics, graphic design, printmaking, and interface design, or a direction may be developed that combines two or more of these areas. Students wishing to work in an area other than those listed above must clearly state their intention in their statement of goals or intent upon application for admission to the M.A.T. program. Students wishing to work in a studio in which they lack adequate preparation may be required to take deficiency courses as prerequisites.

A final oral examination is required (and may be supplemented with a written examination at the discretion of the graduate committee). The M.A.T. final examination may require a written statement as a basis for the oral examination. Such determination is at the discretion of the graduate committee

Landscape Architecture Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Landscape Architecture program. See the College of Graduate Studies section for the general requirements applicable to the degree.

Master of Landscape Architecture. Candidates must fulfill the requirements of the College of Graduate Studies and of the Landscape Architecture program including a 3.0 minimum GPA in order to be considered for admission to the Master of Landscape Architecture first professional degree program. See the College of Graduate Studies section for the general requirements applicable to the degree.

Eighteen of the 36 credits required for the MLA degree must be at the 500 level, including the following courses: LArc 554 Graduate Studio 1 (6 cr), LArc 556 Graduate Studio 2 (6 cr), LArc 558 Graduate Studio 3 (6 cr). The remaining courses required to complete credits for this degree may be 300, 400 or 500-level electives from programs across the university. (300 level electives from Landscape Architecture cannot be used as graduate electives.) (More required courses are listed below under both thesis and nonthesis options)

Students without an undergraduate degree in Landscape Architecture are required to pursue the Non-Thesis or Final Project Option:

Non-Thesis Option Requirements:

Requirements include

LArc 554	Graduate Studio 1 (6 cr)
LArc 556	Graduate Studio 2 (6 cr)
LArc 558	Graduate Studio 3 (6 cr)

Research Methods (various) (3 cr)
LArc 562 Graduate Studio 4 (6 cr)

Non-Thesis Elective courses include:
LArc 495 GIS Applications in Land Planning 2 (3 cr)

The Graduate Thesis Option

Students with an undergraduate degree in Landscape Architecture may pursue the Graduate Thesis Option Requirements include:
LArc 500 Graduate Thesis (7 cr maximum)

LArc 554 Graduate Studio (6 cr)
LArc 556 Graduate Studio (6 cr)
Research Methods (various (3 cr)

Graduate Thesis Elective courses:
LArc 495 GIS Applications In Land Planning 2 (3 cr)
LArc 562 Graduate Studio 4 (6 cr)

Program of Bioinformatics and Computational Biology

Eva Top, Program Director (258 Life Sciences South 83844-3051; phone 208-885-5015; bcb@uidaho.edu; www.uidaho.edu/cogs/bcb). Faculty: Celeste Brown, Brian Dennis, Larry Forney, James Foster, Frank Gao, Luke Harmon, Robert Heckendorn, Paul Hohenlohe, Paul Joyce, Alexander Karasev, Stephen Krone, Stephen Lee, Mark McGuire, Gordon Murdoch, Scott Nuismer, Matt Powell, Ron Robberecht, Barrie Robison, Terence Soule, Jack Sullivan, David Tank, Eva Top, Lisette Waits, Holly Wichman, Michelle Wiest, Christopher J. Williams, Marty Ytreberg.

Bioinformatics and computational biology are new disciplines emerging from the application of mathematics, statistics, and computer science. They explain the vast quantities of biological data that modern molecular techniques have made available. The advent of high throughput data acquisition in the biological sciences, an example of which is the recent completion of a draft of the entire human and mouse genomes, has created far more data than can be analyzed with current techniques. In order to understand and use these data to improve human health, natural and agricultural resource management, and to simply understand the natural world better–will require new techniques and tools. Moreover, industries dependent on that understanding, such as health, pharmaceuticals, agriculture, and forestry will require workers who understand this new knowledge. This is what the Bioinformatics and Computational Biology (BCB) degree program provides.

The University of Idaho offers M.S. and Ph.D. degrees in Bioinformatics and Computational Biology (BCB). The BCB program is offered on-campus in Moscow at the University of Idaho, and is administered by the College of Graduate Studies. A degree in BCB will require coursework and practical experience in biology, mathematics, statistics, and computer science. The focus of the degree will be on learning to develop and use computational and mathematical tools to analyze biological data.

BCB is a highly interdisciplinary program. It requires students and faculty to bridge biological, computational, and mathematical disciplines. BCB faculty members are drawn from nine departments from the Colleges of Agricultural and Life Sciences, Engineering, Natural Resources, and Science, and from the WWAMI program. . These faculty members are available to serve on BCB graduate student committees.

A graduate degree in Bioinformatics and Computational Biology from UI prepares a student for a lifetime of discovery. It enables the graduate to advance the state of the art, not merely to keep up with it. The graduate program develops the student's critical thinking, investigatory, and expository skills. He or she will acquire the methodological skills to resolve important open problems and tackle challenging new projects. The student will learn to present problems and solutions, both orally and in writing.

Graduate Committee and Theses

Both the M.S. and Ph.D. degrees require a thesis. Students will take research and thesis credits (BCB500) or research and dissertation credits (BCB 600). The M.S. degree will require at least nine credits of thesis research and the Ph.D. degree will require at least thirty credits. M.S. theses for a BCB degree will demonstrate a high level of scholarly achievement, and doctoral dissertations will represent a significant, original contribution to the field. In addition to the thesis and dissertation, students will publish their work in appropriate peer-reviewed venues. Students will present their thesis and dissertations publicly at their final defense.

Each student's graduate committee will consist of at least four faculty members. This committee will represent the three BCB disciplines (biological sciences, computer sciences, and mathematical sciences) and will include at least three participating BCB faculty members. Co-advising by major professors in different disciplines will be particularly attractive for BCB degrees, and is possible at the discretion of the student and his or her committee. There is no explicit requirement for an "external" committee member, since each committee will already includes faculty from at least three different disciplines.

There will be no qualifying examination. The Ph.D. will require a preliminary examination, which will be taken no later than the end of the fifth semester. The preliminary examination will have three components. First, it will include a written thesis proposal prepared in the format of a federal research grant, and submitted to the committee at least four weeks prior to the oral examination. Second, there will be a public, oral presentation of the research proposal. Third, the committee will conduct a non-public oral examination in which committee members will ask questions about the proposed research, and about background and core coursework.

Course and Credit Requirements

Incoming students admitted with background deficiencies will take background courses. For example, biology majors with little formal introduction to computation will take background courses in computer science. The specific required background courses will be determined by the students' graduate committees with the approval of the program director. Note that credits from courses numbered 300 and below do not count toward the BCB degree requirements, though they may be required to fulfill deficiencies.

The core courses form a central, shared educational experience for all BCB students. These courses will enable them to share a common language, and to discuss problems from multiple disciplinary points of view. This shared experience will also give BCB students a sense of identity and community, which will encourage them to help each other overcome cultural and terminological differences that usually make such interdisciplinary interactions challenging. When possible and appropriate, core courses will include group projects using team members with backgrounds in different disciplines.

The *depth* courses provide more detailed knowledge of bioinformatics and computational biology, and provide the springboard for graduate research. The list of courses will evolve with the research interests of the BCB faculty participants, and more will be added as new faculty members join the program. See the program webpage at www.uidaho.edu/cogs/bcb for the latest information.

Other courses may be required as determined by the student's committee.

To explicitly make it easier to bridge the traditional gap between disciplines, the BCB program includes four bridging activities:

Seminars and workshops: Seminar series are available, and BCB students are required to participate. Seminars are an opportunity for students to interact with experts in a variety of fields. Workshops will provide practical experience with tools and techniques.

- **Lab rotations:** In order to expose doctoral students to the research perspectives of another discipline, we will require them to spend at least one semester in a lab outside the discipline of their major professor. . The lab will be the research lab of one of the participating BCB faculty outside the discipline of the student's major professor. The student's committee will determine, in conjunction with participating faculty members, with whom the student will meet this requirement. There is no lab rotation requirement for M.S. students.
- **One Credit Supplements**: General courses in computer science, mathematics and statistics sometimes lack material specific to bioinformatics and computational biology. Participating faculty will offer one-credit supplements to current courses in order to provide this connection without duplicating courses in the current catalogue. These will be required of BCB students as determined by their graduate committees.
- **Teaching experience:** Each doctoral candidate will be required to have at least one semester of teaching experience relevant to the BCB program with the details of this requirement determined by his or her committee. This requirement may be satisfied, for example, by teaching a course, running a workshop, offering a supplement, or working as a teaching assistant.

The MS requires a minimum 32 credits and the Ph.D. requires a minimum 78 credits. The BCB program assumes the usual graduate full time load of at least 9 credits per semester. Note that the Ph.D. requires at least 18 credits of "other", supplemental, or workshop courses at the 400 level or above, since there are a total of 60 minimum required core, depth, thesis, seminar, and laboratory credits, and the student must have at least 78 credits to graduate. No more than 3 credits of workshop may apply to the degree, and credits for courses numbered below 400 cannot apply toward the degree. (These are general UI requirements.)

M.S. Degree

Background	As determined on admission
Core courses	9 credits
Depth courses	9 credits: 6 in one area and 3 in the other area
Seminar	2 credits
Lab rotation	None
Supplemental	As determined by thesis committee
Thesis	9 credits, minimum
Other	As determined by thesis committee
Total (min)	**32 Credits**

Ph.D. Degree

Background	As determined on admission
Core courses	9 credits
Depth courses	15 credits: 3 in each of the other two areas and 12 in additional depth courses
Seminar	3 credits
Lab rotation	3 credits, not in discipline of major professor
Supplemental	As determined by thesis committee
Dissertation	30 credits, minimum
Teaching Requirement	3 credits
Other	As determined by committee
Total (min)	**78 (see text)**

Admissions Requirements and Procedures

Admission to this program is highly competitive; meeting admission requirements is not a guarantee of admission. Students who wish to enter the master's or doctoral degree program must demonstrate mathematical maturity, skill in the use of high-level programming language and a basic knowledge of molecular biology. However, students lacking one of these may be admitted with the requirement that they make up the deficiency. At least a 3.0 undergraduate GPA if the student graduated within the last five years and a total Graduate Record Examination score of at least 1300+4 are the minimum admission requirements, though exceptions to GPA and GRE requirements may be made in exceptional circumstances. Students for whom English is a second language must have a TOEFL score of 600 (250 computer-based or 100 IBT) or higher. Applicants must provide at least three letters of reference, speaking to the applicant's aptitude for graduate research, and a statement of research interests that clearly identifies the research he or she would like to pursue and why they want to pursue it at the University of Idaho.

To apply: please go to the University of Idaho Graduate Admissions webpage at www.students.uidaho.edu/gradadmissions, or contact the graduate admissions office at: Graduate Admissions Office; University of Idaho; P.O. Box 444266; Moscow, ID 83844-4266.

Department of Biological and Agricultural Engineering

Thomas F. Hess, Interim Dept. Head (421 Engineering/Physics Bldg. 83844-0904; phone 208/885-6182; fax 208/885-7908; baengr@uidaho.edu; www.agls.uidaho.edu/bae). Faculty: Richard G. Allen, Jan Boll, Erin Brooks, Lide Chen, Brian He, Marvin Heimgartner, Thomas J. Karsky, Jack M. McHargue, W. Howard Neibling, Russell J. Qualls, Jae Ryu, Dev S. Shrestha, Robert W. Smith, Barbara C. Williams, Jon Van Gerpen.

The **departmental mission** is teaching, research, and extension to produce sustainable solutions for engineering and technological management problems in agriculture, environment, biotechnology, and natural resources through application and integration of the biological, chemical and physical sciences. The department's teaching program includes degree programs in Biological and Agricultural Engineering, which are offered through the College of Engineering, and in Agricultural and Life Sciences – Agricultural Systems Management, offered through the College of Agricultural and Life Sciences. The graduate program in biological and agricultural engineering is offered through the College of Graduate Studies. The educational objectives for the B.S. degree in Biological and Agricultural Engineering are:

1. Learn and Integrate: Graduates will be proficient engineering problem solvers capable of identifying, formulating, and solving engineering problems by applying their knowledge of mathematics, engineering, and appropriate biological, chemical, natural resources and/or agricultural topics.
2. Think and create: Graduates will be effective engineers who can apply their skills to design systems, components, and processes to solve engineering problems for an ever-changing world.
3. Communicate: Graduates will be effective written and verbal communicators, and productive team members.
4. Clarify purpose and perspective: Graduates will have a strong professional identity with a keen awareness of their professional and ethical responsibility, and practice lifelong learning.
5. Practice Citizenship: Graduates will design for advancement and sustainability of their local, national and global communities protecting human health and safety, and practicing environmental stewardship.

The Biological and Agricultural Engineering curriculum is accredited by the Engineering Accreditation Commission of ABET 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, ph. 410-347-7700. Students in this program are eligible to take the Fundamentals of Engineering (FE) Examination prior to graduation and to become registered professional engineers after graduating and completing an experience requirement.

The five engineering options in the Biological and Agricultural Engineering program provide each student the opportunity to pursue a course of study suited to a particular professional engineering career goal.

Agricultural Engineering is the curriculum that bridges between two fields of applied science – engineering and agriculture. It is oriented to the design and control of equipment and systems for production, processing, and transportation of food, feed, natural raw fiber, and forest products and for the effective use of natural resources. Agricultural engineers have the education and interests that make them uniquely capable of developing engineering solutions for agricultural and biological systems.

The agricultural engineering program at the UI is designed to prepare students for a variety of interesting and rewarding careers. Many graduates are employed as design or development engineers by equipment manufacturers, irrigation companies, trade associations, engineering consulting firms, and governmental agencies. Others are self-employed in farm equipment manufacturing, consulting firms, and other engineering-related enterprises.

Bioenergy Engineering prepares students for careers within traditional food processing industries and for emerging careers in bioprocess industries including bioenergy and biofuels such as the ethanol and biodiesel industries. The program is designed to develop engineering expertise in the area of applied biotechnology in such areas as waste treatment, biomass to energy production, industrial biological processes and/or molecular biology as related to engineered applications of biotechnology. The goal is the application of the science to real-world problems through more engineering input.

Graduates are prepared for work with private industry, consulting firms, state and federal agencies on projects related to bioprocess development, energy conservation, testing, evaluation and application of new food, industrial and fuel projects.

BAE has an internationally recognized program in biofuels, especially biodiesel. Faculty play a significant role in biofuel development and demonstration and cooperates regularly with the University of Idaho National Institute for Advanced Transportation Technology. The Food and Bioprocessing program works cooperatively with the Food Science and Toxicology programs at both the University of Idaho and Washington State University.

Biological Systems Engineering is an undergraduate curriculum designed to prepare students to solve technological problems in systems that involve plants, animals, microorganisms, and biological materials. They produce creative and effective solutions to problems in the environment, our food supply, and the interaction of living organisms in a biologically complex, interconnected and changing world. The program can be designed to prepare the student for advanced biomedical or environmental engineering studies.

A broader emphasis in biology and chemistry is made within this curriculum compared to other engineering disciplines. Depending on their electives, graduates in biological systems engineering have opportunities to work with consulting and industrial firms in design, environmental control and monitoring, non-point source pollution abatement, bioremediation, hydrology and water quality control. They may also work with food processing industries in storage, product development and quality control. Other options include governmental agencies in water resources, environmental quality, and environmental protection. This program is often used as a pre-biomedical program to prepare students for graduate studies in the biomedical profession.

Ecohydrological Engineering is an undergraduate engineering program designed to prepare students to solve technological problems at the farm and watershed scale of practical importance to the western United States. Topics include soil and water engineering, water use, water conservation, watershed engineering, nonpoint source pollution, water quality, soil conservation, stream restoration, riparian buffer design, irrigation and drainage, water management, and soil-plant-water relationships.

The Department of Biological and Agricultural Engineering is a major player in the water issues facing the state of Idaho. Faculty are involved in the Snake River Plain aquifer issues including modeling efforts directed toward the Snake River Aquifer and water use issues. They are involved with research related to water management, irrigation, and crop water response. BAE has an internationally recognized program in remote sensing related to evapotranspiration and crop water response. They have programs related to nanoparticle transport and the mobility of small particles, especially the transport of constituents sorbed onto clay particles or humic acid molecules. The department conducts studies related to watershed management, and hydrologic modeling of small watersheds for erosion prediction. BAE is the home of the Idaho State Climatologist who also does research using remotely sensed surface temperature data and other phenomena related to water and energy exchange between the land surface and the atmosphere for use in weather and climate prediction.

Environmental Engineering focuses on the design and management of systems that use or impact natural resources. Study in this program prepares engineers to work in natural resource conservation and environmental quality enhancement. Environmental Engineers are uniquely prepared to address issues related to surface water hydrology, groundwater hydrology, sediment transport, water quality, chemical rate and transport determination, waste management, reclamation of disturbed lands, site remediation and drainage. Applications include water quality studies of lakes, rivers and groundwater, system design and management, waste treatment, management of air quality inside buildings and outside, remediation of land damaged by construction, mining, or other activity.

Graduates in environmental engineering work with state and federal agencies, consulting firms and private companies on projects related to environmental engineering design, permitting, waste management, pollution abatement, bioremediation, and hydrology. They may also be employed by processing industries in quality control, waste management, and in projects related to other environmental issues.

Agricultural Systems Management emphasizes the use and management of equipment and systems based on an understanding of their design and operation. Agricultural systems management courses are designed to provide students with experience in systems technology and analysis of agricultural equipment and machinery applications, feed and food processing, agricultural electrification, soil and water management, waste management, agricultural systems, and fabrication practices for agricultural and natural resource-based enterprises.

The undergraduate degree program in agricultural systems management (B.S.Ag.L.S.) is designed to prepare students to apply biological, physical, mechanical, and business knowledge to the production, service, sales, application, and management of the equipment and processes used in agriculture. The curriculum stresses courses in agriculture, agricultural systems management, and basic and applied sciences. It also includes a strong background in agricultural economics, accounting, and business. It prepares students for a variety of important and rewarding career opportunities. Many graduates return to farming, while others pursue careers as farm managers or are employed in agricultural and natural resource-oriented businesses, banking firms, educational institutions, or governmental agencies. This curriculum is recognized by the American Society of Agricultural Engineers. The educational objectives in Agricultural Systems Management are:

1. The graduate can communicate in writing and orally to clientele and the public about solutions to agricultural technology and management problems.
2. The graduate has mechanical skills needed to develop, construct, alter and repair agricultural equipment systems.
3. The graduate has knowledge in business, and in physical and biological sciences for application to system and technology development to creatively solve agricultural problems.
4. The graduate has computer skills that can be used in the analysis and development of agricultural systems.
5. The graduate has mathematical skills to quantify physical and biological processes in agriculture.
6. The graduate has a social science and humanities background to provide sensitivity for the concerns of society and appreciate different points of view.

The agricultural systems management courses are also available to nonmajors interested in obtaining an understanding of the technology used in modern agricultural production systems. A minor in agricultural systems management can be used to support degree programs in other departments.

Graduate study is offered in biological and agricultural engineering with specialization in irrigation, water and chemical management, hydrology, soil and water conservation, subsurface water and chemical transport modeling, and climate modeling; alternative fuels and lubricants; harvesting and handling food and bioproduct processing of agricultural crops; off-road vehicle development, instrumentation and control; equipment design and development; and bioremediation and organic waste management and treatment. The M.S. and Ph.D. degrees are primarily research degrees. Prospective students should have the equivalent of a B.S. degree in engineering and must have a working knowledge of computers including mainframe and microcomputers, structured programming, and electronic spreadsheets.

Assessment of departmental objectives is accomplished by monitoring performance of students on the Fundamentals of Engineering examination and by student interviews. All graduates are interviewed at the time of graduation by the department to evaluate concerns, opportunities, and effectiveness of its educational programs. The assessment statistics can be obtained from the departmental office.

Courses

See course description section for courses in Agricultural Systems Management (ASM) and Biological and Agricultural Engineering (BAE).

Biological and Agricultural Engineering Undergraduate Curricular Requirements

Agricultural Systems Management (B.S.Ag.L.S.)

Required course work includes the university requirements (see regulation J-3) and:

Agricultural and Life Science Core

AgEd 406	Exploring International Agriculture (3 cr)
Soil 205, Soil 206	The Soil Ecosystem and Lab (4 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (2-3cr):

ASM 305	GPS and Precision Agriculture (3 cr)
ASM 412	Agricultural Safety and Health (2 cr)
PlSc 207	Introduction to Biotechnology (3 cr)

One of the following (4cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3-4cr):

Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 207	Persuasive Writing (3 cr)
Engl 313	Business Writing (3cr)
Engl 316	Environmental Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3-4cr):

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Agricultural Systems Management Courses

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
AgEc 278	Farm and Agribusiness Management (4 cr)
AgEc 289	Agricultural Markets and Prices (3 cr)
AgEc 356	Agricultural and Rural Policy (3 cr)
ASM 107	Beginning Welding (2 cr)
ASM 112	Introduction to Agricultural Systems Management (3 cr)
ASM 200	Seminar (1 cr)
ASM 202	Agricultural Shop Practices (2 cr)
ASM 305	GPS and Precision Agriculture (3 cr)
ASM 315	Irrigation Systems and Water Management (3 cr)
ASM 331	Electric Power Systems for Agriculture (3 cr)
ASM 409	Agricultural Tractors, Power Units and Machinery Man-

agement (4 cr)
ASM 412 Agricultural Safety and Health (2 cr)
ASM 433 Agricultural Processing Systems (3 cr)
BAE 491 Senior Seminar (1 cr)
Biol 102 Biology and Society (3 cr)
Bus 101 Introduction to Business Enterprises (3 cr)
Bus 190 Integrated Business and Value Creation (3 cr)
BLaw 265 Legal Environment of Business (3 cr)
Econ 202 Principles of Microeconomics (3 cr)
PlSc 102 The Science of Plants in Agriculture (3 cr)
Agricultural and Technical Electives (13 cr)
Life Science Elective (3 cr)

One of the following (2-3 cr):
Engr 105 Engineering Graphics (2 cr)
CTE 267 Computer Aided Drafting/Design (3 cr)

One of the following (4 cr):
Phys 100, Phys 100L Fundamentals of Physics and Lab (4 cr)
Phys 111, Phys 111L General Physics I and Lab (4 cr)
Phys 211, Phys 211L Engineering Physics I and Lab (4 cr)

Three credits from the following (3 cr):
AgEc 411 The World of International Agribusiness (1 cr)
AgEc 413 Management of Human Resources in Agribusiness Firms (1 cr)
AgEc 415 Entrepreneurial Skills in Agribusiness Management (1 cr)
AgEc 418 Developing Negotiation Skills in Agribusiness (1 cr)
AgEc 419 Development and Analysis of Enterprise Budgets (1 cr)
Courses to total 128 credits for this degree

Biological and Agricultural Engineering (B.S.B.A.E.)

Required course work includes the university requirements (see regulation J-3) and:

BAE 142 Engineering for Living Systems (2 cr)
BAE 242 Engineering Analysis and Design (2 cr)
BAE 441 Instrumentation and Measurements (3 cr)
BAE 478 Engineering Design I (3 cr)
BAE 479 Engineering Design II (3 cr)
BAE 491 Senior Seminar (1 cr)
Biol 115 Cells and the Evolution of Life (4 cr)
Chem 111 Principles of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
Engr 105 Engineering Graphics (2 cr)
Engr 210 Engineering Statics (3 cr)
Engr 240 Introduction to Electrical Circuits (3 cr)
Engr 320 Engineering Thermodynamics and Heat Transfer (3 cr)
Engr 335 Engineering Fluid Mechanics (3 cr)
Engr 350 Engineering Mechanics of Material (3 cr)
Engr 360 Engineering Economy (2 cr)
Math 170 Analytic Geometry and Calculus I (4 cr)
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 275 Analytic Geometry and Calculus III (3 cr)
Math 310 Ordinary Differential Equations (3 cr)
Phys 211, Phys 211L Engineering Physics I and Lab (4 cr)
Phys 212 Engineering Physics II (3 cr)
Stat 301 Probability and Statistics (3 cr)

And one of the following options:

A. Agricultural Engineering Option
BAE 355 Fundamentals of Hydrologic Engineering (3 cr)
BAE 459 Irrigation System Design (3 cr)
BAE 461 Bioprocess Engineering (3 cr)
BAE 462 Electric Power and Controls (3 cr)
CE 211 Engineering Surveying (3 cr)
CE 322 Hydraulics (3 cr)
CE 342 Theory of Structures (3 cr)
Engr 220 Engineering Dynamics (3 cr)
Soil 205 The Soil Ecosystem (3 cr)
Technical Electives (9 cr)
Courses to total 128 credits for this degree

B. Biological Systems Engineering Option
BAE 461 Bioprocess Engineering (3 cr)
BAE 462 Electric Power and Controls (3 cr)
Biol 250, Biol 255 General Microbiology and Lab (5 cr)
Biol 380 Biochemistry I (4 cr)
Chem 277 Organic Chemistry I (3 cr)
Chem 278 Organic Chemistry I: Lab (1 cr)
Biological Science Electives (3 cr)
Technical Electives (15 cr)
Courses to total 128 credits for this degree

C. Environmental Engineering Option
BAE 355 Fundamentals of Hydrologic Engineering (3 cr)
BAE 461 Bioprocess Engineering (3 cr)
BAE 462 Electric Power and Controls (3 cr)
Biol 250, Biol 255 General Microbiology and Lab (5 cr)
Biol 380 Biochemistry I (4 cr)
Chem 277 Organic Chemistry I (3 cr)
Chem 278 Organic Chemistry I: Lab (1 cr)
CE 330 Fundamentals of Environmental Engineering (3 cr)
Soil 205 The Soil Ecosystem (3 cr)
Technical Electives (9 cr)
Courses to total 128 credits for this degree

D. Bioenergy Engineering Option
BAE 461 Bioprocess Engineering (3 cr)
BAE 462 Electric Power and Controls (3 cr)
BAE 485 Fundamentals of Bioenergy and Bioproducts (3 cr)
BAE 492 Biofuels (3 cr)
BAE 494 Thermochemical Technologies for Biomass Conversion (3 cr)
Biol 250, Biol 255 General Microbiology and Lab (5 cr)
Biol 380 Biochemistry I (4 cr)
Chem 277 Organic Chemistry I (3 cr)
Chem 278 Organic Chemistry I: Lab (1 cr)
Science Elective (3 cr)
Technical Electives (6 cr)
Courses to total 128 credits for this degree

E. Eco-Hydrological Engineering Option
BAE 355 Fundamentals of Hydrologic Engineering (3 cr)
BAE 451 Engineering Hydrology (3 cr)
BAE 452 Environmental Water Quality (3 cr)
BAE 458 Open Channel Hydraulics (3 cr)
CE 211 Engineering Surveying (3 cr)
CE 322 Hydraulics (3 cr)
Engr 220 Engineering Dynamics (3 cr)
Soil 205 The Soil Ecosystem (3 cr)
Technical Electives (11 cr)

One of the following (3 cr):
CS 112 Introduction to Problem Solving and Programming (3 cr)
CS 130 Programming with Visual Basic (3 cr)
Courses to total 128 credits for this degree

A grade of C or better is required in each of the following courses before registration is permitted in upper-division engineering courses: BAE 242, Chem 111, Engr 210, Math 275, and Phys 211.

To graduate in this program, a grade of C or better is required in each of the following courses: BAE 242, Chem 111, Engr 210, Math 275, and Phys 211.

Students are required to submit a course plan and a statement of how the humanistic and social course requirements complement the technical content of the curriculum and are consistent with the program and institution objectives.

Biological and Agricultural Engineering Academic Minor Requirements

Agricultural Systems Management Minor

ASM 202 Agricultural Shop Practices (2 cr)
ASM 305 GPS and Precision Agriculture (3 cr)
ASM 315 Irrigation Systems and Water Management (3 cr)
ASM 409 Agricultural Tractors, Power Units and Machinery Management (4 cr)
ASM 412 Agricultural Safety and Health (2 cr)

At least four credits from the following skill courses:
ASM 107 Beginning Welding (2 cr)

ASM 112	Introduction to Agricultural Systems Management (3 cr)
ASM 210	Small Engines (2 cr)
CTE 267	Computer Aided Drafting/Design (3 cr)

Courses to total 20 credits for this minor

The minimum number of credits for a minor in agricultural systems management courses is 20.

Biological and Agricultural Engineering Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Biological and Agricultural Engineering. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. General M.S. requirements apply. Study and research programs are available in all of the areas listed above.

Master of Engineering. General M.Engr. requirements apply.

Doctor of Philosophy. Admission to this program is based on the student's interest being compatible with faculty interest, funds, and facilities. Admission is given only after a thorough review of the student's academic background, research interests, and potential. Individual programs normally consist of three years' work beyond the bachelor's degree. The department does not have a mandatory foreign language requirement. Students are required, however, to broaden their education in an area outside the normal engineering and science curricula. This can be done by taking courses in the humanities and social sciences, demonstrating an in-depth proficiency in a foreign language, or participating in an equivalent broadening educational experience.

Department of Biological Sciences

James J. Nagler, Dept. Chair (252 Life Sc. Bldg. 83844-3051; phone 208/885-6280; www.uidaho.edu/sci/biology). Faculty: Onesmo B. Balemba, John A. Byers, Joseph G. Cloud, Douglas G. Cole, Stacey J. Dunn, Martina Ederer, Larry J. Forney, Elizabeth (Lee) Fortunato, James A. Foster, Peter G. Fuerst, Lisa Harmon, Luke J. Harmon, Patricia L. Hartzell, Candi Heimgartner, Paul A. Hohenlohe, Jill L. Johnson, Christopher J. Marx, Craig P. McGowan, Tanya A. Miura, James J. Nagler, Scott L. Nuismer, Christine E. Parent, Barrie D. Robison, Deborah L. Stenkamp, John M. (Jack) Sullivan, David C. Tank, Eva M. Top, Holly A. Wichman. Research Faculty: Celeste J. Brown, Craig Miller. Lab Coordinator: Jean Norris. Lab Instructor: Tim Steffens. Coordinator of Advising: Pat McCarroll. Adjunct Faculty: James J. Bull, Henry A. Charlier, Jennifer R. Chase, Michael W. Doebeli, Sara J. Heggland, Patricia Heglund, Cheryl L. Jorcyk, Peter L. Meserve, Nils O. Pellmyr, Andrew Pierce, Erica B. Rosenblum, R. Francis Rosenzweig, Irvin R. Schultz, Christopher I. Smith, Ronald W. Strohmeyer, William P. Young. Affiliate Faculty: Patrick J. Hrdlicka, Brian Kennedy.

The Department of Biological Sciences offers B.S. degrees in Biochemistry, Biology (B.A. & B.S.), Microbiology, and Molecular Biology and Biotechnology. The core curriculum, used for every major, involves exposure to concepts fundamental to all living things at several levels of organization and emphasizes a broad cultural base and specific training in biology, chemistry, mathematics, and physics. A diverse range of upper division electives are available in natural history, anatomy/physiology, molecular/cellular/developmental biology, or quantitative/integrative biology. Courses offered by the Department of Biological Sciences are available to students majoring in other disciplines, who wish to increase their knowledge of science, or who wish to obtain an academic minor.

Well-equipped laboratories are available and students are encouraged to undertake research projects with the faculty. A wide variety of ongoing projects have produced a stimulating environment for graduate and undergraduate research. These projects include areas such as: pathophysiology of diseases that affect gastrointestinal functions; gene regulation changes in response to selection and the evolution of disordered proteins; behavioral development, play, sexual selection and female mate choice; intraflagellar transport; the diversity and distribution of prokaryotes; mechanisms behind morbidity and mortality in infants congenitally infected with human cytomegalovirus; characterizing evolutionarily permissible ecological structures in microbial ecosystems and on developing bioinformatics for very large sequence datasets; molecular cues that promote development of the nervous system; patterns of species diversification across the tree of life; prokaryote motility system; the genomic architecture of evolving populations; protein structure and function; neuromuscular biomechanics of vertebrate organisms; models of adaptive evolution and experimental evolution in viruses; regulation of the immune response to coronavirus infection in the lung; effect of environmental factors on fish reproductive biology; cellular and molecular mechanisms of vertebrate retinal development and regeneration; phylogenetic methodology and comparative phylogeography; the ecology and evolution of prokaryotic organisms; adaptive evolution and mammalian genome evolution.

For more complete information on research concentrations, please see faculty profiles on the departmental web site at www.uidaho.edu/sci/biology/.

Graduates from the department enter a variety of fields and many continue their education toward an advanced degree. Recent graduates have entered health-related professions, primary and secondary teaching, agribusiness, veterinary school, graduate school, law school, state and national agencies that deal with biology (e.g., Idaho Department of Fish and Game, Environmental Protection Agency, United States Forest Service), as well as a variety of environmental consulting agencies and biotechnology companies.

Prospective students, or students desiring more information, may write, call (208-885-6329) or email the department (biosci@uidaho.edu).

Courses

See course description section for courses in Biology (Biol), and in Microbiology, Molecular Biology and Biochemistry (MMBB).

Biological Sciences Undergraduate Curricular Requirements

Biology (B.A. or B.S.)

To graduate in this program, students must earn a minimum grade of C in Biol 115 and Biol 116 and must have a minimum gpa of 2.40 in Biol 115, Biol 116, Biol 213, Biol 310, and Biol 312,.

Required course work includes the university requirements (see regulation J-3), and the following major requirements (electives to be chosen in consultation with the departmental advisor).

Biol 101	Perspectives in Biology (1 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms & Environments (4 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Biol 310, Biol 315	Genetics and Lab (4 cr)
Biol 312	Molecular and Cellular Biology (3 cr)
Biol 313	Molecular and Cellular Laboratory (1 cr)
Biol 314	Ecology and Population Biology (4 cr)
Biol 421	Advanced Evolutionary Biology (3 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)
Phys 112, Phys 112L	General Physics II and Lab (4 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (2 cr):

Biol 405	Practicum in Anatomy Laboratory Teaching (2 cr)
Biol 407	Practicum in Biology Laboratory Teaching (2 cr)
Biol 408	Practicum in Human Physiology Laboratory Teaching (2 cr)
Biol 411	Senior Capstone (2 cr)
Biol 495	Research in Molec/Cell/Dev Biology (2 cr)
Biol 496	Research in Ecology and Evolution (2 cr)
Biol 497	Research in Anatomy and Physiology (2 cr)

One of the following (4 cr):

Chem 275, Chem 276	Carbon Compounds and Lab (4 cr)
Chem 277, Chem 278	Organic Chemistry and Lab (4 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

One of the following (3-4 cr):

Biol 300	Survey of Biochemistry (3 cr)
Biol 380	Biochemistry I (4 cr)

NOTE: Students considering graduate school in biology are strongly encouraged to take Math 170, Chem 277/278, and Biol 380.

9 credits of approved electives from the following list are required (categories are intended only as a guide for student and advisor use). Additional classes can be substituted with prior approval of adviser and chairperson.

Natural History

Biol 478	Animal Behavior (3 cr)
Biol 481	Ichthyology (4 cr)
Biol 483	Mammalogy (3 cr)
Biol 489	Herpetology (4 cr)
REM 341	Systematic Botany (3 cr)
WLF 482	Ornithology (4 cr)

Anatomy/Physiology

Biol 324	Comparative Vertebrate Anatomy (4 cr)
Biol 423	Comparative Vertebrate Physiology (3 cr)
Biol 428	Microscopic Anatomy (4 cr)
MMBB 460	Microbial Physiology (3 cr)
PlSc 415	Plant Pathology (3 cr)

Quantitative/Integrative Biology

Biol 425	ST: Experimental Field Ecology (3 cr)
Biol 448	Plant-Animal Interactions (3 cr)
Biol 456	Computer Skills for Biologists (3 cr)
Ent 441	Insect Ecology (3 cr)
Math 437	Mathematical Biology (3 cr)
MMBB 425	Microbial Ecology (3 cr)
WLF 440	Conservation Biology (3 cr)
WLF 448	Fish and Wildlife Population Ecology (4 cr)

Molecular/Cellular/Developmental (MCD) Biology

Biol 444	Genomics (3 cr)
Biol 461	Neurobiology (3 cr)
Biol 474	Principles of Developmental Biology (3 cr)
Chem 414	Applications of Nanomaterials in Biomolecular Engineering (3 cr)
MMBB 409	Immunology (3 cr)
MMBB 440	Advanced Lab Techniques (4 cr)
MMBB 475	Cell Biology (3 cr)
MMBB 488	Genetic Engineering (3 cr)

In addition to the above electives, Biology majors are encouraged to enroll in at least 3 credits of coursework that emphasizes social, political or philosophical aspects of biology. A list of suggested courses will be provided by the student's advisor and is available on the department's website.

Biology B.A. students must also complete:

6 credits (two courses) in the humanities in addition to the minimum university-wide general education requirement of 14 credits in the humanities/social sciences*

3 credits (one course)in the social sciences in addition to the minimum university-wide general education requirement of 14 credits in the humanities/social sciences*

Foreign Languages 0-16 credits (zero-four courses) competence in one foreign language equivalent to that gained by the completion of four semesters of college courses through the intermediate level. This requirement may be satisfied by the completion of either of the following options (1) 16 credits or four high-school units in one foreign language, or (2) 12 credits in one foreign language, and one three-credit course in literature translated from the same language. The 12 credits may be satisfied by three high-school units in one foreign language.

**Courses satisfying the humanities requirement are those dealing with the arts, literature, and philosophy. Courses satisfying the social science requirement are those courses dealing with a person's social condition including social relations, institutions, history, and participation in an organized community. Refer to online degree audit system through Web registration system or your academic advisor for a listing of appropriate courses.*

Biology B.S. students must also complete:

3 credits (one course) in the humanities in addition to the minimum university-wide general education requirement of 14 credits in the humanities/social sciences*

3 credits (one course) in the social sciences in addition to the minimum university-wide general education requirement of 14 credits in the humanities/social sciences*

**Courses satisfying the requirement are those dealing with the arts, literature, and philosophy. Courses satisfying the social sciences requirement are those courses dealing with a person's social condition including social relations, institutions, history, and participation in an organized community. Refer to online degree audit system through Web registration system or your academic advisor for a listing of appropriate courses.*

A student may substitute for these requirements the successful completion of an academic minor or an area of emphasis of at least 18 credits approved by the Biological Sciences Department.

Courses to total 120 credits for this degree

Pre-Medical and Pre-Dental Studies

Admission to schools of medicine or dentistry involves satisfactorily completing prerequisite course work, obtaining a sufficiently high score on the Medical College Admission Test (MCAT) or Dental Admission Test (DAT), completing clinical and volunteer experiences, submitting formal applications, and having a successful interview. The allied health advisor assists students in all areas of the academic preparation and application process.

Students should carefully review information on the UI pre-med and pre-dental web sites and contact the pre-health advisor.

Pre-Nursing Studies

Admission to a school of nursing involves meeting satisfactorily its entrance requirements, acceptable scholastic records or a satisfactory score on the nursing admission test, and possession of personal qualifications essential for effective nursing. Nursing schools differ in their prerequisites. Students should investigate the requirements of their school of choice.

The following two-year program is suggested for students who plan to transfer to a school of nursing.

Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
Chem 275, Chem 276	Carbon Compounds and Lab (4 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
Psyc 101	Introduction to Psychology (3 cr)
Soc 101	Introduction to Sociology (3 cr)
Stat 251	Statistical Methods (3 cr)

Humanities and social sciences electives (at least 6 cr in each field) (21 cr)
Communications electives (3 cr must be in written communication) (6 cr)
Electives (2 cr)

One of the following (4 cr):

Chem 101	Introduction to Chem I (4 cr)
Chem 111	Principles of Chem I (4 cr)

One of the following (4 cr):

Biol 250	General Microbiology (3 cr)
MMBB 154	Intro Biology of Bacteria and Viruses (3 cr)

NOTE: Pre-nursing students are strongly encouraged to take Math 143.

Pre-Physical Therapy Studies

Admission to schools of physical therapy (typically doctoral programs) involves satisfactorily completing prerequisite course work, completing clinical and volunteer experiences, and submitting formal applications. The allied health advisor assists students in all areas of the academic preparation and application process. Students should review information on the UI pre-physical therapy web site and contact the pre-health advisor.

Biochemistry (B.S.Biochem.)

Required course work includes the university requirements (see regulation J-3) and:

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 380, Biol 382	Biochemistry I and Lab (6 cr)
Biol 454	Biochemistry II (3 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277	Organic Chemistry I (3 cr)

Chem 278	Organic Chemistry I: Lab (1 cr)
Chem 305	Physical Chemistry (3 cr)
Chem 306	Physical Chemistry (3 cr)
Chem 372	Organic Chemistry II (3 cr)
Chem 374	Organic Chemistry II: Lab (1 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
MMBB 400	Seminar (1cr)
Phys 211	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (4 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3-4 cr):

Biol 310, Biol 315	Genetics and Lab (4 cr)
Gene 314	General Genetics (3 cr)

Select two of the following (5-6 cr):

Biol 444	Genomics (3 cr)
Chem 472	Rational Design of Pharmaceuticals (3 cr)
Chem 473	Intermediate Organic Chemistry (3 cr)
MMBB 409	Immunology (3 cr)
MMBB 482	Protein Structure and Function (3 cr)
MMBB 485	Prokaryotic Molecular Biology (3 cr)
MMBB 486	Plant Biochemistry (3 cr)
MMBB 487	Eukaryotic Molecular Genetics (3 cr)
MMBB 488	Genetic Engineering (3 cr)

Courses to total 120 credits for this degree

Microbiology (B.S.Microbiol.)

Required course work includes the university requirements (see regulation J-3) and:

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Chem 372	Organic Chemistry II (3 cr)
Gene 314	General Genetics (3 cr)
MMBB 154	Introductory Microbiology (3 cr)
MMBB 400	Seminar (1 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr):

Biol 310, Biol 315	Genetics and Lab (4 cr)
Biol 380	Biochemistry I (4 cr)

One of the following (3 cr):

Engl 207	Persuasive Writing (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

One of the following (4 cr):

MMBB 401	Undergraduate Research (4 cr in one semester)
MMBB 440	Advanced Laboratory Techniques (4 cr)

One of the following (4 cr):

Phys 111, Phys 111L	General Physics I and Lab (4 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)

One of the following (4 cr):

Phys 112, Phys 112L	General Physics II and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)

At least two of the following microbiology electives (6 cr):

MMBB 409	Immunology (3 cr)
MMBB 412	Pathogenic Microbiology (3 cr)
MMBB 432	Virology (3 cr)
MMBB 460	Microbial Physiology (3 cr)
MMBB 463	Molecular Parasitology (3 cr)

At least two of the following molecular biology electives (5-6cr):

MMBB 422	Cellular and Molecular Basis of Disease (3 cr)
MMBB 475	Cell Biology (3 cr)
MMBB 485	Prokaryotic Molecular Biology (3 cr)
MMBB 487	Eukaryotic Molecular Genetics (3 cr)
MMBB 488	Genetic Engineering (3 cr)

Science Electives (6 cr)

Courses to total 120 credits for this degree

Note for double majors in Molecular Biology and Microbiology: Elective courses that count toward one degree cannot be counted as a science elective in the second degree.

Molecular Biology and Biotechnology (B.S.M.B.B.)

Required course work includes the university requirements (see regulation J-3) and:

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Biol 380, Biol 382	Biochemistry I and Lab (6 cr)
Biol 454	Biochemistry II (3 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Chem 372	Organic Chemistry II (3 cr)
MMBB 400	Seminar (1cr)
MMBB 488	Genetic Engineering (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3-4 cr):

Biol 310, Biol 315	Genetics and Lab (4 cr)
Gene 314	General Genetics (3 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

One of the following (3 cr):

MMBB 485	Prokaryotic Molecular Biology (3 cr)
MMBB 487	Eukaryotic Molecular Genetics (3 cr)

One of the following (4 cr):

Phys 111, Phys 111L	General Physics I (4 cr)
Phys 211, Phys 211L	Engineering Physics I (4 cr)

One of the following (4 cr):

Phys 112, Phys 112L	General Physics II (4 cr)
Phys 212, Phys 212L	Engineering Physics II (4 cr)

One of the following (4 cr):

MMBB 401	Undergraduate Research (4 cr)
MMBB 440	Advanced Laboratory Techniques (4 cr)
MMBB 499	Directed Study (4 cr)

Select two of the following (5-6 cr):

Biol 444	Genomics (3 cr)
MMBB 409	Immunology (3 cr)
MMBB 412	Pathogenic Microbiology (3 cr)
MMBB 422	Cellular and Molecular Basis of Disease (3 cr)
MMBB 432	Virology (3 cr)
MMBB 475	Cell Biology (3 cr)
MMBB 485	Prokaryotic Molecular Biology (3 cr)*
MMBB 487	Eukaryotic Molecular Genetics (3 cr)*

Courses to total 120 credits for this degree

Note: Either MMBB 485 or MMBB 487 may be used as an elective if not taken above as a required course.

Biological Sciences Academic Minor Requirements

Bioethics Minor

See the Department of Philosophy section for details on this minor.

Biology Minor

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms & Environments (4 cr)
Biol 213	Principles of Biological Structure and Functions (4 cr)
Biol 310, Biol 315	Genetics and Lab (4 cr)
Biol 312	Molecular and Cellular Biology (3 cr)
Biol 313	Molecular and Cellular Laboratory (1 cr)
Biol 314	Ecology and Population Biology (4 cr)

Courses to total 20 credits for this minor

Biochemistry Minor

Biol 380	Biochemistry I (4 cr)
Biol 454	Biochemistry II (3 cr)

Courses selected from the following (12 cr):

Biol 382	Biochemistry I Laboratory (2 cr)
Chem 302, Chem 303	Principles of Physical Chemistry and Lab (or equiv) (4 cr)
MMBB 400	Seminar (2 cr)
MMBB 401	Undergrad Research (1-4 cr)

Courses to total 20 credits for this minor

Microbiology Minor

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Biol 380	Biochemistry I (4 cr)

Three courses selected from the following (8-10 cr):

MMBB 409	Immunology (3 cr)
MMBB 412	Pathogenic Microbiology (3 cr)
MMBB 425	Microbial Ecology (3 cr)
MMBB 440	Advanced Laboratory Techniques (4 cr)
MMBB 460	Microbial Physiology (3 cr)
MMBB 485	Prokaryotic Molecular Biology (3 cr)
MMBB 487	Eukaryotic Molecular Genetics (3 cr)
MMBB 488	Genetic Engineering (3 cr)

Courses to total 20 credits for this minor

Molecular Biology and Biochemistry Minor

Biol 380	Biochemistry I (4 cr)
Biol 454	Biochemistry II (3 cr)

One of the following (3 cr):

Chem 302	Principles of Physical Chemistry (3 cr)
Chem 305	Physical Chemistry (3 cr)
Chem 306	Physical Chemistry (3 cr)

Three courses from the following (10 cr):

Biol 382	Biochemistry I Laboratory (2 cr)
MMBB 460	Microbial Physiology (3 cr)
MMBB 475	Cell Biology (3 cr)
MMBB 482	Protein Structure and Function (3 cr)
MMBB 487	Eukaryotic Molecular Genetics (3 cr)
MMBB 488	Genetic Engineering (3 cr)

Courses to total 20 credits for this minor

Biological Sciences Graduate Academic Certificates Requirements

Reproductive Biology Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate. This Academic Certificate is intended for Graduate students currently enrolled at the University of Idaho. Please contact the Department of Biological Sciences if you are interested in pursuing this program.

AVS 452	Physiology of Reproduction (4 cr)
Biol 551	Seminar on Reproductive Biology (1 cr)
Biol 553	Ethical Issues in Biological Research (1 cr)

Electives (6-7 cr):

AVS 222	Animal Reproduction and Breeding (3 cr)
AVS 451	Endocrine Physiology (3 cr)
Biol 474	Principles of Developmental Biology (3 cr)
Biol 558	Reproductive Biology of Fishes (2 cr)

Courses to total 12 credits for this certificate

Biological Sciences Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Biological Sciences. See the College of Graduate Studies section for the general requirements applicable to each degree and the Department of Biological Sciences Graduate Student Handbook for required courses and procedures.

Master of Science, Major in Biology or Microbiology, Molecular Biology and Biochemistry. The M.S. program emphasizes research including, but not limited to the departmental and multidisciplinary areas described above. IAdmission is based upon the compatibility of the student's research interests with the areas of concentration offered by the department and the availability of a faculty member to be the student's mentor. An incoming student arranges a formal graduate program of at least 30 semester hours in consultation with his or her major professor and graduate committee. A laboratory research based thesis is required.

Master of Science, Major in Microbiology, Molecular Biology and Biochemistry (non-thesis option). This degree option has the same course credit requirements as the Master of Science thesis option except that students pursuing the non-thesis option enroll in MMBB 599 Non-thesis Master's Research rather than MMBB 500 Master's Research and Thesis. Instead of a laboratory research-based thesis the student must submit a final report on a suitable subject that that has been approved by the student's advisor and the Department Chair. The report should be prepared in the format of a publishable review article.

Doctor of Philosophy, Major in Biology or Microbiology, Molecular Biology, and Biochemistry. The Ph.D. program emphasizes research including, but not limited to the departmental and multidisciplinary area described above. Admission is based upon the compatibility of the student's research interests with the areas of concentration offered by the department, and the availability of a faculty member to be the student's mentor. A doctoral student develops a graduate program of at least 78 semester hours in consultation with his or her major professor and graduate committee. A laboratory research based thesis is required.

Program in Bioregional Planning and Community Design

Stephen R. Drown, Director (207 Art and Architecture Building 83844-2481; phone 208/885-7448; FAX 208/885-9428; bioregionalplanning@uidaho.edu; www.bioregionalplanning.uidaho.edu). Faculty: Gary Austin, Tim Frazier Mark Hoversten, Tammi Laninga, Mike Lowry, Jerrold Long, Sherry McKibben, David Paul, Sandra Pinel, Nick Sanyal, Manoj Shrestha, Philip Watson.

The Master of Science in Bioregional Planning and Community Design (BIOP) is an interdisciplinary, professional degree designed to prepare future leaders for roles in planning within both the public and private sectors and from local to international organizations. The BIOP program is distinguished from other planning programs around North America in three ways: 1) it represents a university-wide, interdisciplinary approach to planning involving eight UI colleges and nine academic departments; 2) it fully integrates education and research with community outreach; and 3) it supports, promotes and advances bioregional approach to planning that focuses on sustainable development, sustainable efficient conservation planning and management, and sustainable human quality-of-life within and across bioregions. Students have a unique opportunity to integrate sustainable approaches to planning in a rapidly developing region of the Intermountain West.

The curriculum includes a common core of required courses that link knowledge with practice, and fundamental theories with skills. Restricted elective requirements build on this core knowledge and skill while providing flexibility for the students to focus on their interest areas. Students also select one of several areas of specialization: 1) Regional Planning and Multi-jurisdictional Governance, 2) Community Design, 3) Community and Economic Development, 4) Transportation and Sustainable Infrastructure, 5) GIS and Spatial Analysis, 6) Natural Hazards and Climate Change Mitigation and Adaptation or, 7) Student designed option. These specializations provide connections between the BIOP program and the disciplines within the participating colleges and departments.

A 15-credit professional certificate is also available in the BIOP program. The certificate is designed for graduate students enrolled in various professional disciplines (e.g., transportation engineering, environmental and natural resource management, architecture, landscape architecture, public administration) who want some expertise in planning. Students earning the certificate will gain knowledge, skills, and values in biore-

gional planning and be able to effectively employ planning concepts and principles within their discipline.

Questions regarding the BIOP M.S. programs should be directed to bioregionalplanning@uidaho.edu.

Courses

See the course description section for courses in Bioregional Planning and Community Design (BioP).

Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Graduate Program in Bioregional Planning and Community Design. See the College of Graduate Studies section for the general requirements applicable to each degree.

The BIOP M.S. degree requires the completion of 44 credits of coursework. Specific requirements are: core requirements (20 cr); additional competency via restricted elective requirements (12 cr); area of specialization (9 cr); and final project or thesis. The final project can take the form of a professional report or a client report. See the BIOP Student Handbook for specific course requirements.

Admissions Requirements and Procedures

Admission to the graduate program is based on: ability to complete graduate-level work evidenced by undergraduate transcripts; the applicant's statement of research and career objectives; the compatibility of the student's objectives with program mission; and availability of graduate faculty to act as major advisor for the applicant. The GRE, applicant's statement of objectives, and three letters of recommendation and resume are required.

Bioregional Planning and Community Design Graduate Academic Certificates Requirements

Bioregional Planning and Community Design Academic Certificate

The Bioregional Planning and Community Design Program offers a certificate program that can be completed by students in other graduate programs who have an interest in planning.

This 15-credit Graduate Certificate in Bioregional Planning and Community Design is for graduate students enrolled in various professional disciplines (e.g., transportation engineering, environmental and natural resource management, architecture, landscape architecture, public administration) who want an emphasis in planning, but have chosen not to enroll in the M.S. degree. Students earning the certificate will gain knowledge, skills, and values in bioregional planning and be able to effectively employ planning concepts and principles within their discipline.

BioP 520	Introduction to Bioregional Planning (3 cr)
BioP 521	Local and Regional Comprehensive Planning (3 cr)

One of the following (3-4 cr):

BioP 530	Public Planning Theory and Process (3 cr)
BioP 560	Bioregional Planning Studio I (4 cr)

GIS Competency (3 cr):

LArc 495	GIS Applications in Land Planning 2 (3 cr) or Equivalent Course/Demonstrated GIS Competency (e.g. GIS Certification)

One Restricted Elective Course (3 cr) in a substantive planning specialization such as land use planning; community and economic development planning; health planning; transportation planning; hazards planning or other. Written approval by the Bioregional Planning and Community Design faculty member is required. See the BIOP Student Handbook for a list of acceptable restricted electives.

Courses to total 15 credits for this certificate

Bioregional Planning and Community Design Graduate Degree Program

Master of Science. The Bioregional Planning and Community Design M.S. degree requires the completion of 44 units of course work. Specific requirements are: core requirement (20 cr); additional competency via restricted and free elective requirements (12 cr); area of specialization (9 cr); and final project or thesis. The final project can take the form of a professional report or a client report. See the BioP student handbook for actual specific course requirements.

Department of Business

Scott K. Metlen, Dept. Head (225A J. A. Albertson Bldg. 83844-3161; phone 208/885-6295; metlen@uidaho.edu). Faculty: Jeff Bailey, Yunhyung Chung, Raymond Dacey, Berna Devezer, Daniel M. Eveleth, Lori Baker Eveleth, Terrance Grieb, John Lawrence, Tracie Lee, Thomas Liesz, Michael McCollough, Scott Metlen, Jon R. Miller, Anubha Mishra, Magdy Noguera, Kathy O'Malley, Youngkyun Park, Norman Pendegraft, Steve Peterson, Jan Rauk, Mario Reyes, Mark Rounds, Steven Shook, Sanjay Sisodiya, Robert Stone, Eric Stuen, George Tanner, Shenghan Xu.

The six major fields (business economics, finance, information systems, management and human resources, marketing, and operations management) within the department lead to the B.S.Bus. degree. These programs provide a solid foundation in the liberal arts, a broad professional preparation in business, and in-depth course work in a major field. They are designed to prepare the student to excel in a competitive market environment. The department offers minors in business and in international business.

The business economics major prepares students for careers as economic forecasters, bankers, stockbrokers, labor or marketing analysts, lobbyists, or regional development specialists. The department offers three undergraduate economics degree programs, one in the College of Business and Economics (CBE) and two in the College of Letters, Arts, and Social Sciences. The essential difference among these programs is that those in the College of Letters, Arts, and Social Sciences require fewer business courses and allow more electives. The less structured programs in this college are in the liberal arts tradition. A minor in economics is also offered through the College of Letters, Arts, and Social Sciences. Another minor in international policy economy is offered jointly through the Colleges of Letters and Science and Business and Economics.

The finance major prepares students for careers in commercial lending, security analysis, portfolio management, and corporate finance.

The information systems major prepares students in the areas of systems analysis and development, data base management, networking, and data communications.

The management and human resources major prepares students for opportunities in the areas of management and personnel administration. The management emphasis has a macro focus oriented toward individuals who will operate their own businesses or who aspire to a more general managerial focus. The human resources management emphasis is directed toward those individuals preparing for careers in personnel administration, recruitment and selection, training, compensation and benefits, and labor relations.

The marketing major prepares students for opportunities in a broad range of areas including management of retail and wholesale distribution, advertising, market research, services marketing and product management. The PGA golf management emphasis prepares students for a successful career in the golf industry. Accredited by the Professional Golfer's Association (PGA) it is the only PGA accredited golf management program in the northwest.

The operations management major prepares students for management positions in operations planning and control, quality management and purchasing.

The business minor is designed for students outside of the CBE who desire an exposure to the field of business. The minor covers the primary fields in business, provides a background in business as a basis for further graduate work, and complements the student's academic major and future professional career.

The international business minor, open only to students with a major in the College of Business and Economics, complements each of the majors in the college, and prepares students to extend their disciplinary mastery to the global economy.

Courses

See the course description section for courses in Business (Bus) and Business Law (BLaw), Economics (Econ).

Business Undergraduate Curricular Requirements

Business Economics (B.S.Bus.)

This program is offered through the College of Business and Economics.

Students preparing for professional careers as economists in private business, government service, or careers where a broad knowledge of economics is useful should elect this curriculum.

Required course work includes the university requirements (see regulation J-3), the college requirements, and:

Econ 351	Intermediate Macroeconomic Analysis (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)
Econ 453	Econometrics (3 cr)
Econ 490	Economic Theory and Policy (3 cr)

And one of the following options:

A. General Option
Additional upper-division credits in economics (9 cr)
Upper-division courses in related field areas, with approval of department (9 cr)
Courses to total 120 credits for this degree

B. Financial Economics Option

Bus 302	Intermediate Financial Management (3 cr)
Bus 407	Financial Institutions (3 cr)
Econ 343	Money and Banking (3 cr)

At least one of the following (3 cr):

Bus 381	International Finance (3 cr)
Bus 408	Security Analysis (3 cr)
Bus 463	Portfolio Management (3 cr)

Additional upper-division credits in economics (6 cr)
Courses to total 120 credits for this degree

Economics (B.A. or B.S.)

This program is offered through the College of Letters, Arts, and Social Sciences.

Required course work includes the university requirements (see regulation J-3), the general College of LASS requirements for the B.A. or B.S. degree, and:

Econ 351	Intermediate Macroeconomic Analysis (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)
Econ 453	Econometrics (3 cr)
Econ 490	Economic Theory and Policy (3 cr)

Additional upper-division credits in economics (12 cr)

One of the following (3-4 cr):

Math 160	Survey of Calculus,
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)

One of the following (3 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Statistics (3 cr)

One of the following groups of courses (4-6 cr):

Group A.

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)

or

Group B.

Econ 272	Foundations of Economic Analysis (4 cr)

Courses to total 120 credits for this degree

Finance (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3), the college requirements, and the following:

Acct 315	Corporate Accounting and Reporting I (3 cr)
Bus 302	Intermediate Financial Management (3 cr)
Bus 407	Financial Institutions (3 cr)

Upper-Division economics courses (3 cr)

Tier 1 Finance electives, select one of the following (3 cr):

Bus 409	Problems in Financial Management (3 cr)
Bus 469	Risk and Insurance (3 cr)

Tier 2 Finance electives, select two of the following (6 cr):

Bus 408	Security Analysis (3 cr)
Bus 463	Portfolio Management (3 cr)
Bus 464	Derivatives and Risk Management (3 cr)
Bus 465	Introduction to Market Trading (3 cr)

Supporting electives, select two of the following (6 cr):

Acct 385	Cost and Management Accounting (3 cr)
Acct 414	Corporate Accounting and Reporting II (3 cr)
Acct 415	Advanced Financial Accounting and Reporting (3 cr)
Acct 483	Fundamentals of Federal Taxation (3 cr)
Bus 378	Project Management (3 cr)
Bus 381	International Finance (3 cr)
Bus 414	Entrepreneurship (3 cr)
Bus 415	New Venture Creation (3 cr)
Bus 421	Marketing Research and Analysis (3 cr)
Bus 427	Services Marketing (3 cr)
Bus 439	Systems and Simulation (3 cr)
Bus 456	Quality Management (3 cr)
Econ 343	Money and Banking (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)
Econ 407	Public Finance (3 cr)
Econ 453	Econometrics (3 cr)
Stat 431	Statistical Analysis (3 cr)

Two of the following may be used if not used to satisfy the above Tier 2 Finance elective:

Bus 408	Security Analysis (3 cr)
Bus 463	Portfolio Management (3 cr)
Bus 464	Derivatives and Risk Management (3 cr)
Bus 465	Introduction to Market Trading (3 cr)

Courses to total 120 credits for this degree

**Note: Students may elect to take Bus 362 or Bus 364 to satisfy the requirements of the Finance major.*

Information Systems (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3), the college requirements, and:

Bus 353	Application Development (3 cr)
Bus 355	Systems Analysis & Administration (3 cr)
Bus 452	Business Telecommunications Management (3 cr)
Bus 453	Database Design (3 cr)
Bus 454	Issues in Information Systems (3 cr)

Restricted IS electives: at least three additional courses from the following (9 cr):

CS 120	Computer Science I (4 cr)
Geog 385	GIS Primer (3 cr)
Geog 390	Cartographic Design & Geovisualization (3 cr)

400-Level course offered by the College of Business and Economics (3 cr)
An additional Bus 390 may be used with approval of IS area coordinator (3 cr)
300-Level or higher computer science course
Non-CBE elective: at least one additional 300 or 400-level course from outside the CBE (3 cr)
Courses to total 120 credits for this degree. In addition to all other requirements, students must take at least 9 credits from outside the CBE in addition to those specifically required. These may be chosen from the restricted electives or from other courses.

Management and Human Resources (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3), the college requirements, and:

Bus 411	Acquiring Human Capital (3 cr)
Bus 417	Deploying and Developing Human Capital (3 cr)

And one of the following emphases:

A. Management Emphasis
Management Elective: select two of the following courses (6 cr):

Bus 416	Developing and Managing Reward Systems (3 cr)
Bus 418	Organization Design and Changes (3 cr)
Bus 441	Maintaining Employee and Labor Relations (3 cr)

Operations Management Elective: select one of the following courses (3 cr):

Bus 378	Project Management (3 cr)
Bus 439	Systems and Simulation (4 cr)
Bus 456	Quality Management (3 cr)
Bus 470	Purchasing and Materials Management (3 cr)
Bus 472	Operations Planning and Scheduling (3 cr)
IndT 362	Behavior Based Safety (3 cr)
Psyc 446	Engineering Psychology (3 cr)

Marketing & Entrepreneurship Elective: select one of the following courses (3 cr):

AgEc 333	Introduction to Sales (3 cr)

Bus 324 Consumer Behavior (3 cr)
Bus 414 Entrepreneurship (3 cr)
Bus 415 New Venture Creation (3 cr)
Bus 420 Promotional Strategy (3 cr)
Bus 421 Marketing Research and Analysis (3 cr)
Bus 422 Personal Selling and Sales Force Management (3 cr)
Bus 424 Pricing Strategy and Tactics (3 cr)
Bus 425 Retail Distribution Management (3 cr)
Bus 426 Marketing Channels Management (3 cr)
Bus 427 Services Marketing (3 cr)
Bus 482 International Marketing (3 cr)
Bus 495 Product Development and Brand Management (3 cr)

Accounting & Finance Elective: select one of the following courses (3 cr):
Acct 305 Accounting Information Systems (3 cr)
Acct 315 Intermediate Financial Accounting I (3 cr)
Acct 385 Cost and Management Accounting (3 cr)
Acct 482 Enterprise Accounting (3 cr)
Acct 483 Fundamentals of Federal Taxation (3 cr)
Bus 302 Intermediate Financial Management (3 cr)
Bus 381 International Finance (3 cr)

Information Systems Elective: select one of the following courses (3 cr):
Bus 353 Application Development (3 cr)
Bus 355 Systems Analysis & Administration (3 cr)
Bus 452 Business Telecommunications Management (3 cr)
Bus 453 Database Design (3 cr)
Bus 454 Issues in Information Systems (3 cr)
Geog 385 GIS Primer (3 cr)

Courses to total 120 credits for this degree

**Note: Students may elect to use Math 160 or Math 170, but not both, to complete their research elective.*

***Note: Stat 433/Econ 453 Econometrics does not satisfy the Upper Division Economics requirement.*

B. Human Resources Management Emphasis

Bus 416 Developing and Managing Reward Systems (3 cr)
Bus 418 Organization Design and Changes (3 cr)
Bus 441 Maintaining Employee and Labor Relations (3 cr)

HR Decision-Making Elective: select one of the following courses (3 cr):
Acct 385 Cost and Management Accounting (3 cr)
Acct 482 Enterprise Accounting (3 cr)
Bus 353 Application Development (3 cr)
Bus 355 Systems Analysis & Administration (3 cr)
Bus 421 Marketing Research and Analysis (3 cr)
Bus 439 Systems and Simulation (4 cr)
Bus 453 Database Design (3 cr)
Econ 453 Econometrics (3 cr)
Geog 385 GIS Primer (3 cr)
OrgS 444 Methods and Analysis in Organizational Science (4 cr)
Psyc 218 Introduction to Research in the Behavioral Sciences (4 cr)
Psyc 430 Tests and Measurements (3 cr)
Soc 310 Methods of Social Research (3 cr)

Specialized Electives: select one of the following courses (3 cr):
Anth 462 Human Issues in Human Development (3 cr)
AOLL 560 Career Development in Organizations (3 cr)
Bus 454 Issues in Information Systems (3 cr)
Comm 233 Interpersonal Communication (3 cr)
Comm 235 Organizational Communication (3 cr)
Comm 332 Communication and the Small Group (3 cr)
Comm 335 Intercultural Communication (3 cr)
Comm 347 Persuasion (3 cr)
Comm 410 Conflict Management (3 cr)
Comm 433 Organizational Communication Theory, Research, and Application (3 cr)
CTE 472 Teaching and Learning in Occupation Education (3 cr)
Econ 441 Labor Economics (3 cr)
EDCI 301 Learning, Development, and Assessment (3 cr)
IndT 362 Behavior Based Safety (3 cr)
Intr 316 Explore Mentoring & Leadership (3 cr)
JAMM 350 Public Relations Writing and Production (3 cr)
OrgS 305 Nonprofit Organizations (3 cr)
PolS 451 Public Administration (3 cr)
Psyc 390 Psychology of Learning (3 cr)
Psyc 440 Psychology of Judgment and Decision Making (3 cr)
Psyc 496 Applied Behavior Analysis (3 cr)
Psyc 541 Social Psychology in the Workplace (3 cr)
Soc 301 Introduction to Diversity and Stratification (3 cr)

Courses to total 120 credits for this degree

Marketing (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3), the college requirements, and:

Bus 324 Consumer Behavior (3 cr)
Bus 421 Marketing Research and Analysis (3 cr)
Bus 428 Marketing Management (3 cr)

And one of the following emphases/options:

A. General Marketing Emphasis

One of the following communication courses (3 cr):
Comm 233 Interpersonal Communication (3 cr)
Comm 235 Organizational Communication (3 cr)
Comm 332 Communication and the Small Group (3 cr)
Comm 410 Conflict Management (3 cr)

One upper division (300-400 level) CBE, statistics, or mathematics courses, (excluding Bus 301, Bus 311, Bus 321, Bus 350, Bus 370.) (3 cr)

Tier 1 Marketing Electives:

One of the following (3 cr):
Bus 427 Services Marketing (3 cr)
Bus 495 Product Development and Brand Management (3 cr)

One of the following (3 cr):
AgEc 333 Introduction to Sales (3 cr)
Bus 420 Promotional Strategy (3 cr)
Bus 422 Personal Selling and Sales Force Management (3 cr)

One of the following (3 cr):
Bus 425 Retail Distribution Management (3 cr)
Bus 426 Marketing Channels Management (3 cr)

One of the following (3 cr):
Bus 424 Pricing Strategy and Tactics (3 cr)
Econ 352 Intermediate Microeconomic Analysis (3 cr)*

Courses to total 120 credits for this degree

**Note: Econ 352 cannot be used to also satisfy the upper-division economics requirement.*

B. Entrepreneurship Emphasis

One of the following communication courses (3 cr):
Comm 233 Interpersonal Communication (3 cr)
Comm 235 Organizational Communication (3 cr)
Comm 332 Communication and the Small Group (3 cr)
Comm 410 Conflict Management (3 cr)

One upper division (300-400 level) CBE, statistics, or mathematics courses, (excluding Bus 301, Bus 311, Bus 321, Bus 350, Bus 370.) (3 cr)

Acct 482 **or** Acct 582 Enterprise Accounting (3 cr)
Bus 414 Entrepreneurship (3 cr)
Bus 415 New Venture Creation (3 cr)

Tier 1 Marketing Electives: Three credits of the following courses (3 cr):
Bus 420 Promotional Strategy (3 cr)
Bus 422 Personal Selling and Sales Force Management (3 cr)
Bus 424 Pricing Strategy and Tactics (3 cr)
Bus 425 Retail Distribution Management (3 cr)
Bus 426 Marketing Channels Management (3 cr)
Bus 427 Services Marketing (3 cr)
Bus 429 Vandal Solutions (1-6 cr, max 6)
Bus 482 International Marketing (3 cr)
Bus 495 Product Development and Brand Management (3 cr)

Entrepreneurship Practicum/Internship/Vandal Solutions (3 cr)

Courses to total 120 credits for this degree

C. PGA Golf Management Option

Bus 103 Introduction to PGA Golf Management (2 cr)
Bus 150 PGA Golf Management I (2 cr)
Bus 251 PGA Golf Management II (2 cr)
Bus 298 Internship (2 cr)
Bus 385 PGA Golf Management III (2 cr)
Bus 386 Food & Beverage Hospitality with Lab (4 cr)
Bus 398 Internship (6 cr)

Rec 105 Teaching Golf I (2 cr.)
Rec 205 Teaching Golf II (2 cr)
Rec 305 Teaching Golf III (2 cr)

One of the following communication courses (3 cr):
Comm 233 Interpersonal Communication (3 cr)
Comm 235 Organizational Communication (3 cr)
Comm 332 Communication and the Small Group (3 cr)
Comm 335 Intercultural Communication (3 cr)
Comm 410 Conflict Management (3 cr)

Tier 1 Marketing Electives:

One of the following courses (3 cr):
Bus 427 Services Marketing (3 cr)
Bus 495 Product Development and Brand Management (3 cr)

One of the following courses (3 cr):
AgEc 333 Introduction to Sales (3 cr)
Bus 420 Promotional Strategy (3 cr)
Bus 422 Personal Selling and Sales Force Management (3 cr)

One of the following courses (3 cr):
Bus 425 Retail Distribution Management (3 cr)
Bus 426 Marketing Channels Management (3 cr)

One of the following courses (3 cr):
Bus 424 Pricing Strategy and Tactics (3 cr)
Econ 352 Intermediate Microeconomic Analysis (3 cr)*

Students must pass the PGA Player Ability Test
Courses to total 128 credits for this degree

**Note: Econ 352 cannot be used to also satisfy the upper-division economics requirement.*

***Students must have a 12.0 handicap or better to enter this program. Students must also be a U.S. citizen to be eligible for PGA membership.*

Operations Management (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3), the college requirements, and:

Bus 378 Project Management (3 cr)
Bus 439 Systems and Simulation (4 cr)
Bus 456 Quality Management (3 cr)
Bus 470 Supply Chain Management (3 cr)
Bus 472 Operations Planning and Scheduling (3 cr)

Three courses selected from the following (9 cr):
EnvS 428 Pollution Prevention (3 cr)
ME 410 Principles of Lean Manufacturing (3 cr)
Stat 431 Statistical Analysis (3 cr)
Stat 446 Six Sigma Innovation (3 cr)
Any upper-division (300-400-level) College of Business and Economics courses (excluding Bus 311)
Any one business, culture, economics or language class that includes a significant international experience component (3 cr)
Courses to total 120 credits for this degree

Business Academic Minor Requirements

Business Minor

This minor is not open to students pursuing other college business options (e.g., foreign language/business option, music/business option, or to students pursuing a major in the College of Business and Economics.

Acct 201 Introduction to Financial Accounting (3 cr)
Bus 311 Introduction to Management (3 cr)
Bus 321 Marketing (3 cr)

One of the following (3 cr):
Bus 301 Financial Resources Management (3 cr)
Bus 350 Managing Information (3 cr)
Bus 378 Project Management (3 cr)
Bus 414 Entrepreneurship (3 cr)

One of the following (3-4 cr):
Econ 202 Principles of Microeconomics (3 cr)
Econ 272 Foundations of Econ Analysis (4 cr)

Take either two additional 300- or 400-level 3 credit BUS prefix courses OR take Bus 190 and one additional 300- or 400-level 3 credit BUS prefix course (6 cr)
Courses to total 21 credits for this minor

Economics Minor

This academic minor is offered through the College of Letters, Arts, and Social Sciences.
Econ 351 Intermediate Macroeconomic Analysis (3 cr)
Econ 352 Intermediate Microeconomic Analysis (3 cr)

One of the following groups of courses (4-6 cr):

Group A.
Econ 201 Principles of Macroeconomics (3 cr)
Econ 202 Principles of Microeconomics (3 cr)

or

Group B.
Econ 272 Foundations of Economic Analysis (4 cr)
Economics courses to total 20 credits for this minor

International Business Minor

Note: This minor is limited to students majoring in the College of Business and Economics.
Bus 381 International Finance (3 cr)
Bus 390 Integrated Topics in Business (3 cr)
Bus 482 International Marketing (3 cr)
Econ 446 International Economics (3 cr)
PolS 237 International Politics (3 cr)

One of the following courses or another approved elective (3 cr):
Econ 447 International Development Economics (3 cr)
FLEN 307 The European Union (3 cr)
PolS 440 International Organizations and International Law (3 cr)
Foreign language mastery is required equivalent to completion of the introductory and intermediate courses, and an upper-division course in a language. A semester of study and/or internship in another country is recommended. CBE students currently have direct access to academic programs at Växjö University (Sweden), Ecole Supérieure de Commerce de Chambéry (France), Pontifica Universidad Católica del Ecuador, Griffith University (Australia), Fachhochschule fur Technik und Wirtschaft Berlin (Germany), University of Zaragoza (Spain), Haagse Hogeschool (The Netherlands), the Southern Denmark Business School, and the University of Newcastle upon Tyne (United Kingdom). CBE students also have access to programs in Australia, Chile, France, Italy, and Spain through the University Studies Abroad Consortium, and to numerous schools in various countries through the International Student Exchange Program. Internships are developed on an ad hoc basis.
Courses to total 20 credits for this minor

International Political Economy Minor

For information on an academic minor in international political economy, see the Department of Political Science & Public Affairs Research section.

Marketing Minor

Bus 321 Marketing (3 cr)

One of the following (3-4 cr):
Econ 202 Principles of Microeconomics (3 cr)
Econ 272 Foundations of Econ Analysis (4 cr)

Four courses from the following (12 cr):
AgEc 302 Managerial Economics: Consumption & Markets (3 cr)
AgEc 333 Introduction to Sales (3 cr)
Bus 324 Consumer Behavior (3 cr)
Bus 420 Promotional Strategy (3 cr)
Bus 421 Marketing Research and Analysis (3 cr)
Bus 422 Personal Selling and Sales Force Management (3 cr)
Bus 424 Pricing Strategy and Tactics (3 cr)
Bus 425 Retail Distribution Management (3 cr)
Bus 426 Marketing Channels Management (3 cr)
Bus 427 Services Marketing (3 cr)
Bus 495 Product Development and Brand Management (3 cr)
CTE 413 Retail Merchandising for Marketing Education (3 cr)
Econ 453 Econometrics (3 cr)
FCS 323 Evaluation of Apparel and Textiles (3 cr)
FCS 448 Consumer Economic Issues (3 cr)
FS 489 Food Product Development (3 cr)
JAMM 452 Public Relations Campaign Design (3 cr)
JAMM 466 Advertising Campaign Strategy (3 cr)
Stat 422 Sample Survey Methods (3 cr)
Courses to total 18 credits for this minor

Business Undergraduate Academic Certificates Requirements

Entrepreneurship Undergraduate Academic Certificate

Bus 414	Entrepreneurship (3 cr)
Bus 415	New Venture Creation (3 cr)

One of the following accounting courses (3 cr):

Acct 482	Enterprise Accounting (3 cr)
Acct 486	Contemporary Management Accounting Issues (3 cr)
Acct 582	Enterprise Accounting (3 cr)

Technical electives (3 cr):

AgEc 415	Entrepreneurial Skills in Agribusiness Management (1 cr)
AgEc 478	Advanced Agribusiness Management (3 cr)
Arch 475	Professional Practice (3 cr)
Arch 556	Architectural Design IX (6 cr)
Art 410	Professional Practices (2 cr)
Art 490	BFA Art/Design Studio (6 cr)
BAE 478	Engineering Design I (3 cr)
BAE 479	Engineering Design II (3 cr)
Bus 428	Marketing Management (3 cr)
Bus 490	Strategic Management (3 cr)
Bus 531	Design for Six Sigma and Lean Management (3 cr)
ChE 451	Environmental Management and Design (3 cr)
ChE 452	Environmental Management and Design (3 cr)
CS 481	CS Senior Capstone Design II (3 cr)
ECE 480	EE Senior Design I (3 cr)
ECE 481	EE Senior Design II (3 cr)
ECE 482	Computer Engineering Senior Design I (3 cr)
ECE 483	Computer Engineering Senior Design II (3 cr)
FCS 496	Internship: Fashion Business (2-8 cr)
FS 489	Food Product Development (3 cr)
Geog 340 or Geog 540	Business Location Decisions (3 cr)
Geog 360 or Geog 560	Population Dynamics and Distribution (3-4 cr)
Geog 385	GIS Primer (3 cr)
ME 410	Principles of Lean Manufacturing (3 cr)
ME 426	Mechanical Systems Design II (3 cr)
Stat 446	Six Sigma Innovation (3 cr)

Courses to total 12 credits for this certificate

Business Graduate Degree Programs

Master of Business Administration. The UI Executive MBA is a rigorous two-year graduate program in management designed for high potential executives. The MBA is a lock-step model where students admitted into a class (cohort) begin the program at the same point, take the same sequence of courses throughout the two-year program, and graduate at the same point. The MBA degree is designed to teach management concepts and an integrated view of business decision making to business executives, mid-level managers, and professionals who have been targeted in succession plans to take on greater managerial responsibility and leadership roles in an organization. Class schedule is formatted to allow students to continue working full time while they pursue their studies. Direct personal interaction in the classroom and in study groups is critical to the learning experience.

Using the College of Business and Economics' award-winning, integrated approach to teaching and learning, CBE faculty examine the relevant themes of leadership, globalization, sustainability, decision-making, and relationship management to bridge the gap between academic theory and workplace practice. The University of Idaho College of Business and Economics faculty are among an elite group of U.S. business school leaders who have mastered team teaching and learning. The integrated program themes create a context for participants as they master the traditional functional areas of accounting, finance, management, marketing, information systems, and operations management. Idaho's integrated approach to learning prepares managers for the complex leadership challenges of today's—and tomorrow's—business environment.

The MBA program fee is $37,000 for the two academic years. The fees include registration, books, materials, and meals. The fee is payable in two annual payments of $18,500 to be received by August 1. The MBA fee is not refundable once classes have begun.

Department of Chemical and Materials Engineering

Wudneh Admassu, Dept. Chair (305/312 Buchanan Engr. Lab. 83844-1021; phone 208/885-8918 and 203B McClure Hall). Chemical Engineering Faculty: Wudneh Admassu, D. Eric Aston, David C. Drown, Dean B. Edwards, Supathorn Phongikaroon, Vivek Utgikar, Materials Science and Engineering Faculty : Indrajit Charit, Daniel Choi, Batric Pesic. Krishnan Raja, Mark Roll. Emeritus Faculty: Louis L. Edwards, Jr., Roger Korus, Jay Scheldorf, Margarit Von Braun, T. Alan Place.

Chemical Engineering Program. The Chemical Engineering Program is an ABET Accredited Program that combines the science of chemistry with the discipline of engineering in order to solve problems and to increase process efficiency. One of the most attractive aspects of a chemical engineering future is the variety of work available. The Chemical Engineering Program is a blend of physics, chemistry, and mathematics; thus, a chemical engineer possesses a versatility that gives him or her many opportunities for employment in fields such as energy systems, pulp and paper, environmental engineering, food products, nuclear power, petroleum and petrochemicals, semiconductors, synthetic fuels, radioisotope applications, plastics and polymers, pharmaceuticals, education, biomedical engineering, computer applications, alternate energy sources, steel, nano technology and textiles. A chemical engineer can choose work in any of the following areas: research and development, design and construction, operations, management, teaching, or technical sales.

The mission of the Chemical Engineering Program is to provide quality educational programs firmly based in fundamental concepts and to perform and publish outstanding chemical engineering research. The goals of the Chemical Engineering Program are (1) to prepare students with a broad-based education grounded in chemical engineering fundamentals, (2) to maintain an environment that promotes effective student/faculty involvement in teaching, research, and mentoring, (3) to promote an active interaction with regional industries, and (4) to graduate students capable of independent life long learning. In addition, the educational objective of the Department of Chemical and Materials Engineering is to prepare students who (1) are well grounded in the fundamentals of chemical engineering, (2) can understand, analyze, and design efficient processes, (3) are proficient in the oral and written communication of their work and ideas, (4) are able to work in multidisciplinary teams in conjunction with their design, formulation of problems, and conducting of experiments, (5) understand the safety and environmental consequences of their work, and (6) are instilled with a sense of social responsibility, ethics, and a commitment to life-long learning. Progress towards these goals and objectives is assessed by student performance on the nationally administered Fundamentals in Engineering Examination, performance at international design competitions, exit interviews with graduating students, and surveys of graduated students and their employers.

The faculty of the Chemical Engineering Program is dedicated to excellence in teaching. It is the faculty's goal to provide the students with a strong, well-rounded background for immediate entry into the industrial workforce or for graduate study. This background includes the theoretical aspects of chemical engineering as well as practical work experiences. Thus, most of the equipment that is installed in the Chemical Engineering laboratory is on the scale of pilot plant equipment. Because much of the equipment is made of glass, students are able to see at a glance what processes occur and where the streams are flowing. The department has a two-story distillation column, a gas absorber, two-stage evaporator, two types of chemical reactors, a catalytic reactor, liquid extraction equipment, membrane based gas separation, an Atomic Force Microscope (AFM) system, a multiple column micro gas chromatograph, process control lab, and supporting analytical equipment such as gas chromatographs. All of this equipment is used by undergraduate students. Proof that the program's goals are being achieved is in the job-placement statistics for chemical engineers from UI. Most receive job offers before graduation and many graduates now hold high-level technical and management positions in industry, government, and academia.

The department has available a number of fellowships and assistantships for students. Support includes fellowships from industry and alumni; UI graduate assistantships; and research assistantships. Entering graduate students must normally hold a B.S. in chemical engineering.

Students entering the graduate program in the Chemical Engineering Program can work towards an M.S., M.Engr., or Ph.D. degree. The graduate program also includes provisions for study leading to an M.S. in Chemical Engineering for students who have a B.S. degree in a related field. Students will be required to register as undergraduates for as many

semesters as it takes to meet prerequisites to the courses required in the M.S. (Ch.E.) degree program.

Graduate studies in this department are highly diversified in order to accommodate the needs of most students who have a good basic background in the physical sciences, mathematics, and engineering. Areas of expertise include chemical reaction engineering; simulation, optimization and process design especially for energy systems, pulp and paper and food applications; hazardous waste characterization and bioremediation; membrane, nano-science, fluid mechanics, biochemical engineering; and mass transfer research. The graduate program in chemical engineering requires a total GRE score of at least (Analytical >500 and Quantitative >725), as well as a TOEFL score of at least 550 (paper based) or 225 (computer based).

Material Science and Engineering Program. The educational objectives of the Material Science and Engineering Program are to educate graduates who will: (1) Use their mathematics and science background to formulate and solve engineering problems. (2) Remain current in modern technology and in tools of engineering practice. (3) Demonstrate an understanding of current economic and societal issues associated with engineering projects and their impacts. (4) Be able to communicate effectively with engineers and non-engineers while working independently or on teams to develop engineering solutions. (5) Demonstrate an understanding of their professional and ethical responsibilities as engineers and uphold their responsibility to the public and occupational health and safety. (6) Demonstrate the importance of life-long learning and continued professional growth.

Our Materials Science and Engineering Program is an ABET Accredited program and its educational mission is to produce graduates who are equipped to begin competitive and productive careers in their engineering professions; who can define and solve material science and engineering problems to meet desired needs and produce societal benefits; and who understand the importance of working responsibly, acting ethically and pursuing professional growth.

Although the program emphasizes economics and technology, engineering training also includes environment concerns, ethical behavior, and safety concerns. As technological and engineering fields, these professional disciplines offer tremendous opportunities for the person who wishes to become involved in the application of material science and engineering, often in sophisticated designs, to the preservation and enhancement of our society. The program provides the technical training to prepare our graduates for productive and rewarding engineering careers.

The laboratory facilities for materials science and engineering include: state of the art magnetic and thin film, electrical and optical materials characterization, semiconductor processes including thin film sputtering and deposition, inductively coupled plasma processing, electron cyclotron resonance plasma dry etching, chemical mechanical planarization, mechanical alloying, vacuum arc furnaces, combustion synthesis, clean room, electron beam lithography, ion beam technology, electro-chemistry, computer chip and bio-chip design, micro-electromechanical systems (MEMS), nano-materials, nano-devices and other state of the art technologies including optical and transmission electron microscopy, atomic force microscopy, scanning electron microscopy, x-ray diffraction, focused ion beam, differential scanning calorimetry and thermogravimetric analysis, etc. These laboratories provide an understanding of nano scale technology, magnetic, electronic, bio-active, ceramic, polymeric, metallic and intermetallic materials.

Our faculty has proven their qualifications by their credentials in national and international professional societies. They are well known by their publications, research, and contract work. Most students find employment in the summer or on a cooperative basis, so that they can become more intimately involved in the disciplines that they are studying. Exposure to the department faculty members provides students with a one-to-one interaction and an expertise that enables them to be truly competitive when they enter the real world.

The program is designed to take advantage of the other excellent facilities of the university and other engineering disciplines. The program of study also includes involvement with practical aspects of professional practice by exposure to the regional industries and research groups through field trips, guest speakers, study problems, and work time during the summer.

A minor in Materials Science and Engineering is offered which integrates nicely with majors in chemical or mechanical engineering along with other engineering and science disciplines. This minor allows the graduate to combine expertise in materials with another technical discipline.

A minor in Metallurgical Engineering is offered and integrates nicely with majors in either chemical or materials engineering. This minor allows the graduate to specialize in the minerals processing area of metal materials, fabrications, and research.

The Advanced Materials Technology Certificate is a graduate level certificate open for working professionals or graduate students with a Bachelor degree in engineering or sciences (physical sciences preferred). The level of educational proficiency will be judged on a case-by-case basis; and thus it is possible that the student may need to take preparatory courses before they can register for the required courses.

The program offers the Master of Science (M.S.) and the Doctor of Philosophy (PhD) degrees in materials science and engineering. These programs include a mix of theoretical and practical study most appropriate to each student. Studies include topics on nano-technology, electronic materials, alternative energy materials (nuclear, solar, etc.), and advanced materials processing techniques, as well as other traditional materials science areas, such as corrosion, welding, powder metallurgy etc.. Some students prefer to work on applied problems that are presented by industry or research establishments in the area, generally with funding from outside sources. Studies can be tailored to individual interests.

These advanced studies are financed by research grants, an industry sponsor, or occasionally by departmental funding. They are designed to train the individual in research methods and investigative procedures that will later enhance his or her ability in industrial or research environments or in teaching. The master's program involves both class work and research; the latter being designed to familiarize the student with research methods. In the doctoral program, the student is expected to break new ground and advance the field both scientifically and to maintain the competitive technological lead enjoyed in the U.S. for so many years. The master's program generally requires 12 to 24 months beyond the baccalaureate degree and the doctoral program usually entails at least three years beyond the baccalaureate degree.

Most students find employment in the summer or on a cooperative basis, so that they can become more intimately involved in the processes that they are studying. The total program enables the person to leave the university with confidence, either as a baccalaureate student or at the master's or doctoral level, with the capability of a truly competent professional. Metallurgical and materials engineers have a wide variety of career options. This ranges all the way from primary metals/ceramics/polymer production through advanced materials industries. There are opportunities in technological areas with names and processes not even dreamed of just a few decades ago: plasma extractive processing, ceramic powder synthesis, bio-corrosion, magnetic recording media, and electron microscopy. The materials produced are formed into all of the products we use in our daily lives, such as our cars, home appliances, farm equipment, and electrical and electronic equipment. Some of our graduates are employed as engineering consultants or by government agencies. In fact, everything we touch, with the exception of agricultural or forestry products, has had its origin as a mineral in the earth. Materials engineers and materials scientists also develop new products to fit specific demands, such as materials to withstand high stress, high temperature environments, or the extreme cold of outer space.

Courses

See the course description section for courses in Chemical Engineering (ChE) and Materials Science & Engineering (MSE).

Chemical and Materials Engineering Undergraduate Curricular Requirements

Chemical Engineering (B.S.Ch.E.)

Required course work includes the university requirements (see regulation J-3) and:

ChE 110	Introduction to Chemical Engineering (1 cr)
ChE 123	Computations in Chemical Engineering (2 cr)
ChE 210	Integrated Chemical Engineering Fundamentals
ChE 223	Material and Energy Balances (3 cr)
ChE 326	Chemical Engineering Thermodynamics (3 cr)
ChE 330	Separation Processes I (3 cr)
ChE 340	Transport and Rate Processes I (4 cr)
ChE 341	Transport and Rate Processes II (4 cr)
ChE 423	Reactor Kinetics and Design (3 cr)
ChE 433, ChE 434	Chemical Engineering Lab I, II (2 cr)
ChE 444	Process Analysis and Control (3 cr)

ChE 445	Digital Process Control (3 cr)
ChE 453	Process Analysis and Design I (3 cr)
ChE 454	Process Analysis and Design II (3 cr)
ChE 491	Seminar (1 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 277, Chem 278	Organic Chemistry I and Lab (4 cr)
Chem 305, Chem 307	Physical Chemistry and Lab (4 cr)
Chem 372, Chem 374	Organic Chemistry II and Lab (4 cr)
Engr 210	Engineering Statics (3 cr)
Engr 240	Introduction to Electrical Circuits (3 cr)
Engr 320	Engineering Thermodynamics and Heat Transfer (3 cr)
Engr 335	Engineering Fluid Mechanics (3 cr)
Math 170	Analytic Geometry and Calculus (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Phys 211	Engineering Physics I (3 cr)
Phys 212	Engineering Physics II (3 cr)

Chemical engineering or Material Science and Engineering numbered 390 or greater technical electives (3 cr)
Chemical/bioscience elective course (3 cr)
Chemical/bioscience elective lab (1 cr)
Computer science elective in a programming language (3 cr)
Economics elective (3 cr)
Humanities and Social Sciences electives (9 cr)
Communication electives (2 cr)
Mathematics electives numbered 300 or greater (excluding any 398, 498, or 598 Internship) (3 cr)
Technical electives in math, science, or engineering numbered 300 or greater (6 cr)

Courses to total 128 credits for this degree, not counting Engl 101, any 398 (Internship), any 498 (Internship), any 598 (Internship), or mathematics courses numbered lower than Math 170, and other courses that might be required to remove deficiencies.

Students majoring in chemical engineering must earn a grade of C or better in each of the following courses before registration is permitted in upper-division chemical engineering courses: Chem 111 and Chem 112; ChE 223; Engr 210, Engr 320, and Engr 335; and Math 275 and Math 310.

Students transferring ChE 223 or its equivalent from a university without an ABET accredited chemical engineering program must pass a test on the subject matter of this course before acceptance of the course for certification.

A passing grade is required in each of the following courses before registration is permitted in upper-division chemical engineering courses: ChE 123, computer science elective, Engl 102, Math 170 and Math 175, and Phys 211 and Phys 212.

Any student majoring in chemical engineering may accumulate no more than four grades of D or F in UI mathematics, science, or engineering courses that are used to satisfy junior certification requirements. Included in this number are multiple repeats in a single class or single repeats in multiple classes. A warning will be issued in writing to students who have accumulated two grades of D or F in UI mathematics, science, or engineering courses used to satisfy curricular requirements.

An average GPA of at least 2.0 is required for all chemical engineering courses used to satisfy the curricular requirements.

Materials Science and Engineering (B.S.M.S.E.)

Required course work includes the university requirements (see regulation J-3) and the following:

Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 305	Physical Chemistry (3 cr)
Chem 307	Physical Chemistry Lab (1 cr)
Engl 317	Technical Writing (3 cr)
Engr 210	Engineering Statics (3 cr)
Engr 240	Introduction to Electrical Circuits (3 cr)
Engr 335	Engineering Fluid Mechanics (3 cr)
Engr 350	Engineering Mechanics of Materials (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
MSE 101	Intro to Metallurgy and Materials Science (2 cr)
MSE 201	Elements of Materials Science (3 cr)
MSE 308	Thermodynamics of Materials (3 cr)
MSE 313	Physical Metallurgy (4 cr)
MSE 340	Transport and Rate Processes I (4 cr)
MSE 412	Mechanical Behavior of Materials (3 cr)
MSE 413	Phase Equilibria in Materials (3 cr)
MSE 417	Instrumental Analysis (3 cr)
MSE 423	Corrosion (3 cr)
MSE 427	Ceramic Materials (3 cr)
MSE 432	Fundamentals of Thin Film Fabrication (3 cr)
MSE 434	Fundamentals of Polymeric Materials (3 cr)
MSE 453	Process Analysis and Design I (3 cr)
MSE 454	Process Analysis and Design II (3 cr)
MSE 456	Metallic Materials (3 cr)
MSE 464	Materials Physics and Engineering (3 cr)
Phil 103	Ethics (3 cr)
Phys 211	Engineering Physics I (3 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Stat 301	Probability and Statistics (3 cr)

Computer Science elective in a programming language (3 cr)
Economics Elective (3 cr)
Humanities and Social Science electives (6 cr)
MSE or ChE elective numbered 300 or greater (3 cr)
Technical electives in math, science, or engineering numbered 300 or greater (excluding any 398, 498, or 598 Internship) (3 cr)

Courses to total 127 credits for this degree, not counting Engl 101, any 398 (Internship), any 498 (Internship), any 598 (Internship),or mathematics courses numbered lower than Math 170, and other courses that might be required to remove deficiencies.

Students majoring in materials science engineering must earn a grade of C or better in each of the following courses before registration is permitted in upper-division materials science engineering courses: Chem 111 and Chem 112, Engr 210 and Engr 335, Math 275 and Math 310, MSE 201, and Phys 211 and Phys 212.

A passing grade is required in each of the following courses before registration is permitted in upper-division materials science engineering courses: computer science elective, Engl 102, Math 170 and Math 175, and MSE 101.

Any student majoring in materials science engineering may accumulate no more than four grades of D or F in UI mathematics, science, or engineering courses that are used to satisfy junior certification requirements. Included in this number are multiple repeats in a single class or single repeats in multiple classes. A warning will be issued in writing to students who have accumulated two grades of D or F in UI mathematics, science, or engineering courses used to satisfy curricular requirements.

An average GPA of at least 2.0 is required for all materials science engineering courses used to satisfy the curricular requirements.

Chemical and Materials Engineering Academic Minor Requirements

Materials Science and Engineering Minor

(Note: If completing both the Materials Science and Engineering major or minor and the Metallurgical Engineering minor, students must have 6 unique credits towards each minor)

MSE 201	Elements of Materials Science (3 cr)

And 17 cr from the following courses:

Engr 350	Engineering Mechanics of Materials (3 cr)
MSE 313	Physical Metallurgy I (4 cr)
MSE 340 or ChE 340	Transport and Rate Processes I (4 cr)
MSE 341	Particulate Materials Processing (4 cr)
MSE 412	Mechanical Behavior of Materials (3 cr)
MSE 423	Corrosion (3 cr)
MSE 427	Ceramic Materials (3 cr)
MSE 432	Fundamentals of Thin Film Fabrication (3 cr)
MSE 434	Fundamentals of Polymeric Materials (3 cr)
MSE 438	Fundamentals of Nuclear Materials (3 cr)
MSE 456	Metallic Materials (3 cr)
MSE 464	Materials Physics and Engineering (3 cr)
Phys 212	Engineering Physics II (3 cr)

Courses to total 20 credits for this minor

Metallurgical Engineering Minor

MSE 201	Elements of Materials Science (3 cr)
MSE 313	Physical Metallurgy (4 cr)
MSE 344	Low Temperature Processing of Materials (3 cr)
MSE 442	High Temperature Processing of Materials (3 cr)
MSE 456	Metallic Materials (3 cr)

And 6 cr from the following courses:

Engr 350	Engineering Mechanics of Materials (3 cr)
MSE 308	Thermodynamics of Materials (3 cr)
MSE 340 or ChE 340	Transport and Rate Processes I (4 cr)
MSE 341	Particulate Materials Processing (4 cr)
MSE 423	Corrosion (3 cr)
MSE 438 or NE 438	Fundamentals of Nuclear Materials (3 cr)
Phys 212	Engineering Physics II (3 cr)

Courses to total 20 credits for this minor

Chemical and Materials Engineering Graduate Academic Certificates Requirements

Advanced Materials Technology Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all course work for this academic certificate.

Twelve credits from the following:

MSE 434	Fundamentals of Polymeric Materials (3 cr)
MSE 456	Metallic Materials (3 cr)
MSE 523	Corrosion (3 cr)
MSE 527	Ceramic Materials (3 cr)
MSE 538	Fundamentals of Nuclear Materials (3 cr)
MSE 564	Materials Physics and Engineering (3 cr)

Courses to total 12 credits for this certificate

Chemical and Materials Engineering Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Chemical and Materials Engineering. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. Majors are available in chemical engineering, materials science and engineering, and metallurgical engineering. General M.S. requirements apply. All students entering the chemical engineering program must complete ChE 515, ChE 529, and ChE 541.

Master of Science degrees in metallurgical engineering, and materials science and engineering are offered through the Engineering Outreach program. Degrees through Engineering Outreach have both thesis and non-thesis options, but otherwise have the same requirements (i.e., 30 credits) as degree programs offered on the Moscow campus.

Master of Engineering. General M.Engr. requirements apply.

Doctor of Philosophy. Majors are available in chemical engineering and materials science and engineering While most students entering the graduate program possessing only the bachelor's degree will first earn the M.S., it is possible to bypass the M.S. and work directly toward the Ph.D. Students electing this option will be expected to critically analyze a current research area as part of their degree requirements. This will constitute their Ph.D. qualifying examination. For others, the oral M.S. thesis examination serves as the Ph.D. qualifying examination. A written research proposal modeled after those submitted to such agencies as the National Science Foundation is required as part of the requirements for the Ph.D.

Department of Chemistry

Ray von Wandruszka, Dept. Chair (116 Malcolm M. Renfrew Hall 83844-2343; phone 208/885-6552; chemoff@uidaho.edu). Faculty: Thomas E. Bitterwolf, Eric B. Brauns, I. Francis Cheng, W. Daniel Edwards, T. Rick Fletcher, Patrick J. Hrdlicka, Sharon J. Hutchison, Jacob Magolan, Sofie P. Pasilis, Jean'ne M. Shreeve, Daniel S. Stelck, Ray von Wandruszka, Chien M. Wai, Richard V. Williams.

Chemistry is the central science; the foundation on which a variety of applied and nonapplied disciplines build. Chemistry deals with the composition, structure, and properties of substances and the changes they undergo. It is the study of the materials of which the entire universe is composed. Chemistry graduates will find an impressive array of options and exciting opportunities in fields such as basic research, environmental protection, instrumentation, the search for and synthesis of new therapeutic drugs, new product and process development, technical marketing, market research, forensic chemistry, teaching at all levels, and information science. Moreover, an education in chemistry is valuable in health sciences such as medicine, pharmacology, clinical chemistry, and industrial hygiene. It can be useful as well in nontechnical areas such as advertising, journalism, patent law, banking, and investment counseling. The options are bounded only by the limits of one's imagination.

There are four distinct undergraduate curricula designed to meet a wide range of professional needs. The professional option is the curriculum of choice for students who are interested in practicing chemistry as a career, including graduate study for an advanced degree in chemistry or a related field. The degree is certifiable to the American Chemical Society. The general chemistry option provides a suitable foundation for those students needing a strong background in chemistry, but not necessarily aspiring to become professional chemists, such as those in Education or Chemical Engineering. The pre-medical option has been designed to serve the needs of those students interested in careers in medicine, pharmacy, dentistry, or other health related fields. The forensics option is a full-fledged chemistry degree that prepares students for a career in forensic science.

Students majoring in chemistry at UI have the very good fortune to interact with an award-winning, distinguished teaching faculty. They have a unique opportunity to participate in undergraduate research in a nurturing environment where they work side by side with graduate students, postdoctoral fellows, and faculty members. Very often the research carried out by undergraduates results in publications in leading chemical journals. As a result of the strong research programs in the department, undergraduates have the opportunity in their courses to have hands-on experience with, or to acquire data from, modern sophisticated instrumentation such as FT nuclear magnetic resonance spectrometers, gas chromatographs interfaced with mass spectrometers, and laser Raman, infrared and ultraviolet spectrometers, in addition to the more classical techniques. Considerable use of computers is made in laboratory courses and as an aid to instruction. Because our students receive a first-class education, they are in demand by prospective employers and graduate schools.

The Chemistry Department trains its B.S. graduates to attain a high level of familiarity with:

- basic chemical concepts and fundamental chemical processes;
- organic synthesis and characterization;
- analytical and environmental approaches and problem solving;
- inorganic, material, and nuclear chemical concepts and applications;
- physical chemical aspects of natural systems and theoretical modeling thereof.

In the course of their studies, students will acquire:

- strong lab techniques and synthetic skills;
- familiarity with the chemical literature and relevant search techniques;
- an awareness of safety issues;
- communication skills;
- problem solving skills;
- basic research skills;
- a sense of professionalism and competence.

M.S. and Ph.D. degrees are offered in chemistry with concentrations in analytical, inorganic, organic, and physical chemistry.

Entering graduate students (master's and doctoral candidates) are expected to demonstrate proficiency in chemistry by taking a series of four examinations in the areas of analytical (qualitative, quantitative, and instrumental), inorganic, organic (including qualitative organic analysis), and physical chemistry. These must be taken at the first offering after the student's arrival. These examinations are offered immediately before registration week of the fall and spring semesters. Questions are at an advanced undergraduate level.

Students who score at greater than the 50th percentile (established nationally) on a qualifying examination may begin with a 500-level course in that area in their first semester and are given credit for the relevant 400-level course (Chem 455, 466, 476, and/or 496). Students who score below the 50th percentile on an examination will begin course work

in the respective area: analytical, Chem 454 (the lab in this course may be bypassed by petition if the student can present evidence of adequate exposure; previous course at B level); physical, Chem 495; inorganic, Chem 463; organic, Chem 473.

All candidates for the M.S. or Ph.D. degree in chemistry are required to have teaching experience, here or elsewhere, as part of their training and will complete Chem 506 (Introduction to Teaching and Research Skills) at their first opportunity on entering the program.

Chemistry graduate students will acquire advanced perspectives in analytical, inorganic, organic, and physical chemistry. They will gain a detailed understanding of the problems, challenges, and opportunities in their chosen subdiscipline, and an in-depth familiarity with the theoretical underpinnings and methodologies in their specific research area. Graduate students will also acquire skills in teaching, directing, and mentoring others.

Courses

See the course description section for courses in Chemistry (Chem).

Chemistry Undergraduate Curricular Requirements

Chemistry (B.S.)

Required course work includes the university requirements (see regulation J-3) and completion of one of the following options.

A. General Option

This degree provides the basic elements needed for a career in chemistry. It is especially suited for students who wish to enter other professions that require a background in science, including high school teaching, patent law, and technology management.

Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277, Chem 278	Organic Chemistry I and Lab (4 cr)
Chem 305, Chem 307	Physical Chemistry I and Lab (4 cr)
Chem 306, Chem 308	Physical Chemistry II and Lab (4 cr)
Chem 372, Chem 374	Organic Chemistry II and Lab (4 cr)
Chem 409	Proseminar (1 cr)
CS 101	Introduction to Computer Science or higher CS course (3 cr)
Math 170	Analytic Geometry and Calculus (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)

One of the following (4 cr):

Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)

Courses to total 120 credits for this degree

B. Professional Option

Note: Students who complete this option will be certifiable to the American Chemical Society.

This curriculum provides a suitable background for students wishing to enter the profession of chemistry or to pursue graduate study for an advanced degree in chemistry or a related field.

Biol 380	Biochemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277, Chem 278	Organic Chemistry I and Lab (4 cr)
Chem 305, Chem 307	Physical Chemistry I and Lab (4 cr)
Chem 306, Chem 308	Physical Chemistry II and Lab (4 cr)
Chem 372, Chem 374	Organic Chemistry II and Lab (4 cr)
Chem 409	Proseminar (1 cr)
Chem 454	Instrumental Analysis (4 cr)
Chem 463	Inorganic Chemistry (3 cr)
Chem 464	Inorganic Chemistry (3 cr)
Chem 465	Inorganic Chemistry Laboratory (1 cr)
Chem 491	Research (2 cr)
CS 101	Introduction to Computer Science or higher CS course (3 cr)
Math 170	Analytic Geometry and Calculus (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)

Two advanced chemistry courses approved by the Chemistry Department in accordance with American Chemical Society stipulations.

One of the following (4 cr):

Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)

Courses to total 120 credits for this degree

C. Pre-Medical Option

This curriculum provides a suitable foundation in chemistry for students who intend to enter careers in medicine, dentistry, pharmacy, etc.

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 380, Biol 382	Biochemistry I and Lab (6 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277, Chem 278	Organic Chemistry I and Lab (4 cr)
Chem 305, Chem 307	Physical Chemistry I and Lab (4 cr)
Chem 306, Chem 308	Physical Chemistry II and Lab (4 cr)
Chem 372, Chem 374	Organic Chemistry II and Lab (4 cr)
Chem 409	Proseminar (1 cr)
Chem 472	Medical Chemistry (3 cr)
CS 101	Introduction to Computer Science or higher CS course (3 cr)
Math 170	Analytic Geometry and Calculus (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)

In addition, two courses must be selected from the following list:

Chem 454	Instrumental Analysis (4 cr)
Chem 473	Intermediate Organic Chemistry (3 cr)

Courses to total 120 credits for this degree

D. Forensics Option

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Biol 380, Biol 382	Biochemistry I and Lab (6 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277, Chem 278	Organic Chemistry I and Lab (4 cr)
Chem 305, Chem 307	Physical Chemistry and Lab (4 cr)
Chem 306, Chem 308	Physical Chemistry and Lab (4 cr)
Chem 372, Chem 374	Organic Chemistry II and Lab (4 cr)
Chem 409	Proseminar (1 cr)
Chem 454	Instrumental Analysis (4 cr)

Geol 426	Principles of Forensic Mineralogy and Geology (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Stat 251	Statistical Methods (3 cr)

Any CS course (101 or higher) (3 cr)

One of the following (3-4 cr):

Biol 310, Biol 315	Genetics and Lab (4 cr)
Gene 314	General Genetics (3 cr)

One of the following (4 cr):

Phys 212, Phys 212L	Engineering Physics II and Lab **or**
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)

Courses to total 120 credits for this degree

Chemistry Academic Minor Requirements

Chemistry Minor

This program is designed to give a non-chemistry major a sufficient background in general chemistry and laboratory techniques to improve his or her employment prospects as a laboratory technician and to improve the technical background of the student interested in science education or communication.

Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277, Chem 278	Organic Chemistry I and Lab (4 cr)
Chem 302, Chem 303	Principles of Physical Chemistry and Lab (4 cr)
Chem 372	Organic Chemistry II (3 cr)

Courses to total 20 credits for this minor

Chemistry Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Chemistry. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. (A) Thesis option: General M.S. requirements apply. At least one credit must be earned in Chem 501. (B) Non-thesis option: A minimum of 30 credits in course work is required and must be divided among the following: (1) 20 credits in chemistry courses numbered 500 or above (including one credit in Chem 501); (2) 10 credits in chemistry courses numbered 400 or above, or related courses numbered 300 or above. A written and/or oral examination that covers graduate course work must be taken during the final semester in residence.

Doctor of Philosophy – Major in Chemistry. The student will enroll for at least 33 credit hours in courses. All students will take Chem 509 (Advanced Physical Chemistry) and obtain two credits in Chem 501 (Seminar). In addition, sufficient credit hours of research will be completed to meet a total minimum registration requirement of 78 credits.

The student is encouraged to take courses in related fields, e.g., mathematics, physics, chemical engineering, geochemistry, computer science, electronics, or biochemistry. This work can be designated as the minor or supporting field on the study program.

All Ph.D. candidates are required to participate in seminar (Chem 501) while in residence, even though not formally registered for credit in this course. Registration may be for zero credit.

Cumulative examinations are general examinations in the student's field of specialization to judge the breadth of knowledge gained by the student from courses, lectures, and the literature, as well as the ability to use this knowledge in the solution of a variety of problems. Once started, a student must continue to take these examinations each time they are offered whenever the student is in residence and is eligible. If a given examination is not taken, a failing grade is received. Examinations are approximately three hours in length and are given four times each semester and, in exceptional cases, during the summer session. Normally, students will take examinations only in the chosen area of concentration, but they may elect to take them in other areas of chemistry. The student must obtain an average grade of 50% in eight examinations to continue in the Ph.D. program.

Shortly after completing the final cumulative examination, Ph.D. students are required to submit a written proposal on their doctoral research project and defend it at an oral examination by their graduate committee (Chem 590). The proposal will be limited to a maximum of 5,000 words, excluding the bibliography, and will consist of a statement of the proposed doctoral research problem, an in-depth discussion of the relevant literature, a listing of the major research objectives, a summary of the proposed experimental work plan, and an appropriate bibliography.

Doctor of Philosophy – Major in Biochemistry. A Ph.D. with major in biochemistry is offered by the Department of Biological Sciences. See that departmental section for information on the degree.

Department of Civil Engineering

Richard J. Nielsen, Dept. Chair (104 Buchanan Engr. Lab. 83844-1022; phone 208/885-6782). Faculty: Ahmed Abdel-Rahim, Richard G. Allen, Fouad M. Bayomy, An Chen, Erik R. Coats, Fritz R. Fiedler, Peter Goodwin, S.J. Jung, Michael D. Kyte, Chyr Pyng Liou, Michael Lowry, Richard J. Nielsen, Sunil Sharma, Daniele Tonina, Elowyn Yager.

Civil engineering consists of the application of scientific principles to the design, construction, and maintenance of public and private works that constitute the infrastructure for human populations. From a historical aspect, the pyramids of Egypt, the water resources systems that supported the agricultural society of ancient Babylonia and Assyria, the public buildings of Greece and Rome, the roads that linked the Roman Empire, and the railroads and barge canals of the early United States were all civil engineering projects that served the people of their times. Today's civil engineers are still involved in building and maintaining the infrastructure necessary for modern society to function. A civil engineer may be involved in the design and construction of highways, bridges, buildings, water conveyance systems, water and wastewater treatment plants, dams, airports, and other constructed projects. Civil engineers may also be involved in planning for traffic controls, flood plain management, and water and air quality management. The graduates of civil engineering programs may work with consulting engineering firms, governmental agencies, construction contractors, or manufacturing industries.

In the foreseeable future, population growth and relocation should create a steady demand for infrastructure growth. The concept of environmentally sensitive and resource sustainable development is emerging as the tenet for future growth. Civil engineers will have to apply evolving technologies and develop innovative solutions to ensure wise stewardship of our limited natural resources. Students who enter civil engineering can anticipate a challenging and rewarding career.

Lower-division courses in civil engineering consist of a common core of basic courses in science, mathematics, and engineering required of most students within the college. Required course work in the junior and senior years provides the student with a broad background in civil engineering subjects while 18 credits of technical electives permit some specialization at the undergraduate level. For civil engineering student interest in geology, there is an option to complete a minor in Geologic Engineering.

The Department of Civil Engineering occupies the first floor of the Buchanan Engineering Laboratory Building with some additional office and laboratory space in the basement and on the second floor of the building. Maintenance and replacement of existing equipment is provided by funds from research projects, from alumni donations, from lab fees, and from state educational funds. Instructional and research equipment include modern computing and data acquisition equipment.

The department offers three graduate degree programs in civil engineering: (1) Master of Science (30 credits, with thesis), (2) Master of Engineering (33 credits, non-thesis), and (3) Doctor of Philosophy (in limited specialty areas). It also offers the Master of Engineering in Engineering Management and a Master of Science in Geologic Engineering. Course work requirements in each of the degree programs are relatively flexible depending on student interest and course availability. Financial assistance is available on a competitive basis in the form of instructional and graduate research assistantships. Students interested in graduate studies should select a specialty area in which they wish to study. Foreign students must have a TOEFL score of at least 550 for admission to any departmental graduate degree program.

Graduate study is offered with specialization in structures and structural mechanics, highway and pavement materials, soil mechanics, transportation, hydraulics and water resources, geological engineering and sanitary engineering. Interdisciplinary programs of study are encouraged for interested students. As examples, students specializing in sanitary engineering may do considerable work in chemical engineering or biochemistry,

and specialization in soil mechanics may involve study in geology or mining engineering.

The mission of the Department of Civil Engineering is to provide a high quality education at both the undergraduate and graduate level, emphasizing the needs of Idaho and the region. The goals and objectives of the program include graduating students that will be: (1) Competent in the fundamentals of engineering, (2) Capable of designing and describing civil engineering systems and processes (3) Aware of the social and economic implications of engineered projects, and (4) Responsible, ethical, and committed to life-long learning. Additionally, the department is committed to (1) maintaining experienced, professional instructors, modern facilities, and close interaction between the department and the professional engineering community in Idaho, (2) extending the knowledge base in civil engineering through research, continuing education, technology transfer, and professional practice, and (3) providing these services in the most cost effective manner for both the students and the taxpayers. Progress toward these goals and objectives is assessed by student performance on the nationally administered Fundamentals of Engineering Exam, exit interviews with graduating students, surveys of graduated students and their employers, and by an external advisory committee composed of practicing civil engineers from the state and the region.

The Bachelor of Science program in Civil Engineering is accredited by the Engineering Accreditation Commission of Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700.

Courses

See the course description section for courses in Civil Engineering (CE), Engineering Management (EM) and Geological Engineering (GeoE).

Civil Engineering Undergraduate Curricular Requirements

Civil Engineering (B.S.C.E.)

To graduate in this program, a minimum grade of C must be earned in all engineering, mathematics, and science courses used to satisfy the curriculum.

Any student majoring in civil engineering may accumulate no more than 14 credits of D or F in mathematics, science, technical elective, or engineering courses that are used to satisfy graduation requirements. Included in this number are multiple repeats of a single class or single repeats in multiple classes and courses transferred from other institutions. A warning will be issued in writing to students who have accumulated 7 credits of D or F in mathematics, science, technical elective, or engineering classes used to satisfy curricular requirements.

Required course work includes the university requirements (see regulation J-3) and:

CE 115	Introduction to Civil Engineering (1 cr)
CE 211	Engineering Surveying (3 cr)
CE 215	Civil Engineering Analysis and Design (3 cr)
CE 322	Hydraulics (3 cr)
CE 325	Fundamentals of Hydrologic Engineering (3 cr)
CE 330	Fundamentals of Environmental Engineering (3 cr)
CE 342	Theory of Structures (3 cr)
CE 357	Properties of Construction Materials (4 cr)
CE 360	Fundamentals of Geotechnical Engineering (4 cr)
CE 372	Fundamentals of Transportation Engineering (4 cr)
CE 491	Civil Engineering Professional Seminar (1 cr)
CE 494	Senior Design Project (3 cr)
Chem 111	Principles of Chemistry I (4 cr)
Engl 317	Technical Writing (3 cr)
Engr 105	Engineering Graphics (2 cr)
Engr 210	Engineering Statics (3 cr)
Engr 220	Engineering Dynamics (3 cr)
Engr 335	Engineering Fluid Mechanics (3 cr)
Engr 350	Engineering Mechanics of Materials (3 cr)
Engr 360	Engineering Economy (2 cr)
Math 170	Analytic Geometry and Calculus (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Phys 211	Engineering Physics I (3 cr)
Stat 301	Probability and Statistics (3 cr)

One of the following (3 cr):

AmSt 301	Studies in American Culture (3 cr)
Phil 103	Ethics (3 cr)

One of the following (3-4 cr):

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
Econ 272	Foundations of Economic Analysis (4 cr)

One of the following (3 cr):

Engr 240	Introduction to Electrical Circuits (3 cr)
Engr 320	Engineering Thermodynamics and Heat Transfer (3 cr)

Two of the following (8-9 cr):

Biol 115	Cells and the Evolution of Life (4 cr)
Chem 112	Principles of Chemistry II and Lab (5 cr)*
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)*
Geol 111, Geol 111L	Physical Geology for Science Majors and Lab (4 cr)
MMBB 154, MMBB 155	Introductory Microbiology and Lab (4 cr)

**Note: Students may use Chem 112 or Phys 212/212L, but not both.*

Technical electives. To ensure sufficient breadth, technical electives must include at least 15 credits from at least three of the following five groups (21 cr):

Environmental:

CE 431	Design of Water and Wastewater Systems I (3 cr)
CE 432	Design of Water and Wastewater Systems II (3 cr)
CE 433	Water Quality Management (3 cr)

Geotechnical:

CE 460	Geotechnical Engineering Design (3 cr)
GeoE 436	Geological Engineering Analysis and Design (3 cr)

Hyd/Water Resources:

CE 421	Engineering Hydrology (3 cr)
CE 422	Hydraulic Design (3 cr)
CE 428	Open Channel Hydraulics (3 cr)

Structures:

CE 441	Reinforced Concrete Design (3 cr)
CE 444	Steel Design (3 cr)
CE 445	Matrix Structural Analysis (3 cr)

Transportation:

CE 474	Traffic Systems Design (3 cr)
CE 475	Pavement Design and Evaluation (3 cr)

Other CE 400 level classes (except CE 411), or approved alternatives, may be used to complete the required 21 cr of tech electives.

Courses to total 128 credits for this degree, not counting math below 170, English below 102, and any classes needed to remove deficiencies.

Civil Engineering Academic Minor Requirements

Geological Engineering Minor

CE 360	Fundamentals of Geotechnical Engineering (4 cr)
CE 460	Geotechnical Engineering Design (3 cr)
Geol 111, Geol 111L	Physical Geology for Science Majors and Lab (4 cr)
Geol 345	Structural Geology (3-4 cr)
Geol 422	Principles of Geophysics (4 cr)
GeoE 407	Rock Mechanics (3 cr)
GeoE 436	Geological Engineering Analysis and Design (3 cr)
Hydr 409	Quantitative Hydrogeology (3 cr)

Approved technical elective in the geotechnics area (3 cr)

Courses to total 20 credits for this minor

Civil Engineering Graduate Academic Certificates Requirements

Applied Geotechnics Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

GeoE 407	Rock Mechanics (3 cr)
GeoE 436	Geological Engineering Analysis and Design (3 cr)

Electives (6 cr):

GeoE 428	Geostatistics (3 cr)
GeoE 465	Excavation and Materials Handling (3 cr)
GeoE 517	Tunnel Design and Construction (3 cr)
GeoE 535	Seepage and Earth Dams (3 cr)

Courses to total 12 credits for this certificate

Structural Engineering Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

CE 546	Finite Element Analysis (3 cr)

One course from the following (3 cr):

CE 542	Advanced Design of Steel Structures (3 cr)
CE 547	Advanced Reinforced Concrete (3 cr)

Electives (6 cr):

CE 504	Special Topics (3 cr)
CE 510	Advanced Mechanics of Materials (3 cr)
CE 541	Reliability of Engineering Systems (3 cr)
CE 542	Advanced Design of Steel Structures (3 cr)
CE 543	Dynamics of Structures (3 cr)
CE 545	Matrix Structural Analysis (3 cr)
CE 547	Advanced Reinforced Concrete (3 cr)

Electives may include one of the following:

CE 521	Sedimentation Engineering (3 cr)
CE 561	Engineering Properties of Soils (3 cr)
CE 562	Advanced Foundation Engineering (3 cr)
CE 566	Geotechnical Earthquake Engineering (3 cr)
CE 575	Advanced Pavement Design and Analysis (3 cr)

Courses to total 12 credits for this certificate

Water Resources Engineering Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

CE 428	Open Channel Hydraulics (3 cr)

One course from the following (3 cr):

CE 519	Fluid Transients (3 cr)
CE 521	Sedimentation Engineering (3 cr)

Electives (6 cr):

CE 421	Engineering Hydrology (3 cr)
CE 520	Fluid Dynamics (3 cr)
CE 528	Stochastic Hydrology (3 cr)
CE 533	Water Quality Management (3 cr
CE 546	Finite Element Analysis (3 cr)
Engr 428	Numerical Methods (3 cr)

Courses to total 12 credits for this certificate

Civil Engineering Graduate Degree Programs

Graduate study is offered with specialization in the following subdisciplines of civil engineering: hydraulics and water resources engineering, environmental and sanitary engineering, structural engineering and structural mechanics, geotechnical engineering, and transportation engineering.

Master's Degrees. In addition to meeting the general requirements of the College of Graduate Studies stated in this catalog, master's degree students are required to complete at least 12 credits of 500s level courses having a CE prefix, not including CE 500, CE 502, CE 503, CE 597, CE 598, and CE 599. Master's degree students are required to complete at least 12 credits in courses associated with one of the subdisciplines of civil engineering listed above. On their plan of study, candidates are restricted to a maximum of 6 credits of coursework with a grade of 'C'.

An approved thesis is required for Master of Science degrees. A maximum of 6 credits of CE 500, Master's Research and Thesis, can be used to fulfill M.S. degree requirements.

A minimum of 33 credits is required for the Master of Engineering degree. A thesis is not required and credit is not given for CE 500. A maximum of 3 credits of CE 502, Directed Study, can be used to satisfy M.Engr. degree requirements. M.Engr. students are required to demonstrate the ability to write a technical paper or report.

A final comprehensive examination conducted by the student's committee is required for master's degrees.

Applicants for admission to the master's degree programs generally will have a B.S. degree in civil engineering. Graduate degree applicants not holding B.S. degrees in civil engineering are required to show evidence of completing the following undergraduate coursework: mathematics through differential equations, and one semester each of chemistry, physics, and engineering statics. Once admitted, additional preparatory coursework will be determined by the student's advisory committee and/or as pre-requisites to courses listed in the student's study plan

Doctor of Philosophy. Major in Civil Engineering. Persons interested in pursuing a doctoral degree must contact a correspondent in the department well in advance of admission to the Graduate College. Preliminary screening of candidates and program planning for those admitted are essential features of the Ph.D. program. Programs are offered with specialization in the following general areas: (1) water resources and hydraulics; (2) structures, structural mechanics, and construction materials; (3) geotechnical engineering with a major in soil mechanics; (4) transportation engineering; and (5) environmental engineering. The qualifying examination is written and/or oral, and the preliminary examination is written and oral.

Department of Computer Science

Gregory W. Donohoe, Dept. Chair (237 Janssen Engr. Bldg. 83844-1010; phone 208/885-6501; chair@cs.uidaho.edu; www.cs.uidaho.edu). Faculty: James Alves-Foss, Bruce M. Bolden, David Buehler, , Robert B. Heckendorn, Robert E. Hiromoto, Clinton L. Jeffery, William S. Junk, Axel W. Krings, Milos Manic, John C. Munson, Paul W. Oman, Robert Rinker, Terence Soule. Adjunct Faculty: Leonard Bond, Wayne F. Boyer, James R. Buffenbarger, W. Scott Harrison, Miles A. McQueen, Carol Taylor, Chunsheng Xin.

Computer science is the systematic study of algorithmic processes that describe and transform information: their theory, analysis, design, efficiency, implementation, and application. It is a broad discipline with an ever-growing array of opportunities. Graduates in this field can find employment in a wide spectrum of public and private enterprises.

The field of computer science encompasses many areas of specialization. One may find a personal niche in software development, systems development and hardware selection, studies of compatibility between hardware and software, programming language development and modification, information assurance, bioinformatics or perhaps a combination of these and any number of other diverse computer-oriented applications and concepts. Because of this diversity in potential application areas, the computer scientist must be familiar with the language of the physical or biological sciences, mathematics, and English. If the computer is to extend its role as a benefit to mankind, the computer scientist must be broadly educated and conversant with the many implications of the powerful tool that he or she is controlling and developing.

The Department of Computer Science was formed in 1981 and is in the College of Engineering. The Bachelor of Science in Computer Science has been offered at UI since 1977. This program consists of a carefully designed computer science core, surrounded by an extensive array of challenging technical elective courses. The core consists of courses in algorithms and data structures, programming languages, computer architecture, operating systems, software engineering, theory of computation, and a senior capstone design experience. All of these courses have important components of theory, abstraction, and design.

The Bachelor of Science program in computer science is accredited by the Computing Accreditation Commission (CAC) of the Accreditation Board for Engineering and Technology (ABET) 111 Market Place, Suite 1050, Baltimore, MD 21202 - 4012 - telephone: (410) 347-7700.. The department has made substantial contributions to achieving the University's designation by the US Department of Homeland Security, as a National Center of Excellence in Information Assurance Education.

The department offers graduate programs leading to the degrees, Master of Science and Doctor of Philosophy. These programs combine a core of advanced work with a complement of elective courses selected to provide a focused plan of study.

Students in computer science have the unique opportunity to draw from the expertise of an outstanding faculty with extensive experience in industry, teaching, and research. Computers currently available to students include an extensive department network of UNIX, Linux, and Windows-based workstations and several campus personal computer laboratories for research focus. All major campus and department computer systems are networked together with Internet connections, providing a state-of-the-art computing environment. The department was instrumental in

establishing the Center for Secure and Dependable Systems (CSDS) and the Initiative for Bioinformatics and Evolutionary Studies (IBEST). The importance of these labs can be seen from the range of private and government funding which supports the department's research in computer security, computer reliability, bioinformatics, evolutionary computation and high performance computing.

Courses

See the course description section for courses in Computer Science (CS).

Computer Science Undergraduate Curricular Requirements

Computer Science (B.S.C.S.)

Required course work includes the university requirements (see regulation J-3) and:

General Education Electives (5 cr):

Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 317	Technical Writing (3 cr)

Computer Science (43 cr):

CS 105	Computer Science as a Profession (2 cr)
CS 120	Computer Science I (4 cr)
CS 121	Computer Science II (4 cr)
CS 150	Computer Organization and Architecture (3 cr)
CS 210	Computing Languages (3 cr)
CS 240	Computer Operating Systems (3 cr)
CS 270	System Software (3 cr)
CS 383	Software Engineering (3 cr)
CS 385	Theory of Computation (3 cr)
CS 395	Analysis of Algorithms (3 cr)
CS 401	Contemporary Issues in Computer Science (1 cr)
CS 445	Compiler Design (4 cr)
CS 481	CS Senior Capstone Design II (3 cr)

Mathematics and Statistics (17 cr):

Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 176	Discrete Mathematics (3 cr)
Math 330	Linear Algebra (3 cr)
Stat 301	Probability and Statistics (3 cr)

One of the following laboratory science sequences (8-9 cr):

Biol 115 and Biol 116	Cells and the Evolution of Life and Organisms and Environments (8 cr)
Chem 111 and Chem 112	Principles of Chemistry I and Principles of Chemistry II (9 cr)
Phys 211, Phys 211L and Phys 212, Phys 212L	Engineering Physics I and Lab and Engineering Physics II and Lab (8 cr)
Phys 211, Phys 211L and Phys 213, Phys 213L	Engineering Physics I and Lab and Engineering Physics III and Lab (8 cr)

Science electives from the following sets of courses (4 cr):
Biology – all courses except Biol 102
Chemistry – all courses except Chem 100 and Chem 101
Environmental Science – only EnvS 101 and EnvS 102
Geography – only Geog 100, Geog 301, or Geog 401
Geology – all courses
Microbiology, Molecular Biology, and Biochemistry – all courses
Physics – all courses except Phys 100, Phys 200, Phys 400, and Phys 403

Upper-division technical electives selected to satisfy the credit distribution in these categories (15 cr):

Computer Science (12 cr) – any upper-division CS course except 499.

Mathematics (3 cr) – Math 275 or any upper-division Math or Stat course except Math 400, Math 404, Math 499, and Math 513-Math 519.

Courses to total 128 credits for this degree, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies. A minimum grade of 'C' is required in CS 120, CS 121, CS 150, CS 210, CS 240, CS 270, Math 170, Math 176, and Math 175 in order to graduate.

Students majoring in computer science must earn a grade of C or better in CS 120, CS 121, and CS 150 and a C or better in Math 176 before registration is permitted in 200 level CS courses. Students majoring in computer science must earn a grade of C or better in CS 210, CS 240, CS 270, and Math 170 and Math 175 before registration is permitted in upper-division CS courses.

Students must consult with their advisors when selecting electives within the curriculum to insure that their career objectives are met.

Computer Science Academic Minor Requirements

Computer Science Minor

CS 120	Computer Science I (4 cr)
CS 121	Computer Science II (4 cr)
CS 150	Computer Organization and Architecture (3 cr)
Math 176	Discrete Mathematics (3 cr)

Elective courses (6 cr):

CS 210	Computing Languages (3 cr)
CS 240	Computer Operating Systems (3 cr)
CS 270	System Software (3 cr)

Courses to total 20 credits for this minor

Computer Science Graduate Academic Certificates Requirements

Secure and Dependable Computing Systems Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

CS 536	Advanced Information Assurance Concepts (3 cr)

One of the following (3 cr):

CS 438	Network Security (3 cr)
CS 538	Network Security (3 cr)

Electives (6 cr):

CS 448	Survivable Systems and Networks (3 cr)
CS 449	Fault-Tolerant Systems (3 cr)
CS 504	Special Topics (3 cr)
CS 548	Survivable Systems and Networks (3 cr)
CS 549	Fault-Tolerant Systems (3 cr)

Courses to total 12 credits for this certificate

Computer Science Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and the Department of Computer Science. See the College of Graduate Studies section for the general requirements applicable to each degree. No 300-level course that is required in the B.S.C.S. curriculum may be used to satisfy the requirements of the graduate degree.

A graduate degree in computer science from UI prepares a student for a lifetime of discovery. It enables the graduate to advance the state of the art in computing, not merely to keep up with it. The graduate program develops the student's critical thinking, investigatory, and expository skills. The student will learn the foundations of computer science theory and application, and the interaction between the two. By understanding the extent and limitation of current knowledge in computer science, the graduate will learn to understand what issues are important and why. He or she will acquire the methodological skills to resolve important open problems and tackle challenging new projects. The student will learn to present problems and solutions, both orally and in writing. For examples of active research areas please visit the department's website www.cs.uidaho.edu.

The study of computer science at the graduate level requires mathematical maturity, skill in the use of high-level and machine-level programming languages, and basic knowledge of computer hardware. Admission to this program is highly competitive. An undergraduate degree in Computer Science is not a requirement. Students with a bachelor's degree from other closely allied undergraduate programs will be considered. Students who wish to enter the graduate program must ultimately demonstrate competence in specific areas equivalent to the material covered in several of the undergraduate computer science core courses. Normally a 3.0 undergraduate GPA and a Graduate Record Examination general (aptitude) score in the 60th percentile are the minimum admission requirements. Actual admission is based on a combination of undergraduate GPA and Graduate Record Examination scores. International students for whom English is a second language must have a TOEFL score of 550 or higher for the written test, 213 or higher for the computer based test, or 79 or higher for the internet-based test.

As a prerequisite to graduate program admission, competence in the following areas must be demonstrated: knowledge of a structured, high-level language; algorithms and data structures; and a full year of calculus.

If prerequisite requirements are met, a student who does not have an adequate coursework background in computer science may be admitted with deficiencies. He or she must then demonstrate knowledge of this material early on in their graduate studies by either taking the GRE Computer Science Subject Test and receiving a score in the 60th percentile or higher or by completing those courses in which he or she is deficient. Deficiency areas for graduate work in computer science are: computer organization and architecture; computer languages; computer operating systems; software engineering; analysis of algorithms; and theory of computation. Credit for deficiency courses cannot be counted toward the total credits required for the graduate degree.

Master of Science. The following are requirements for receiving an M.S. degree in computer science from UI. There is both a thesis and a non-thesis option, though in both options the student must complete courses in the graduate CS core and in a focused plan of study. In both options, the student must successfully complete at least 18 credit hours of 500-level courses and at least 18 credit hours of CS courses.

A graduate degree represents mastery of the theory underlying one's discipline, a graduate breadth requirement. This is the foundation on which further study should be based.

The student must acquire depth in at least one major area by developing a focused plan of study in consultation with the major advisor. This should be a program that investigates some aspect of computer science in depth, consistent with the goals of the graduate program in computer science.

The thesis option requires at least 30 credit hours of study. Specific requirements are: graduate breadth requirement; at least one semester of CS Graduate Seminar, CS 501 (1 cr); and Master's Research and Thesis, CS 500 (at least 6 cr). The thesis must be in the approved format and must represent significant scholarly achievement. The thesis must be presented at a public colloquium.

The non-thesis option requires at least 30 credit hours of study, up to 6 credits of which can be CS 580. Specific requirements are: graduate breadth requirement and at least one semester of CS Graduate Seminar, CS 501 (1 cr). At the end of the program, non-thesis students must pass a comprehensive examination that covers their graduate studies.

Doctor of Philosophy. The PhD degree represents a continuation in the mastery of the theory underlying computer science. A doctoral student develops a graduate program of at least 78 semester hours in consultation with his or her major professor and supervisory committee. The PhD graduate candidate must successfully complete the CS graduate breadth requirement. As a part of the program the student is required to include at least two semesters of CS 501 (graduate seminar). The student must have at least one full semester of teaching experience, with the teaching assignment determined by the student's supervisory committee. There is no foreign language requirement. The student must satisfy the residency requirement by spending at least two terms at the Moscow campus or a UI Residence Center. The purpose of the residency requirement is to provide the student with access to facilities, faculty, and colleagues.

The qualifying examination is a written and/or oral examination, administered by the student's graduate committee, which covers fundamental areas of computer science. The preliminary examination is an examination of a student's proposed dissertation research, including both a written proposal and an oral public presentation covering related research, preliminary results, and a research plan. The student must produce a dissertation, presenting an original, significant contribution to computer science. The dissertation should be publishable, in whole or in part, and should demonstrate the ability of the candidate to successfully initiate and pursue a significant, original research project. A public presentation and defense of the final dissertation is required. It is expected that all PhD students will publish the results of their research before completion of their degree.

Department of Conservation Social Sciences

Troy Elizabeth Hall, Dept. Head (19 CNR Bldg. 83844-1139; phone 208/885-7911; e-mail css@uidaho.edu; www.uidaho.edu/cnr/css. CSS Faculty: Troy E. Hall, Charles C. Harris, Karla Bradley Eitel, Edwin E. Krumpe, Tamara J. Laninga, Yen Hai Le, Nick Sanyal, Kelly Wendland, Patrick Wilson. CSS Affiliate Faculty: Brant Miller, Lee Vierling. CSS Adjunct Faculty: Carlos M. Chacon, David N. Cole, Travis Paveglio.

Programs in the Department of Conservation Social Sciences involve the study of how individual, private, non-profit and governmental institutions determine how land and natural resources are allocated and managed. The Department prepares professionals and helps build the capacity of organizations that protect and conserve the environment. The program prepares conservation professionals who: 1) Possess core skills relating to organizational management and leadership; 2) Are aware of new social science theories, approaches, and technological applications; 3) Can apply both social theory and practice to current conservation issues; 4) Can work across disciplinary and sector boundaries with diverse stakeholders; 5) Understand and apply key concepts related to protected area recreation and ecotourism, and; 5) Develop and incorporate a personal land ethic into their daily actions and relationships. Students receive a solid educational foundation by studying natural resources and their management. This is coupled with courses in the human dimensions of resource use, including a strong emphasis in sociology, psychology, geography, political science, economics, and communication.

The B.S.Nat.Resc.Consv. degree has two tracks: Conservation Science and Conservation Planning and Management. These prepare students for employment or graduate education in the social dimensions of natural resource and environmental management. Graduates find employment in private businesses; county, state, and national parks and protected areas; educational institutions; environmental non-profit organizations; and a variety of resource-management agencies such as the U.S. Forest Service, Bureau of Land Management, National Park Service, and others. Some students also pursue a second degree in ecology, environmental science, forestry, wildlife and fisheries, or range management to broaden their employability. Still others select foreign language coursework to prepare for careers in international conservation.

Graduates are prepared for a wide spectrum of career opportunities related to the human dimensions of conservation. Careers, however, usually begin in one of three general areas: environmental communication/education; parks, protected areas, and wilderness conservation; or land management policy and planning.

The department also offers thesis and non-thesis graduate programs (M.S. with a major in Natural Resources), as well as a Ph.D. These are multidisciplinary and provide students with the opportunity to combine interests in natural resource management and the social sciences. In cooperation with an advisory committee, each student develops a program of studies that supports his or her educational and professional interests. Graduate courses are available in this department and in supporting areas such as forest resources, landscape ecology, anthropology, geography, education, statistics, political science, sociology, and psychology.

Admission to graduate study normally requires completion of undergraduate course work in the natural and social sciences. Applicants who have completed their undergraduate degrees in fields not closely related may be required to make up deficiencies as determined by their advisory committees. In addition to the university's application requirements, the Graduate Record Examination (or other accepted graduate examination such as GMAT or LSAT) is required for consideration of all candidates from English-speaking countries. Admission is based on undergraduate grades, evidence of ability to complete graduate-level work, letters of recommendation, examination scores, the compatibility of the student's educational and career objectives with areas of concentration in the department, and the availability of departmental graduate faculty.

For additional information, consult the department head (208/885-7911) or visit the department website, www.uidaho.edu/cnr/css

Courses

See the course description section for courses in Conservation Social Sciences (CSS).

Conservation Social Sciences Undergraduate Curricular Requirements

Natural Resource Conservation (B.S.Nat.Resc.Consv.)

Required Course work includes the university requirements (see regulation J-3) and:

CSS 235	Society and Natural Resources (3 cr)
CSS 287	Foundations of Conservation Leadership and Management (taken simultaneously with NR 101) (3 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
CSS 387	Environmental Communication Skills (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
NR 101	Exploring Natural Resources (taken simultaneously with CSS 287) (1 cr)
Stat 251	Statistical Methods (3 cr)

One writing course, such as Engl 207, Engl 208, Engl 313, Engl 316, Engl 317 (3 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

One of the following (3-4 cr):

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 160	Survey of Calculus (4r)
Math 170	Analytic Geometry and Calculus I (4 cr)

And one of the following emphases:

A. Conservation Planning and Management Emphasis

Students must attend one, two-week long field studies course during summer session. Special fees are required for this and a few other courses. To graduate a student must earn an average GPA 2.30 or higher in all CSS courses.

CSS 304	Conservation Social Sciences Field Studies (3 cr)
CSS 310	Social Research Methods in Conservation (4 cr)
CSS 364	Politics of the Environment (3 cr)
CSS 385	Conservation Management and Planning I (4 cr)
CSS 475	Conservation Management and Planning II (4 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 489	Personalities and Philosophies in Conservation (3 cr)

One of the following (4 cr):

Biol 102, Biol 102L	Biology and Society and Lab (4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)

One of the following (2-4 cr):

Comm 101	Fundamentals of Public Speaking (2 cr)

One semester of a foreign language course

One of the following (3 cr):

PolS 101	Intro to Political Science and American Government (3 cr)
PolS 275	American State and Local Government (3 cr)

One of the following (4 cr):

Chem 101	Introduction to Chem I (4 cr)
Chem 111	Principles of Chem I (4 cr)
Geol 101, Geol 101L	Physical Geology and Lab (4 cr)

One of the following (3 cr):

For 326	Fire Ecology and Management (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459, REM 460	Rangeland Ecology (2 cr); and Integrating GIS and Field Studies in Rangelands (2 cr)
WLF 314	Wildlife Ecology I (3 cr)

Two of the following (6 cr):

CSS 490	Wilderness and Protected Area Management (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
LArc 480	The Emerging Landscape (3 cr)
WLF 440	Conservation Biology (3 cr)

Two of the following (6 cr):

Anth 100	Introduction to Anthropology (3 cr)
Psyc 101	Introduction to Psychology (3 cr)
Soc 101	Introduction to Sociology (3 cr)

12 credits (if not chosen above) from the following, in at least 2 disciplines with at least 2 courses in one discipline:

AgEc 477	Law, Ethics, and the Environment (3 cr)
Anth 428	Social and Political Organization (3 cr)
Bus 321	Marketing (3 cr)
Comm 410	Conflict Management (3 cr)
CSS 462	Natural Resource Policy (3 cr)
CSS 487	Environmental Education (3 cr)
CSS 490	Wilderness and Protected Area Management (3 cr)
CSS 492	Ecotourism Principles and Issues (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
CSS 496	Monitoring Impacts in Protected Areas and Wilderness (3 cr)
CSS 498	Internship (3-6 cr)
Geog 360	Population Dynamics and Distribution (3-4 cr)
Hist 423	Idaho and the Pacific Northwest (3 cr)
Hist 424	American Environmental History (3 cr)
JAMM 350	Public Relations Writing and Production (3 cr)
JAMM 444	Mass Media and Public Opinion (3 cr)
Phil 452	Environmental Philosophy (3 cr)
PolS 451	Public Administration (3 cr)
PolS 453	Public Management Techniques (3 cr)
PolS 454	Public Organization Theory (3 cr)
PolS 473	Sustainable Community Development Planning (3 cr)
PolS 480	Politics of Development (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)
Psyc 325	Cognitive Psychology (3 cr)
Soc 313	Collective Behavior (3 cr)
Soc 343	Political Sociology (3 cr)

Courses to total 120 credits for this degree

B. Conservation Science Emphasis

To graduate a student must earn an average GPA of 2.00 or higher in all courses taught in the College of Natural Resources and complete an approved professional work experience in natural resources.

One of the following (4 cr):

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms and Environments (4 cr)

One of the following (4 cr):

Chem 101	Introduction to Chem I (4 cr)
Chem 111	Principles of Chem I (4 cr)

One of the following (4 cr):

CSS 364	Politics of the Environment (3 cr)
CSS 462	Natural Resource Policy (3 cr)

One of the following (4 cr):

CSS 385	Conservation Management and Planning I (4 cr)
CSS 490	Wilderness and Protected Area Management (3 cr)

Natural Resource Science Restricted Electives (33 cr), at least 15 cr must be at the 400-level:

Fishery Science (6 cr):

Fish 314	Fish Ecology (3 cr)
Fish 315	Fish Ecology Lab (1 cr)
Fish 316	Principles of Population Dynamics (2 cr)
Fish 415	Limnology (4 cr)
Fish 418	Fisheries Management (4 cr)
Fish 422	Concepts in Aquaculture (3 cr)
Fish 424	Fish Health Management (4 cr)
Fish 430	Riparian Ecology and Management (3 cr)

Fire Ecology and Management (3 cr):

For 326	Fire Ecology and Management (3 cr)
For 433	Fire and Fuel Modeling (2 cr)
For 450	Fire Behavior (2 cr)
For 454	Air Quality and Smoke Management (3 cr)

Forestry (6 cr):

For 320	Dendrology (4 cr)
For 324	Forest Regeneration (3 cr)
For 330	Forest Soil and Canopy Processes (4 cr)
For 373	Forestry Sampling Methods (2 cr)
For 424	Forest Dynamics and Management (4 cr)

For 425	Forest and Soil Nutrient Cycling (3 cr)
For 430	Forest Operations (3 cr)
For 431	Low Volume Forest Roads (2 cr)
For 436	Cable Systems (2 cr)
For 462	Watershed Science and Management (3 cr)
For 468	Forest and Plant Pathology (2 cr)
For 472	Remote Sensing of the Environment (4 cr)

Renewable Materials (6 cr):

RMat 321	Properties of Renewable Materials (3 cr)
RMat 365	Wood Building Technology (3 cr)
RMat 436	Biocomposites (3 cr)
RMat 438	Introduction to Lignocellulosic Chemistry (1 cr)
RMat 444	Primary Products Manufacturing (3 cr)
RMat 450	Biomaterials Deterioration and Protection (2 cr)
RMat 491	Biomaterial Product and Process Development Lab (2 cr)
RMat 495	Product Development and Brand Management (3 cr)

Rangeland Ecology and Management (6 cr):

REM 341	Systematic Botany (3 cr)
REM 410	Principles of Vegetation Measurement and Assessment (2 cr)
REM 411	Rangeland Ecology Current Topics and Field Studies (1 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 452	Western Wildland Landscapes (2 cr)
REM 456	Integrated Rangeland Management (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Integrating GIS and Field Studies in Rangelands (2 cr)
REM 472	Remote Sensing of the Environment (3-4 cr)

Wildlife Science (6 cr):

WLF 314	Wildlife Ecology I (3 cr)
WLF 315	Wildlife Ecology I Laboratory (1 cr)
WLF 316	Wildlife Ecology II (4 cr)
WLF 440	Conservation Biology (3 cr)
WLF 448	Fish and Wildlife Population Ecology (4 cr)
WLF 482	Ornithology (4 cr)
WLF 492	Wildlife Management (4 cr)

Courses to total 120 credits for this degree

Conservation Social Sciences Academic Minor Requirements

Conservation Social Sciences Minor

Note: This minor may not be earned by students in an existing degree program in the Department of Conservation Social Sciences.

One of the following (3-4 cr):

CSS 235 or For 235	Society and Natural Resources (3 cr)
CSS 287	Foundations of Conservation Leadership and Management (3 cr)

One of the following (3-4 cr):

CSS 304	Conservation Social Sciences Field Studies (3 cr)
CSS 310	Social Research Methods in Conservation (4 cr)

One of the following (3 cr):

CSS 364	Politics of the Environment (3 cr)
CSS 462	Natural Resource Policy (3 cr)

Electives from the following (9 cr)

CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
CSS 385	Conservation Management and Planning I (4 cr)
CSS 387	Environmental Communication Skills (3 cr)
CSS 475	Conservation Management and Planning II (4 cr)
CSS 481	Conservation Leadership (3 cr)
CSS 489	Personalities and Philosophies in Conservation (3 cr)

Courses to total 18 credits for this minor

Environmental Communication Minor

CSS 387	Environmental Communication Skills (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 487	Environmental Education (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 252	Introduction to Public Relations (3 cr)

Two courses from the following (6 cr):

Art 280	Understanding Photography (3 cr)
Comm 347	Persuasion (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 431	Professional Presentation Techniques (3 cr)
JAMM 265	Principles of Advertising (3 cr)
JAMM 275	Introduction to Broadcasting and Digital Media Production (4 cr)
JAMM 361	Advertising Creativity (3 cr)
JAMM 425	Feature Article Writing (3 cr)

Courses to total 18 credits for this minor

Outdoor Recreation Leadership Minor

Note: This academic minor is offered through both the College of Natural Resources and the College of Education.

Rec 107	Outdoor Recreation and Tourism Pursuits (3 cr)
Rec 108	Orienteering & Navigation (1 cr)
Rec 290	Wilderness First Responder (3 cr)
Rec 310	Outdoor and Adventure Leadership (3 cr)

Courses selected from the following (9 cr):

Rec 216	River Recreation and Water Craft Safety (3 cr)
Rec 218	Rock Climbing & Mountaineering (3 cr)
Rec 228	Avalanche Fundamentals (2 cr)
Rec 240	Recreation Activities, Programming and Marketing (3 cr)
Rec 254	Camp Leadership in Recreation and Sport (3 cr)
Rec 280	Recreation Practicum in Recreation, Parks and Tourism (1 cr)
Rec 408	Experiential Education and Adventure Recreation (3 cr)

Courses selected from the following (4 cr):

PEB 106	Individual and Dual Sports [Wall Climbing, Advanced Wall Climbing, Fly Tying, Fly Fishing, Intro Archery/Hunting, Adventure Racing] (1 cr)
PEB 108	Water-Based Sports and Fitness Activities: Scuba (1 cr)
Rec 204	Special Topics (course approved by advisor)
Rec 222	Cross Country Skiing (1 cr)
Rec 223	Winter Skills (2 cr)
Rec 224	Whitewater Rafting (1 cr)
Rec 225	Kayaking (1 cr)
Rec 227	Mountain Biking (1 cr)

Approved technical competency (contact the CSS or Movement Sciences departments; practical exam administered by Rec and/or CSS faculty) (max 4 cr)

Courses to total 23 credits for this minor

Parks, Protected Areas, and Wilderness Conservation Minor

WLF 440	Conservation Biology (3 cr)

One of the following (3 cr):

CSS 490	Wilderness and Protected .Area Management (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)

One of the following (3-4 cr):

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

A general ecology course (3 cr)

Courses selected from the following (11 cr):

AIST 401	Contemporary American Indian Issues (3 cr)
CSS 304	Conservation Social Sciences Field Studies (3 cr)
CSS 385	Conservation Management and Planning I (4 cr)
CSS 475	Conservation Management and Planning II (4 cr)
CSS 489	Personalities and Philosophies in Conservation (3 cr)
CSS 490	Wilderness and Protected .Area Management (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
CSS 496	Monitoring Impacts in Protected Areas and Wilderness (3 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Hist 424	American Environmental History (3 cr)
Phil 452	Environmental Philosophy (3 cr)

Courses to total 20 credits for this minor

Sustainable Tourism and Leisure Enterprises Minor

Note: This academic minor is offered through both the College of Natural Resources and the College of Education.

Bus 321	Marketing (3 cr)

CSS 385	Conservation Management and Planning I (4 cr)
Rec 490	Management and Entrepreneurship in Recreation, Parks, and Tourism (3 cr)

Course selected from the following (10-12 cr):

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
AgEc 477	Law, Ethics, and the Environment (3 cr)
AIST 401	Contemporary American Indian Issues (3 cr)
Bus 420	Promotional Strategy (3 cr)
CSS 475	Conservation Management and Planning II (4 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
Geog 340	Business Location Decisions (3 cr)
Rec 104	Introduction to Recreation, Parks, and Tourism Professions (3 cr)
Rec 204	Special Topics (cr arr)
Rec 254	Camp Leadership in Recreation and Sport (3 cr)
Rec 280	Recreation Practicum in Recreation, Parks and Tourism (1 cr)

Courses to total 20 credits for this minor

Conservation Social Sciences Graduate Academic Certificates Requirements

Environmental Education Academic Graduate Certificate

CSS 559	Writing Research and Project Proposals (1 cr)
CSS 560	Community Ecology for Env. Educators (3 cr)
CSS 562	Field Science Teaching (2 cr)
CSS 563	Place Based Env. Education (3 cr)
CSS 566	Adv. Field Ecology Course Design (5 cr)
CSS 567	Environmental Education Teaching Practicum I (2 cr)
CSS 568	Environmental Education Teaching Practicum II (1 cr)
CSS 569	Environmental Education Teaching Practicum III (2 cr)
CSS 575	Leadership for the Environmental Educator (2 cr)

Courses to total 21 credits for this certificate

Conservation Social Sciences Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the College of Natural Resources. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. Thesis, non-thesis, and course-based options are offered. (A) Thesis programs are specifically research oriented and the student is required to conduct independent research and present the results as a thesis, which must be approved by the candidate's supervisory committee. (B) Non-thesis programs are concentrated more on course work. Though research may be conducted, the candidate is not required to present the results in a formal thesis. A final report, professional paper(s), or other terminal project agreed on in advance by the advisory committee is a normal requirement under this plan. This program lends itself to projects such as recreation master plans, regional plans, area management plans, historical reviews, and the development of professional interpretive media. (C) The course-based program is designed for practitioners with a focus on coursework that will prepare professionals for leadership careers in conservation.

For both the thesis and non-thesis options, after a research or other scholarly project is selected, the student must prepare for his or her committee a formal work plan and make an oral public presentation of the proposed project. The purpose of this requirement is to: (a) help structure and sharpen the student's thinking and approach to the project, (b) obtain the views of various knowledgeable persons that may lead to constructive modifications in the work plan, (c) gain experience in making professional presentations, and (d) increase communication within the academic community.

Doctor of Philosophy. The Ph.D. degree is available with a major in natural resources. General Ph.D. requirements apply; see the NR section for details.

Department of Curriculum and Instruction

Paul H. Gathercoal, Dept. Chair (509 B Educ. Bldg. 83844-3082; 208/885-6587 , Faculty: Julie Amador, Anne E. Adams, John Cannon, James Connors, Janine Darragh, John Davis, Raymond Dixon, Jeremy Falk, Julie Fodor, Sally Greene, James A. Gregson, Cassidy Hall, Aleksandra Hollingshead, Teresa Jentsch, Anne Kern, Royce Kimmons, K. Allen Kitchel, Sally G. Machlis, Melissa McConnell, Rodney McConnell, Shannon McGowan, Jerry R. McMurtry,Gwen Mitchel, Brant Miller, Lee T. Ostrom, Ingrid Spence, Allison Touchstone, Margaret Vaughn, Matthew Wappett. Shauna Williams, Katlin Wolf, David Yopp

The Department of Curriculum and Instruction includes teacher preparation programs for elementary education, secondary education, special education and graduate programs in curriculum and instruction and special education.

The professional degree majors in curriculum and instruction provide knowledge, skills, and experiences to enable teachers to work effectively with K-12 students and schools. Students benefit from collaborative relationships and experience with partner schools and agencies.

Pre-service teaching degree majors are offered in elementary education, and secondary education (B.S.Ed.).A fifth-year program is offered in Special Education. Students should consult an advisor concerning requirements for degree and/or certification.

Master's degrees are offered in curriculum and instruction and special education (M.Ed.). The doctorate is available in education (Ed.D., Ph.D.) with emphasis in curriculum and instruction or special education.

Elementary and Secondary Teacher Education. These programs include the university core curriculum, professional education core curriculum and program content courses. Secondary students select teaching majors and minors from subjects currently taught in secondary schools such as English, social studies, sciences, mathematics, art, and foreign languages. Elementary students receive a B.S.Ed. degree; secondary students may earn a B.S.Ed. degree through the College of Education or a B.A. or B.S. degree through the department and college administering the academic major.

Early and continuous field experiences are a hallmark of the teacher preparation program, which culminates in a Professional Year experience for elementary students and a semester program for secondary students. Program goals include (1) recruitment and retention of high quality students through rigorous admission, continuation, and exit criteria, (2) preparation of teachers in a standards driven, integrated, and field-based program, (3) completion of the Internship semester , and (4) engagement in continuing professional development for students, teachers, and university faculty to improve K-12 student performance.

Special Education Teacher Education. The 5th Year Special Education Program offers a unique program culminating in an undergraduate degree and recommendation for certification in either elementary or secondary education plus a Master's Degree and recommendation for K-12 certification in special education. It is designed for students who want to become teachers in Special Education and general education.

Graduate Education/Curriculum and Instruction. The program provides advanced professional and foundational courses that support graduate study in the College of Education. Graduate programs in curriculum and instruction with an emphasis in teacher education include (a) Master of Education in curriculum and instruction; and (b) doctoral degree programs (either Doctor of Education or Doctor of Philosophy) with emphases in curriculum and instruction.

Graduate Education/Special Education. The program provides advanced professional and foundational courses that support graduate study in the College of Education. Graduate programs in special education include (a) Master of Education in special education; and (b) doctoral degree programs (either Doctor of Education or Doctor of Philosophy) with emphases in special education.

Persons interested in doctoral work should apply to the College of Education. Admission requirements for the doctoral program include: (a) a minimum grade-point average of 2.80 in undergraduate preparation, (b) a minimum grade-point average of 3.50 at the master's degree level or its equivalent, (c) a composite verbal and quantitative Graduate Record Examination score of at least 1050, and (d) letters of recommendation. Exceptions to the criteria may be made when documented by the Graduate Review Committee.

The professional degree majors in Career and Technical Education provide the opportunity and relevant skills, knowledge, and dispositions to

enable teachers, administrators, and business and industry personnel to work effectively with today's organizations, youth, and adults. Learners benefit from the realistic relationships between course experiences and work required by educational institutions, business, industry, agriculture, and family life.

Preservice teaching degree majors are offered in: Career and Technical Education (CTE) with options in Business and Marketing Education, Engineering & Technology Education, and Occupational Education in the College of Education; and Agricultural Education (B.S.Ag.Ed.). (See Admission to Teacher Education Programs.)

For all undergraduate teaching degrees listed below the student should consult an advisor concerning state requirements for the professional-technical education certificate.

Agricultural Education. Graduates with this degree (B.S.Ag.Ed.) are qualified for a standard secondary teaching certificate and are qualified to teach secondary agricultural science and technology. Schools, government, and agribusiness agencies that seek persons with training in agriculture and education provide employment opportunities for graduates of this curriculum. (See Agricultural and Extension Education for program and course descriptions.)

Business and Marketing Education. The business and marketing education option is for students interested in teaching business, marketing and business technology subjects at the high school or post-secondary level. Completers of this option qualify for an Idaho secondary teaching certificate (6-12) in business technology education, marketing technology education, and usually economics (based on selected electives).

Professional-Technical Education. Professional-technical education option is designed primarily for teachers in area professional-technical schools and secondary trade and industry programs who do not hold degrees. It does not qualify one for teaching in a public K-12 system unless a person also holds a secondary endorsement or an occupational specialist certificate.

Professional-Technical Certification. In collaboration with the Idaho State Division of Professional-Technical Education, sequential inservice undergraduate professional-technical education degree courses, as well as selected graduate professional-technical courses, are offered each semester at area professional/technical schools located at Coeur d'Alene, Lewiston, Boise, and Twin Falls.

Technology Education. The Technology Education option is designed for students interested in teaching technical subjects related to construction technology, communications technology, electronics, engineering, manufacturing, production and other technology related subjects. Graduates of this option qualify for an Idaho secondary teaching certificate in technology education (grades 6-12).

Courses

See the course description section for courses in Career and Technical Education (CTE), Curriculum and Instruction (EDCI), Special Education (EDSP), and Library Science (LibS).

Curriculum and Instruction Undergraduate Curricular Requirements

Note: For registration in upper-division courses in education, students must have been admitted to the teacher education program and maintain a cumulative GPA of 2.75. For admission criteria, refer to "Admission to the Teacher Education Program" in the College of Education section.

Early Childhood Development and Education (B.S.Erly.Chldhd.Dev.Ed.)

Coursework will prepare students to be recommended for Idaho Early Childhood Education/Early Childhood Special Education (ECE/ECSE) Blended Teacher Certification. Students will be certified to teach children birth through grade three.

For information on an undergraduate major in Early Childhood Development and Education, see the School of Family and Consumer Sciences section.

Elementary Education (B.S.Ed.)

Required course work includes the university requirements (see regulation J-3), successful completion of Praxis II test, the Idaho Comprehensive Literacy Assessment parts 1 and 2 prior to the internship, and completion of requirements for a subject area endorsement as outlined by the Idaho State Board of Education requirements for a Standard Secondary Certificate. Maintain at least a grade of C in the following course requirements:

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 302	Teaching Culturally Diverse Learners (4 cr)
EDCI 321	Literature for Children (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
Hist 101 or Hist 102	History of Western Civilization (3 cr)
Hist 111 or Hist 112	Intro to U.S. History (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 235	Mathematics for Elementary Teachers I (3 cr)
Math 236	Mathematics for Elementary Teachers II (3 cr)
PEP 350	Elementary Physical and Health Education (3 cr)
Psyc 305	Developmental Psychology (3 cr)

Advanced composition elective (3 cr)

Engl 207	Persuasive Writing (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 291	Creative Writing: Poetry (3 cr)
Engl 292	Creative Writing: Fiction (3 cr)
Engl 309	Advanced Prose Writing (3 cr)
Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)
Engl 401	Writing Workshop for Teachers (3 cr)

Earth science elective (4 cr):

Geog 100, Geol 100L	Physical Geography and Lab (4 cr)
Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
Geol 111, Geol 111L	Physical Geology for Science Major and Lab (4 cr)

Physical science elective (4 cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Phys 103, Phys 104	General Astronomy and Lab (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)

Life science elective (4 cr):

Biol 102, Biol 102L	Biology and Society and Lab (4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)

English elective in composition or literature (excluding Engl 101 and 102) (3 cr)
Literature elective (3 cr)
Social science electives other than psychology (6 cr)

Elementary Education Major Requirements

Mathematics/Science/Social Studies/Technology Block:

EDCI 327	Elementary Mathematics Education (3 cr)
EDCI 328	Elementary Social Studies Education (3 cr)
EDCI 329	Elementary Science Education (3 cr)
EDCI 408	Integrated Methods Practicum I (1 cr)
EDCI 410	Technology, Teaching and Learning (2 cr)

Literacy/Arts Education Block:

Dan 360	Children's Dance (1 cr)
EDCI 320	Teaching Reading and Literacy (3 cr)
EDCI 322	Teaching Writing/Language Arts (3 cr)
EDCI 325	Elementary Art Education (3 cr)
EDCI 409	Integrated Methods Practicum II (1 cr)

Internship Semester:

EDCI 401	Internship Seminar (1 cr)
EDCI 466	Literacy Assessment and Intervention (3 cr)
EDCI 483	Elementary Internship I (14 cr)

Courses to total 120 credits for this degree

Secondary Education (B.S.Ed.)

Required course work includes the university requirements (see regulation J-3); successful completion of Praxis II test in the student's content area; one 45-credit teaching major or one 30-credit teaching major and one 20-credit teaching minor (see "Teaching Majors and Minors" below); and maintain at least a grade of C in the following course requirements:

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 302	Teaching Culturally Diverse Learners (4 cr)
EDCI 401	Internship Seminar (1 cr)
EDCI 410	Technology, Teaching and Learning (2 cr)
EDCI 453	Phonics, Phonological Awareness, Fluency, and Assessment (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDCI 485	Secondary Internship (15 cr)
EDSP 300	Educating for Exceptionalities (2 cr)

Advanced composition course (Engl 207, Engl 208, Engl 291, Engl 292, Engl 309, Engl 313, Engl 317 or Engl 401) (3 cr)
Mathematics elective (math or statistics UI general education course) (3 cr)
Special methods sequence (EDCI 437/EDCI 447, EDCI 431/ EDCI 441, EDCI 432/ EDCI 442, EDCI 433/ EDCI 443, EDCI 434/ EDCI 454, or EDCI 436/ EDCI 446) (4 cr)

One of the following (3 cr):

Psyc 101	Intro to Psychology (3 cr)
Psyc 305	Developmental Psychology (3 cr)

Courses to total 128 credits for this degree

Physical Education (B.S.Ed.)

Coursework will prepare students to be recommended for certification in Physical Education. Students will be certified to teach K-12 Physical Education. For information on the undergraduate major in Physical Education (B.S.Ed.), see the Department of Movement Sciences section.

Career and Technical Education (B.S.Ed.)

Required course work includes the university requirements (see regulation J-3) and the following:

General Professional-Technical and Technology Education Requirements

CTE 351	Principles and Philosophy of Career and Technical Education (3 cr)
CTE 430	Leadership and Student Organizations (2 cr)
CTE 431	Supervising CTE Career and Technical Student Organizations (1-3 cr. max 3)
CTE 464	Career Guidance and Transitioning to Work (3 cr)

Completion of one of the following three options:

A. Business and Marketing Education Option

The Business and Marketing Education option is for students interested in teaching business, marketing, and business technology subjects at the high school or post-secondary level. Completers of this option may apply for Idaho secondary teacher certification with endorsements in business technology, marketing technology, and usually economics (based on selected electives).

Requirements include the General Career and Technical Education Requirements, the satisfactory completion of the PRAXIS II Content Area Exam, and the following:

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
BLaw 265	Legal Environment of Business (3 cr)
Bus 101	Introduction to Business Enterprises (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
CTE 413	Retail Merchandising for Marketing Education (3 cr)
CTE 418	Teaching Economics and Personal Finance (3 cr)
CTE 484	Internship in Career and Technical Education Teaching (10 cr)
CTE 492	Business and Marketing Education Methods (3 cr)
CTE 495	Administrative Technology Management and Procedures (3 cr)
Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 302	Teaching Culturally Diverse Learners (4 cr)
EDCI 401	Internship Seminar (1 cr)
EDCI 410	Technology, Teaching and Learning (2 cr)
EDCI 453	Phonics, Phonological Awareness, Fluency, and Assessment (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
Engl 313	Business Writing (3 cr)
FCS 448	Consumer Economic Issues (3 cr)

Accounting, business, economics or CTE electives (6 cr)

One of the following (3 cr):

CTE 415	Microcomputer Applications (3 cr)
CTE 419 or CTE 519	Database Applications and Information Management (3 cr)

One of the following (3 cr):

CTE 416	Website Design and Development (3 cr)
CTE 460	Desktop Publishing (3 cr)

One of the following (3 cr):

Psyc 101	Intro to Psychology (3 cr)
Psyc 305	Developmental Psychology (3 cr)

One of the following (3 cr):*

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Stat 251	Statistical Methods (3 cr)

**Note: This mathematics elective is in addition to the General Education Mathematics requirements. Students must complete a total of 6 credits.*

Courses to total 128 credits for this degree

Note: Students interesting in obtaining a teaching endorsement in Economics need to ensure that 3 credits of the designated elective credits are in economics, finance or accounting, see an advisor for details.

B. Occupational Education Option

This option is designed for those teachers in secondary trade and industrial programs who wish to teach in post-secondary professional-technical programs. Requirements include the General Career and Technical Education Requirements and the following:

CTE 420	Evaluation in Professional-Technical Education (3 cr)
CTE 426	Occupational Analysis and Curriculum Development (3 cr)
CTE 447	Diverse Populations and Individual Differences (2-3 cr)
CTE 472	Teaching and Learning in Occupation Education (3 cr)

Approved course in computer literacy (3 cr)

Courses to total 128 credits for this degree

Professional-technical electives approved by advisor to total 128 credits:

CTE 200, CTE 400	Seminar (cr arr)
CTE 203, CTE 403	Workshop (cr arr)
CTE 204, CTE 404	Special Topics (cr arr)
CTE 299, CTE 499	Directed Study (cr arr)
CTE 306	Preservice for New Professional-Technical Teachers (3 cr)
CTE 307	Inservice for New Professional-Technical Teachers (3 cr)
CTE 418	Teaching Economics and Personal Finance (3 cr)
CTE 470	Technical Competence (1-32 cr)

Additional requirements for CTE Occupational Education students seeking an Idaho Secondary Teaching Certificate include the satisfactory completion of the PRAXIS II Content Area Test, and the following:

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 302	Teaching Culturally Diverse Learners (4 cr)
EDCI 401	Internship Seminar (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)

One of the following (10 cr):

EDCI 485	Secondary Internship (10 cr)
CTE 484	Internship in Career and Technical Education Teaching (10 cr)

One of the following (3 cr):

Psyc 101	Intro to Psychology (3 cr)
Psyc 305	Developmental Psychology (3 cr)

C. Engineering & Technology Education Option

Requirements include the General Career and Technical Education Requirements, the satisfactory completion of the PRAXIS II Content Area Exam, and the following:

ASM 107	Beginning Welding (2 cr)
ASM 202	Agricultural Shop Practices (2 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
CTE 130	Introduction to Electricity and Electronics (3 cr)
CTE 267	Computer Aided Drafting/Design (3 cr)
CTE 310	Lab Safety, Management, and Liability (4 cr)
CTE 353	Manufacturing Systems (3 cr)
CTE 354	Construction Technology (3 cr)
CTE 370	Transportation & Engineering Technologies (4 cr)
CTE 410	Technology and Society (3 cr)
CTE 415	Microcomputer Applications (3 cr)
CTE 416	Website Design and Development (3 cr)
CTE 417	Teaching & Learning through STEM Integration (3 cr)
CTE 426	Occupational Analysis and Curriculum Development (3 cr)
CTE 428	Computer Integrated Systems (3 cr)
CTE 449	Appropriate Technology and Alternative Energy (3 cr)
CTE 462	Communication Technology (3 cr)
CTE 481	Computer-Integrated and Robotics Manufacturing Technologies (3 cr)
CTE 484	Internship in Career and Technical Education (10 cr)
CTE 494	Senior Project (3 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 302	Teaching Culturally Diverse Learners (4 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
Engl 317	Technical Writing (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)
Phys 112, Phys 112L	General Physics II and Lab (4 cr)

One of the following (3 cr):

Psyc 101	Intro to Psychology (3 cr)
Psyc 305	Developmental Psychology (3 cr)

Courses to total 129 credits for this degree

Teaching Majors and Minors

One option required from the following:

One 45-credit teaching major

One 30-credit teaching major and one 20-credit teaching minor

The various teaching majors and teaching minors required to accompany several of the curricula are outlined below. Because the College of Education reserves the right to approve or disapprove the content of all proposed majors and minors, students should confer closely with their college advisors and with advisors in the academic department concerned in the selection of these courses.

Art

An academic major in Art Education is also offered in the major curriculum leading to the degree of B.S.Art Ed. (see Art and Architecture in the departmental section of this catalog).

A. 45-Credit Art Teaching Major

Art 100	World Art and Culture (3 cr)
Art 110	Integrated Art and Design Communication (2 cr)
Art 111	Drawing I(2 cr)
Art 112	Drawing as Integrated Design Thinking (2 cr)
Art 121	Integrated Design Process (2 cr)
Art 122	Design Process II (3 cr)

Courses selected from the following (18 cr):

Art 211	Drawing III (3 cr)
Art 221	Introduction to Graphic Design (3 cr)
Art 231	Painting I (3 cr)
Art 241	Sculpture I (3 cr)
Art 251	Printmaking I (3 cr)
Art 261	Ceramics I (3 cr)
Art 271	Interaction Design I (3 cr)
Art 280	Understanding Photography (3 cr)

Two art studio courses from the following: (Art 321, Art 330, Art 340, Art 350, Art 370, Art 390) (6 cr)

Two courses in Art History, any period. (6 crs)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 436	Secondary Art Methods (3 cr)
EDCI 446	Secondary Art Methods Practicum (1 cr)

B. 21-Credit Art Teaching Minor

Art 100	World Art and Culture (3 cr)
Art 110	Integrated Art and Design Communication (2 cr)
Art 111	Drawing I (2 cr)
Art 112	Drawing as Integrated Design Thinking (2 cr)
Art 121	Integrated Design Process (2 cr)
Art 122	Design Process II (3 cr)

Courses selected from Art 211, Art 221, Art 231, Art 241, Art 251, Art 261, Art 271, Art 280, or Art 321, Art 330, Art 340, Art 350, Art 370, Art 390 (6 cr)

Biological Sciences

Note: Math 143 is a prerequisite to required physics courses. To graduate in this program, students must earn a minimum grade of C in Biol 115 and 116 and must have a minimum gpa of 2.40 in Biol 115, 116, 210, 212, and 213.

Special Methods sequence:

EDCI 433	Secondary Science Methods (3 cr)
EDCI 443	Secondary Science Methods Practicum (1 cr)

A. 45-Credit Composite Teaching Major

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms & Environments (4 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Biol 310, Biol 315	Genetics and Lab (4 cr)
Biol 312	Molecular and Cellular Biology (3 cr)
Biol 313	Molecular and Cellular Laboratory (1 cr)
Biol 314	Ecology and Population Biology (4 cr)
Biol 421	Advanced Evolutionary Biology (3 cr)
Phys 111, 111L	General Physics I and Lab (4 cr)
Phys 112, 112L	General Physics II and Lab (4 cr)

Electives (see list of electives for the Biology major in the Department of Biological Sciences) (3-4 cr)

One of the following (4 cr):

Chem 101	Introduction to Chemistry (4 cr)
Chem 111	Principles of Chemistry (4 cr)

One of the following (3 cr):

Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry I (3 cr)

B. 24-Credit Composite Teaching Minor

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms and Environments (4 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Biol 310, Biol 315	Genetics and Lab (4 cr)
Biol 312	Molecular and Cellular Biology (3 cr)
Biol 313	Molecular and Cellular Laboratory (1 cr)
Biol 314	Ecology and Population Biology (4 cr)

Business Education

24 to 27-Credit Business Education Teaching Minor

CTE 415	Microcomputer Applications (3 cr)
CTE 430	Leadership and Student Organizations (2 cr)
CTE 431	Supervising CTE Career and Technical Student Organizations (1-3 cr, max 3)
CTE 492	Business and Marketing Education Methods (3cr)
CTE 495	Administrative Technology Management and Procedures (3 cr)
FCS 448	Consumer Economic Issues (3 cr)

One of the following (3 cr):

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)

One of the following (3 cr):

Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)

One of the following (3-4 cr):

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)

Econ 272 Foundations of Economic Analysis (4 cr)

NOTE: This minor will not meet professional-technical certification requirements, but will enable the student to apply for a provisional professional-technical certificate.

Other required courses for professional-technical certification include:
CTE 351 Principles and Philosophy of Career and Technical Education (3 cr)
CTE 464 Career Guidance and Transitioning to Work (3 cr)

Chemistry

Note: See the physics and mathematics prerequisites for the chemistry courses listed below.

A. 45-Credit Chemistry Teaching Major

Biol 116 Organisms and Environments (4 cr)
Chem 111 Principles of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
Chem 253, Chem 254 Quantitative Analysis and Lab (5 cr)
Chem 302, Chem 303 Principles of Physical Chemistry and Lab (4 cr)
Math 170 Analytic Geometry and Calculus I (4 cr)
Phys 111, 111L General Physics I and Lab (4 cr)
Phys 112, 112L General Physics II and Lab (4 cr)
Chemistry elective (3 cr)

One of the following groups (8-10 cr):
Group A:
Biol 380, Biol 382 Biochemistry I and Lab (6 cr)
Chem 275, Chem 276 Carbon Compounds and Lab (4 cr)

or

Group B:
Chem 277, Chem 278 Organic Chem I and Lab (4 cr)
Chem 372, Chem 374 Organic Chem II and Lab (4 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:
EDCI 433 Secondary Science Methods (3 cr)
EDCI 443 Secondary Science Methods Practicum (1 cr)

B. 21-Credit Chemistry Teaching Minor

Biol 380 Biochemistry I (4 cr)
Chem 111 Prin of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
Chem 275, Chem 276 Carbon Compounds and Lab (4 cr)
Chem 302, Chem 303 Principles of Physical Chemistry and Lab (4 cr)

Computer Science

Computer science is not an area of endorsement for Idaho certification. Students may complete a teaching minor in computer science only under the 30-20-20 option where the 30 credit major and one of the 20 credit minors are in endorsement areas.

22-Credit Computer Science Teaching Minor

CS 120 Computer Science I (4 cr)
CS 121 Computer Science II (4 cr)
CS 150 Computer Organization and Architecture (3 cr)
Math 176 Discrete Mathematics (3 cr)

Electives chosen from the following (5 cr):
CS 210 Programming Languages (3 cr)
CS 324 Computer Graphics (3 cr)
CS 383 Software Engineering (3 cr)
Math 385 or CS 385 Theory of Computation (3 cr)
Math 395 or CS 395 Analysis of Algorithms (3 cr)

Consumer Economics

A teaching major in consumer economics is not offered. To meet both college graduation requirements and state certification requirements, students selecting a teaching minor in consumer economics must have a teaching major in social science, or an academic major in business education, marketing education or child, family and consumer studies to meet both college graduation requirements and state certification requirements.

20-Credit Consumer Economics Teaching Minor

BLaw 265 Legal Environment of Business (3 cr)
CTE 418 Teaching Economics and Personal Finance (3 cr)
Econ 201 Principles of Macroeconomics (3 cr)
Econ 202 Principles of Microeconomics (3 cr)
FCS 448 Consumer Economic Issues (3 cr)

Electives chosen from the following (6 cr):
Acct 201 Introduction to Financial Accounting (3 cr)
Bus 321 Marketing (3 cr)
Econ 343 Money and Banking (3 cr)
FCS 123 Textiles (3 cr)
FCS 346 Personal and Family Finance and Management (4 cr)
FCS 428 Housing America's Families (3 cr)

Dance

21-Credit Dance Teaching Minor

The dance minor provides broad experiences in techniques, composition, production, and teaching.
Dan 210 Dance Theatre (1 cr)
Dan 320 Labanotation (3 cr)
Dan 321 Dance Pedagogy (3 cr)
Dan 360 Children's Dance (1 cr)
Dan 384 Dance Composition I (3 cr)
Dan 421 Dance History (3 cr)

3 Credits in Modern:
Dan 105 Dance (1 cr, max arr)
Dan 216 Techniques (cr arr)
Dan 416 Advanced Technique (cr arr)

4 Credits selected from Social Dance, World Dance, Ballet, Jazz, and Modern:
Dan 105 Dance (1 cr, max arr)
Dan 216 Techniques (cr arr)
Dan 416 Advanced Technique (cr arr)

Earth Science

Due to extensive course overlap, earth science majors may NOT select geology as a teaching minor.

45-Earth Science Teaching Major

Note: Completion of the Earth Science Teaching Major involves completion of the following required courses and three or more advisor-approved elective courses to total 45 credits.
Chem 111 Principles of Chemistry I (4 cr)
Geog 301 Meteorology (3 cr)
Geog 313 Global Climate Change (3 cr)
Geol 102, Geol 102L Historical Geology and Lab (4 cr)
Geol 309 Ground Water Hydrology (3 cr)
Geol 324 Principles of Stratigraphy and Sedimentation (4 cr)
Geol 335 Geomorphology (3 cr)
Phys 103 General Astronomy (3 cr)
Phys 104 General Astronomy Lab (1 cr)
Phys 111, Phys 111L General Physics I and Lab (4 cr)

One of the following (4 cr):
Geol 101, Geol 101L Physical Geology and Lab (4 cr)
Geol 111, Geol 111L Physical Geology for Science Majors and Lab (4 cr)
Advisor Approved Science Electives (9 cr):
Geol 212 Principles of Paleontology (4 cr)
Geol 249 Mineralogy and Optical Mineralogy (4 cr)

Geol 290	Field Geology I (3 cr)
Geol 326	Igneous and Metamorphic Petrology (4 cr)
Geol 344	Earthquakes and Seismic Hazards (3 cr)
Geol 345	Structural Geology (4 cr)
Geol 361	Geology and the Environment (3 cr)
Geol 410	Techniques of Ground Water Study (3 cr)
Geol 423	Principles of Geochemistry (3 cr)

21-22-Credit Earth Science Teaching Minor

Geog 301	Meteorology (3 cr)
Geol 102, Geol 102L	Historical Geology and Lab (4 cr)
Geol 335	Geomorphology (3 cr)
Phys 103	General Astronomy (3 cr)
Phys 104	General Astronomy Lab (1 cr)

One of the following (4 cr):

Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
Geol 111, Geol 111L	Physical Geology for Science Majors and Lab (4 cr)

One of the following (3-4 cr):

Geol 212	Principles of Paleontology (4 cr)
Geol 249	Mineralogy and Optical Mineralogy (4 cr)
Geol 290	Field Geology I (3 cr)
Geol 324	Principles of Stratigraphy and Sedimentation (4 cr)
Geol 326	Igneous and Metamorphic Petrology (4 cr)
Geol 344	Earthquakes and Seismic Hazards (3 cr)
Geol 345	Structural Geology (4 cr)
Geol 361	Geology and the Environment (3 cr)
Geol 410	Techniques of Ground Water Study (3 cr)
Geol 422	Principles of Geophysics (4 cr)
Geol 423	Principles of Geochemistry (3 cr)

Economics

A teaching major in economics is not offered.

20-Credit Economics Teaching Minor

Econ 201,	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
Econ 351	Intermediate Macroeconomic Analysis (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)

Additional upper-division credits in economics (8 cr)

Engineering & Technology Education

31-Credit Engineering & Technology Education Teaching Minor

For certification to teach technology education, a teaching minor must contain at least 20 credits distributed among and including each of the areas of communication technology; manufacturing technology; computer applications; power, energy& transportation; construction technology; principles of technology; and electronics technology.

CTE 130	Introduction to Electricity and Electronics (3 cr)
CTE 267	Computer Aided Drafting/Design (3 cr)
CTE 352	Manufacturing: Metallic Materials and Processes (3 cr)
CTE 354	Construction Technology (4 cr)
CTE 370	Transportation & Engineering Technologies (4 cr)
CTE 428	Computer Integrated Systems (3 cr)
CTE 462	Communication Technology (3 cr)

Other required courses for professional-technical certification include:

CTE 351	Principles and Philosophy of Career and Technical Education (3 cr)
CTE 447	Diverse Populations and Individual Differences (2-3 cr)
CTE 464	Career Guidance and Transitioning to Work (3 cr)

English

A. 46-Credit English Teaching Major

Engl 201	English Grammar: Key Concepts and Terms (1 cr)
Engl 241	Introduction to Study of Language (3 cr)
Engl 309	Advanced Prose Writing (3 cr)
Engl 341 or Engl 342	Survey of British Literature (3 cr)
Engl 343	Survey of American Literature (3 cr)
Engl 344	Survey of American Literature (3 cr)
Engl 345	Shakespeare (3 cr)
Engl 401	Writing Workshop for Teachers (3 cr)

One of the following (3 cr):

Engl 175	Introduction to Literary Genres (3 cr)
Engl 215	Introduction to English Studies (3 cr)

One of the following (3 cr):

Engl 208	Personal and Exploratory Writing (3 cr)
Engl 291	Beginning Poetry Writing (3 cr)
Engl 292	Beginning Fiction Writing (3 cr)
Engl 293	Beginning Nonfiction Writing (3 cr)

One of the following (3 cr):

Engl 445	Literature for Adolescents (3 cr)

A 400-level English Literature Course (3 cr)

Two linguistics courses (Engl 442 and Engl 496 (6 cr)

Two 400-level English area course (6 cr)

One literature course focusing on multicultural literature (Engl 380, Engl 481, Engl 482, Engl 483, Engl 484; or Engl 485) (3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 431	Secondary English Methods (3 cr)
EDCI 441	Secondary English Methods Practicum (1 cr)

B. 34-Credit English Teaching Major

Engl 201	English Grammar: Key Concepts and Terms (1 cr)
Engl 241	Introduction to Study of Language (3 cr)
Engl 309	Advanced Prose Writing (3 cr)
Engl 341 or Engl 342	Survey of British Literature (3 cr)
Engl 343	Survey of American Literature (3 cr)
Engl 344	Survey of American Literature (3 cr)
Engl 345	Shakespeare (3 cr)
Engl 401	Writing Workshop for Teachers (3 cr)

One of the following (3 cr):

Engl 175	Introduction to Literary Genres (3 cr)
Engl 215	Introduction to English Studies (3 cr)

One of the following (3 cr):

Engl 442	Linguistics (3 cr)
Engl 496	History of the English Language (3 cr)

One of the following (3 cr):

Engl 445	Literature for Adolescents (3 cr)

A 400-level English Literature Course (3 cr)

One literature course focusing on multicultural literature (Engl 380, Engl 481, Engl 482, Engl 483, Engl 484; or Engl 485) (3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 431	Secondary English Methods (3 cr)
EDCI 441	Secondary English Methods Practicum (1 cr)

C. 25-Credit English Teaching Minor

Engl 201	English Grammar: Key Concepts and Terms (1 cr)
Engl 241	Introduction to Study of Language (3 cr)
Engl 309	Advanced Prose Writing (3 cr)
Engl 401	Writing Workshop for Teachers (3 cr)

One of the following (3 cr):

Engl 175	Introduction to Literary Genres (3 cr)
Engl 215	Introduction to English Studies (3 cr)

One survey course in both American literature (Engl 343 or Engl 344) and British literature (Engl 341 or Engl 342); at least one of the two survey courses must be Engl 341 or Engl 343 (6 cr)

One literature course focusing on multicultural literature (Engl 380, Engl 481, Engl 482, Engl 483, Engl 484; or Engl 485) (3 cr)

English as a Second Language

A teaching major in English as a second language is not offered.

21-Credit English as a Second Language Teaching Minor

Modern foreign language (100-level or above) (4 cr)

Cultural diversity (i.e. Anth 261) (3 cr)

ESL methods (EDCI 437/EDCI 447) (4 cr)

Theory, philosophical foundations, testing/identification of limited English proficient students, or applied linguistics in ESL (i.e. Engl 241 or Engl 442) (3 cr)

Practicum or field experience in ESL (i.e. EDCI 402, EDCI 597) (1cr)

At least one course in English language and linguistics (Engl 241, Engl 442) (3 cr)

Electives to total 21 credits (Anth 427/Soc 427 Racial and Ethnic Relations is recommended)

French

Basic language courses taken in high school or elsewhere may be evaluated for college equivalencies as part of this teaching major and minor. Consult the Department of Modern Languages & Cultures for policies on earning credit for vertically-related courses.

A. 45-Credit French Teaching Major

Fren 101- Fren 102	Elementary French I-II (8 cr)
Fren 201- Fren 202	Intermediate French I-II (8 cr)
Fren 301	Advanced French Grammar (3 cr)
Fren 302	Advanced French Writing Skills (3 cr)
Fren 304	Connecting French Language and Culture (4 cr)
Fren 408	French and Francophone Culture and Institutions (3 cr)
Fren 449	Practicum in Tutoring (1-2 cr)

Electives chosen from the following (7-10 cr):

Engl 241	Introduction to Study of Language (3 cr)
FLEN 243	English Word Origins (2 cr)

Approved upper-division course in literature

Approved upper-division French electives

Approved upper division French electives to total 45 credits in the teaching major.

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 437	Secondary Foreign Language Methods (3 cr)
EDCI 447	Secondary Foreign Language Methods Practicum (1 cr)

B. 22-Credit French Teaching Minor

Fren 101- Fren 102	Elementary French I-II (8 cr)
Fren 201- Fren 202	Intermediate French I-II (8 cr)

Approved upper-div French electives (either Fren 301 or Fren 302 is required; lab-based and lit in translation courses are not acceptable) (6 cr)

In addition to the above teaching requirements, the following special methods course is also required:

EDCI 437	Secondary Foreign Language Methods (3 cr)

Note: A minor in French of less than 22 credits is not acceptable.

Geography

A. 31-Credit Geography Teaching Major

Geog 100, 100L	Physical Geography and Lab (4 cr)
Geog 165	Human Geography (3 cr)
Geog 200	World Regional Geography (3 cr)
Geog 385	GIS Primer (3 cr)

Five courses from the following (15 cr):

Geog 240	Economic Geography (3 cr)
Geog 330	Urban Geography (3 cr)
Geog 360	Population Dynamics and Distribution (3-4 cr)
Geog 365	Political Geography (3 cr)
Geog 390	Cartographic Design & Geovisualization (3 cr)
Geog 401	Climatology (3 cr)

B. 22-Credit Geography Teaching Minor

Geog 100, 100L	Physical Geography and Lab (4 cr)
Geog 165	Human Geography (3 cr)
Geog 200	World Regional Geography (3 cr)
Geog 240	Economic Geography (3 cr)
Geog 385	GIS Primer (3 cr)

Additional geography courses to total 22 credits (3 cr)

German

Basic language courses taken in high school or elsewhere may be evaluated for college equivalences as part of this teaching major and minor. Consult the Department of Modern Languages & Cultures for policies on earning credit for vertically-related courses.

A. 45-Credit German Teaching Major

Engl 241	Introduction to Study of Language (3 cr)
FLEN 324	German Literature in Translation (3 cr)
Germ 101	Elementary German I (4 cr)
Germ 102	Elementary German II (4 cr)
Germ 201	Intermediate German I (4 cr)
Germ 202	Intermediate German II (4 cr)
Germ 301	Advanced German Grammar (3 cr)
Germ 302	Advanced German Speaking and Writing (3 cr)
Germ 306	Introduction to German Literature (3 cr)

Approved upper division German electives (including at least one 400-level course) to total 45 credits in the teaching major.

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 437	Secondary Foreign Language Methods (3 cr)
EDCI 447	Secondary Foreign Language Methods Practicum (1 cr)

B. 22-Credit German Teaching Minor

Germ 101	Elementary German I (4 cr)
Germ 102	Elementary German II (4 cr)
Germ 201	Intermediate German I (4 cr)
Germ 202	Intermediate German II (4 cr)

Approved upper-div German electives (either Germ 301 or Germ 302 is reqd; lab-based and lit in translation courses are not acceptable) (6 cr)

In addition to the above teaching requirements, the following special methods course is also required:

EDCI 437	Secondary Foreign Language Methods (3 cr)

Note: A minor in German of less than 22 credits is not acceptable.

Health Education

24-25-Credit Health Education Teaching Minor

A current advanced first aid and emergency care card is required upon graduation.

FCS 205	Concepts in Human Nutrition (3 cr)
H&S 288	First Aid: Emergency Response (2 cr)
H&S 423	School Health Education Methods and Administration (3 cr)
H&S 450	Critical Health Issues (3 cr)

One of the following (3 cr):

FCS 240	Intimate Relationships (3 cr)
Psyc 330	Human Sexuality (3 cr)

One of the following (3 cr):

H&S 150	Wellness Lifestyles (3 cr)
MvSc 201	Physical Activity, Wellness & Behavior Change for Healthy Active Lifestyles (3 cr)

One of the following groups (3-4 cr):

Group A:

H&S 289	Drugs in Society (2 cr)
H&S 350	Stress Management and Mental Health (2 cr)

or

Group B:

H&S 451	Psychosocial Determinants of Health (3 cr)

Choose one of the following (4 cr):

Biol 102, Biol 102L	Biology and Society and Lab (4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Biol 120	Human Anatomy (4 cr)
MMBB 154, MMBB 155	Introductory Microbiology and Laboratory (4 cr)

History

A. 45-Credit History Teaching Major

Hist 101	History of Civilization (3 cr)
Hist 102	History of Civilization (3 cr)
Hist 111	Introduction to U.S. History (3 cr)
Hist 112	Introduction to U.S. History (3 cr)
Hist 290	The Historian's Craft (3 cr)
PolS 101	Introduction to Political Science and American Government (3 cr)

Upper-division history courses in the following areas:
- Non-regional U.S. history (3 cr)
- Latin American history (3 cr)
- Asian or African history (3 cr)
- Pre-1750 history from any region (3 cr)
- American non-European ethnic history (3 cr)
- Modern European history (3 cr)
- Additional upper-division history courses (9 cr)

Approved upper division history electives to total 45 credits in the teaching major.

Note: A single course may satisfy more than one of the upper-division requirements.

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 432	Secondary Social Science Methods (3 cr)
EDCI 442	Secondary Social Science Methods Practicum (1 cr)

B. 33-Credit History Teaching Major

Hist 101	History of Civilization (3 cr)
Hist 102	History of Civilization (3 cr)
Hist 111	Introduction to U.S. History (3 cr)
Hist 112	Introduction to U.S. History (3 cr)
Hist 290	The Historian's Craft (3 cr)
PolS 101	Introduction to Political Science and American Government (3 cr)

Upper-division history courses in the following areas:
Non-regional U.S. history (3 cr)
Latin American history (3 cr)
Asian or African history (3 cr)
Pre-1750 history from any region (3 cr)
Modern European history (3 cr)

Approved upper division history electives to total 33 credits in the teaching major.

Note: A single course may satisfy more than one of the upper-division requirements.

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 432	Secondary Social Science Methods (3 cr)
EDCI 442	Secondary Social Science Methods Practicum (1 cr)

C. 24-Credit History Teaching Minor

Hist 101	History of Civilization (3 cr)
Hist 102	History of Civilization (3 cr)
Hist 111	Introduction to U.S. History (3 cr)
Hist 112	Introduction to U.S. History (3 cr)

One of the following (3 cr):

PolS 101	Introduction to Political Science and American Government (3 cr)
PolS 275	American State and Local Government (3 cr)

Upper-division history courses, including at least (9 cr):
3 cr in U.S., Latin American, or African history
3 cr in Ancient, European or Asian history

Journalism

A. 37-Credit Journalism Teaching Major

Art 280	Understanding Photography (3 cr)
JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 225	Reporting I (3 cr)
JAMM 275	Introduction to Broadcasting and Digital Media Production (4 cr)
JAMM 324	News Editing and Production (3 cr)
JAMM 425	Feature Article Writing (3 cr)
JAMM 448	Law of Mass Media (3 cr)
JAMM 498	Internship (1 cr)

Two courses chosen from the following (6 cr)

JAMM 322	Broadcast News (3 cr)
JAMM 325	Publications Editing (3 cr)
JAMM 327	Reporting II (3 cr)
JAMM 444	Mass Media and Public Opinion (3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 431	Secondary English Methods (3 cr)
EDCI 441	Secondary English Methods Practicum (1 cr)

B. 21-Credit Journalism Teaching Minor

JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 225	Reporting I (3 cr)

One course from the following (3 cr):

Art 280	Understanding Photography (3 cr)
JAMM 275	Introduction to Broadcasting and Digital Media Production (4 cr)

Three courses chosen from the following (9 cr):

Art 280	Understanding Photography (3 cr)
JAMM 275	Introduction to Broadcasting and Digital Media Production (4 cr)
JAMM 324	News Editing and Production (3 cr)
JAMM 425	Feature Article Writing (3 cr)
JAMM 448	Law of Mass Media (3 cr)
JAMM 498	Internship (1 cr)

Latin

Basic language courses taken in high school or elsewhere may be evaluated for college equivalencies as part of this teaching major or minor. Consult the Department of Modern Languages & Cultures for policies on earning credit for vertically-related courses.

A. 45-Credit Latin Teaching Major

FLEN 210	Introduction to Classical Mythology (3 cr)
FLEN 243	English Word Origins (2 cr)
Latn 101	Elementary Latin I (or equivalent) (3 cr)
Latn 102	Elementary Latin II (or equivalent) (3 cr)

Latin at the 300 and/or 400 level (15 cr)
A methods course approved by advisor and classics section or Latn 449 Practicum in Tutoring (2 cr)

Electives chosen from the following (3-4 cr):
Additional upper-division Latin courses (especially recommended)

Engl 241	Introduction to Study of Language (3 cr)

Approved upper division Latin electives to total 45 credits in the teaching major.

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 437	Secondary Foreign Language Methods (3 cr)
EDCI 447	Secondary Foreign Language Methods Practicum (1 cr)

B. 23-Credit Latin Teaching Minor

Latn 101	Elementary Latin I (or equivalent) (3 cr)
Latn 102	Elementary Latin II (or equivalent) (3 cr)
FLEN 243	English Word Origins (2 cr)

Latin at the 300 and/or 400 level (10 cr)

In addition to the above teaching requirements, the following special methods course is also required:

EDCI 437	Secondary Foreign Language Methods (3 cr)

Note: A minor in Latin of less than 20 credits is not acceptable.

Library Science

A teaching major in library science is not offered.

24-Credit Library Science Teaching Minor

The teaching minor in library science must total 24 credits. At least 12 of these must be in the areas of selection, organization, and administration of library materials. This teaching minor will qualify the student for the Idaho K-12 Education Media Generalist endorsement. Because library science is not a teaching field, the teacher-librarian must also qualify for a standard Idaho elementary or secondary teacher's certificate.

Note: Departmental approval and approval of site are required for the practicum; it is approved after the majority of the required course work has been completed.

LibS 420	Classification and Cataloging (4 cr)
LibS 421	Acquisitions and Collection Development in Libraries (3 cr)
LibS 422	Use of School Library and/or C423 Intro to Reference Work (2-5 cr)
LibS 425	Organization and Management of Small Libraries (4 cr)
LibS 427	Library and Media Center Practicum (1-3 cr)

Audiovisual aids and computer electives (minimum) (2 cr)

Note: The above selections must total at least 18 credits

Courses selected from the following to total 24 cr for this teaching minor:

Engl 445	Literature for Adolescents (3 cr)

Communication/graphic arts (6 cr)

Mathematics

Math 143 and 144 may be necessary prerequisites for students with weak backgrounds.

A. 47-Credit Mathematics Teaching Major

CS 112	Introduction to Problem Solving and Programming (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 176	Discrete Mathematics (3 cr)
Math 215	Seminar in Topology of the Plane (3 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 330	Linear Algebra (3 cr)
Math 386	Theory of Numbers (3 cr)
Math 461	Abstract Algebra I (3 cr)
Math 471	Introduction to Analysis I (3 cr)

One of the following (3 cr):

Math 390	Axiomatic Geometry (3 cr)
Math 391	Modern Geometry (3 cr)

One of the following (3-4 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Stat (3 cr)
Math 451	Probability Theory (3cr)

One 3 credit Math course numbered 400-490 (3 cr)

Two 3 credit Math courses numbered 310-490 (6 cr)

Approved upper division mathematics electives to total 47 credits in the teaching major.

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 434	Secondary Mathematics Methods (3 cr)
EDCI 454	Secondary Mathematics Methods Practicum (1 cr)

B. 32-Credit Mathematics Teaching Major

CS 112	Introduction to Problem Solving and Programming (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 176	Discrete Mathematics (3 cr)
Math 215	Seminar in Topology of the Plane (3 cr)
Math 330	Linear Algebra (3 cr)
Math 386	Theory of Numbers (3 cr)

One of the following (3 cr):

Math 390	Axiomatic Geometry (3 cr)
Math 391	Modern Geometry (3 cr)

One of the following (3 cr):

Math 461	Abstract Algebra I (3 cr)
Math 471	Introduction to Analysis I (3 cr)

One of the following (3-4 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Stat (3 cr)
Math 451	Probability Theory (3cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 434	Secondary Mathematics Methods (3 cr)
EDCI 454	Secondary Mathematics Methods Practicum (1 cr)

C. 23-Credit Mathematics Teaching Minor

Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 176	Discrete Mathematics (3 cr)
Math 330	Linear Algebra (3 cr)
Math 386	Theory of Numbers (3 cr)

One of the following (3 cr):

Math 390	Axiomatic Geometry (3 cr)
Math 391	Modern Geometry (3 cr)

One of the following (3-4 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Stat (3 cr)
Math 451	Probability Theory (3cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 434	Secondary Mathematics Methods (3 cr)
EDCI 454	Secondary Mathematics Methods Practicum (1 cr)

Music Education

26-Credit Vocal Music Teaching Minor

MusA 114	Studio Instruction (2 cr)*
MusA 145-MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146-MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 387	Conducting I (2 cr)
MusC 139-MusC 140	Aural Skills I-II (4 cr)
MusC 141-MusC 142	Theory of Music I-II (4 cr)
MusH 101	Survey of Music (students may substitute MusH 111) (3 cr)
MusT 385	Choral Music in the Secondary School (3 cr)
MusX 140	Convocation (two semesters) (0 cr)

Vocal ensembles (4 cr)

**If students do not qualify immediately for MusA 114, they must take Voice Class until they can meet departmental approval.*

Physical Education

30 to 31 Physical Education Teaching Minor (Grade levels 1-12)

An academic major in Physical Education Teacher Education is offered through the Department of Movement Science leading to the degree of B.S.Ed. For information on the undergraduate major in Physical Education see the Department of Movement Sciences section.

H&S 288	First Aid: Emergency Response (2 cr)
MvSc 201	Physical Activity, Wellness & Behavior Change for Healthy Active Lifestyles (3 cr)
PEP 107	Movement Fundamentals (1 cr)
PEP 161	Introduction to Physical Education (1 cr)
PEP 360	Motor Behavior (3 cr)
PEP 380	Assessment & Research in Physical Activity Pedagogy (2 cr)
PEP 412	Elementary Methods in Physical Activity Pedagogy (3 cr)
PEP 421	Secondary Methods in Physical Activity Pedagogy (3 cr)
PEP 424	Inclusive Physical Education and Recreation (3 cr)
PEP 440	Curriculum & Administration in Physical Activity Pedagogy (1 cr)

One of the following (3 cr):

PEP 300	Applied Human Anatomy & Biomechanics (2-3 cr)
PEP 418	Physiology of Exercise (3 cr)

One of the following individual activity courses (1 cr):

PEP 132	Skill and Analysis of Tennis, Pickleball, and Badminton (1 cr)
PEP 133	Skill and Analysis of Golf, Archery, and Field Sports (1 cr)

One of the following team activity courses (1 cr):

PEP 134	Skill and Analysis of Walking/Jogging/Track and Field (1 cr)
PEP 135	Skill and Analysis of Basketball and Volleyball (1 cr)
PEP 136	Skill and Analysis of Soccer and Speedball (1 cr)

Physical Sciences

45-Credit Composite Teaching Major

This is a 40-credit composite teaching major consisting of courses in chemistry, geology, and physics. A teaching minor in mathematics is recommended to accompany this teaching major.

Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 275	Carbon Compounds (3 cr)
Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
Phys 103	General Astronomy (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)
Phys 411	Physical Instrumentation I (3 cr)

One of the following (3-4 cr):

Biol 102, Biol 102L	Biology and Society and Lab (4 cr)
Biol 116	Organisms and Environments (4 cr)
Geog 100, Geog 100L	Physical Geography and Lab (4 cr)
Geog 401	Climatology (3 cr)

Additional electives in chemistry, geology, or physics to total 45 credits. Recommended elective courses include Biol 380 & Chem 302 (2-3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 433	Secondary Science Methods (3 cr)
EDCI 443	Secondary Science Methods Practicum (1 cr)

Physical Science-Life Science

63-Credit Composite Teaching Major

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms and Environments (4 cr)
Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)
Phys 411	Physical Instrumentation I (3 cr)
PlSc 205	General Botany (4 cr)

Courses in biology, chemistry, or physics (8 cr)

Electives chosen from the following (11 cr):

Biol 314	Ecology and Population Biology (4 cr)
Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Geog 100, Geol 100L	Physical Geography and Lab (4 cr)
Geog 401	Climatology (3 cr)
Phys 103	General Astronomy (3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 433	Secondary Science Methods (3 cr)
EDCI 443	Secondary Science Methods Practicum (1 cr)

Physics

A. 45-Credit Physics Teaching Major

Biol 116	Organisms and Environments (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Phys 103	General Astronomy (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)
Phys 305	Modern Physics (3 cr)
Phys 411	Physical Instrumentation I (3 cr)

One of the following (4 cr):

Chem 101	Intro to Chemistry I (4 cr)
Chem 111	Prin of Chemistry I (4 cr)

Approved upper division physics electives to total 45 credits in the teaching major.

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 433	Secondary Science Methods (3 cr)
EDCI 443	Secondary Science Methods Practicum (1 cr)

B. 20-Credit Physics Teaching Minor

Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)
Phys 305	Modern Physics (3 cr)

Electives in physics (approved by advisor in Dept of Physics), including at least 2 credits of lab work (5 cr)

Political Science

A. 30-Credit Political Science Teaching Major

A minimum of 30 credits in political science courses is required with an additional 6 credits in US history necessary for certification. Courses listed in more than one field may be counted in only one of those fields. Substitutions in specific courses may be made with the consent of the advisor.

US history electives 6 cr

U.S. Government: Process and Policy (12-15 cr):

PolS 101	Introduction to Political Science and American Government (3 cr)

And 9-12 cr from the following: PolS 275, PolS 437, PolS 469

15-18 credits from the following fields:

Comparative Government and Politics. At least 3 credits from the following:
PolS 381, PolS 480, PolS 487

International Relations. At least 3 credits from the following:
PolS 237, PolS 440, PolS 449

Public Administration and Public Law. At least 3 credits from the following:
PolS 451, PolS 452, PolS 454, PolS 467, PolS 468, PolS 469

Political Thought. At least 3 credits from the following:
PolS 425, PolS 426, PolS 428, PolS 429

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 432	Secondary Social Science Methods (3 cr)
EDCI 442	Secondary Social Science Methods Practicum (1 cr)

B. 20 Credit Political Science Teaching Minor

A minimum of 20 credits in political science courses is required with an additional 6 credits in US history necessary for certification.

PolS 101	Introduction to Political Science and American Government (3 cr)

Three credits in U.S. government (see the list of courses in U.S. Govt: Process and Policy under teaching major above) (3 cr)
Three credits in comparative government (see the list of courses in Comparative Govt and Politics under teaching major above) (3 cr)
Other political science electives selected from courses listed in the teaching major (11 cr)
US history electives (6 cr)

Psychology

A. 30-Credit Psychology Teaching Major

The basic objective of this teaching major is to provide the undergraduate student with preparation that leads to teaching psychology in secondary schools, and/or to undertake graduate work in several related areas. Though psychology is an endorsement area, it is desirable to present two teaching minors in standard secondary-school subjects. At least a teaching minor in sociology/anthropology is recommended for those anticipating graduate work in guidance and counseling and school psychology. A second teaching major in lieu of two teaching minors is acceptable preparation. The composite teaching majors (i.e., social science or physical science), if elected as a second teaching major, should meet the stipulated credit requirement.

Psyc 101	Introduction to Psychology (3 cr)
Psyc 305	Developmental Psychology (3 cr)

One of the following courses (3-4 cr):

Psyc 218	Introduction to Research in Behavioral Sciences (4 cr)
Psyc 430	Tests and Measurements (3 cr)

Two of the following courses (6 cr):

Psyc 310	Psych of Personality (3 cr)
Psyc 311	Abnormal Psychology (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)

Two of the following courses (6 cr):

Psyc 325	Cognitive Psychology (3 cr)
Psyc 372	Physiological Psychology
Psyc 444	Sensation and Perception (3 cr)
Psyc 390	Psychology of Learning (3 cr)

Approved upper-division psychology elective (9 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 432	Secondary Social Science Methods (3 cr)
EDCI 442	Secondary Social Science Methods Practicum (1 cr)

B. 21-Credit Psychology Teaching Minor

Psyc 101	Introduction to Psychology (3 cr)
Psyc 305	Developmental Psychology (3 cr)

One of the following courses (3-4 cr):

Psyc 218	Introduction to Research in Behavioral Sciences (4 cr)
Psyc 430	Tests and Measurements (3 cr)

Two of the following courses (6 cr)

Psyc 310	Psych of Personality (3 cr)
Psyc 311	Abnormal Psychology (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)

One of the following courses (3 cr):

Psyc 325	Cognitive Psychology (3 cr)
Psyc 372	Physiological Psychology
Psyc 390	Psychology of Learning (3 cr)

Approved upper-division psychology electives (3 cr)

Social Science

A. 56-Credit Composite Teaching Major

The basic objective of this teaching major is to provide the undergraduate student with the preparation that leads to teaching social studies in the public schools. To obtain a social studies endorsement in the state of Idaho, a student must pass the Praxis II exam in both social studies content knowledge and in one of the other areas listed below (Economics, Geography, History, or Political Science) where they have a minimum of 20 credits of coursework. This will result in a student being endorsed to teach in any of the subject areas included in the composite major.

Idaho's federal representatives have approved the Social Studies endorsement as meeting "Highly Qualified" status for all four of the related core content areas; history, geography, economics, and government.

It is important to note that the converse is not true. If a teacher has an endorsement in one or more of the core social studies areas, but does NOT hold the full Social Studies endorsement, they cannot be considered "Highly Qualified" to teach in any area other than those for which they hold the specific endorsement.

Students need to choose one area (History, Economics, Geography, or Political Science) for an endorsement which includes 20 credit hours, and complete 12 credits in each of the other remaining content areas (History, Economics, Geography, or Political Science).

History (12 cr):

Hist 101	History of Civilization (3 cr)
Hist 102	History of Civilization (3 cr)
Hist 111	Introduction to U.S. History (3 cr)
Hist 112	Introduction to U.S. History (3 cr)

History electives:
US, Latin American, or African History
Ancient, European, or Asian History

Economics (12 cr):
Required Courses:

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)

Economics electives:

Acct 201	Introduction to Financial Accounting (3 cr)
CTE 418	Teaching Economics and Personal Finance (3 cr)
CTE 492	Business and Marketing Education Methods (3 cr)
Econ 351	Intermediate Macroeconomic Analysis (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)
FCS 346	Personal and Family Finance and Management (4 cr)
FCS 448	Consumer Economic Issues (3 cr)

Geography (12 cr):
Required Courses:

Geog 100	Physical Geography (4 cr)
Geog 385	GIS Primer (3 cr)

Geography electives:

Geog 165	Human Geography (3 cr)
Geog 200	World Regional Geography (3 cr)
Geog 240	Economic Geography (3 cr)
Geog 313	Global Climate Change (3 cr)
Geog 330	Urban Geography (3 cr)
Geog 350	Geography of Development (3-4 cr)
Geog 360	Population Dynamics and Distribution (3-4 cr)
Geog 364	Idaho and the Pacific Northwest (3 cr)
Geog 365	Political Geography (3 cr)
Geog 390	Cartographic Design & Geovisualization (3 cr)
Geog 401	Climatology (3 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Geog 440	The New Global Economy (3 cr)

Political Science (12 cr):
Required Course (3 cr):

PolS 101	Introduction to Political Science and American Government (3 cr)

One of the following (3 cr):

PolS 275	American State and Local Government (3 cr)
PolS 331	American Political Parties and Elections (3 cr)
PolS 332	American Congress (3 cr)
PolS 333	American Political Culture (3 cr)
PolS 338	American Foreign Policy (3 cr)
PolS 360	Law and Society (3 cr)

Political Science electives:

PolS 205	Introduction to Comparative Politics (3 cr)
PolS 237	International Politics (3 cr)
PolS 381	European Politics (3 cr)
PolS 440	International Organizations and International Law (3 cr)
PolS 449	World Politics and War (3 cr)

PolS elective numbered 100-499 (3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:

EDCI 432	Secondary Social Science Methods (3 cr)
EDCI 442	Secondary Social Science Methods Practicum (1 cr)

B. 45- OR 60-Credit Teaching Major Through American Studies

American studies majors follow the credit distributions and recommended courses as stated above for economics, geography, history, political science, and sociology/anthropology.

Sociology/Anthropology

A teaching major in sociology/anthropology is not offered.

20-Credit Sociology/Anthropology Teaching Minor

Anth 100	Introduction to Anthropology (3 cr)
Soc 101	Introduction to Sociology (3 cr)
Soc 230	Social Problems (3 cr)

Approved electives in anthropology and sociology (8 cr)

One of the following (3 cr):
Anth 220 Peoples of the World (3 cr)
Anth 329 North American Indians (3 cr)

Spanish

Basic language courses taken in high school or elsewhere may be evaluated for college equivalencies as part of this teaching major and minor. Consult the Department of Modern Languages & Cultures for policies on credit for vertically-related courses.

A. 45-Credit Spanish Teaching Major
Span 101 Elementary Spanish I (4 cr)
Span 102 Elementary Spanish II (4 cr)
Span 201 Intermediate Spanish I (4 cr)
Span 202 Intermediate Spanish II (4 cr)
Span 301 Advanced Grammar (3 cr)
Span 302 Advanced Composition (3 cr)
Span 305 Culture and Institutions of Spain (3 cr)
Span 306 Culture and Institutions of Latin America (3 cr)
Upper-division courses in Spanish language (9 credits must be at 400 level) to total 45 credits in the teaching major.

A maximum of 3 credits in FLEN 391, FLEN 393, or FLEN 394 may be counted toward a teaching major in Spanish.

In addition to the above teaching major requirements, the following special methods sequence is also required:
EDCI 437 Secondary Foreign Language Methods (3 cr)
EDCI 447 Secondary Foreign Language Methods Practicum (1 cr)

B. 22-Credit Spanish Teaching Minor
Span 101 Elementary Spanish I (4 cr)
Span 102 Elementary Spanish II (4 cr)
Span 201 Intermediate Spanish I (4 cr)
Span 202 Intermediate Spanish II (4 cr)
Approved upper-div Spanish electives (either Span 301 or Span 302 required; lab-based and lit in translation courses are not acceptable) (6 cr)

In addition to the above teaching requirements, the following special methods course is also required:
EDCI 437 Secondary Foreign Language Methods (3 cr)

Note: A minor in Spanish of less than 22 credits is not acceptable.

Speech

A. 31-Credit Speech Teaching Major
Comm 111 Introduction to Communication Studies (3 cr)
Comm 233 Interpersonal Communication (3 cr)
Comm 332 Communication and the Small Group (3 cr)
Comm 335 Intercultural Communication (3 cr)
Comm 410 Conflict Management (3 cr)
Comm 431 Professional Presentation Techniques (3 cr)
JAMM 100 Media and Society (3 cr)
The 105 Basics of Performance (3 cr)

One of the following (3 cr):
Comm 347 Persuasion (3 cr)
Phil 201 Critical Thinking (3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:
EDCI 431 Secondary English Methods (3 cr)
EDCI 441 Secondary English Methods Practicum (1 cr)

B. 25-Credit Speech Teaching Minor
Comm 111 Introduction to Communication Studies (3 cr)
Comm 233 Interpersonal Communication (3 cr)
Comm 332 Communication and the Small Group (3 cr)
JAMM 100 Media and Society (3 cr)
The 105 Basics of Performance (3 cr)

Two of the following courses (6 cr)
Comm 335 Intercultural Communication (3 cr)
Comm 347 Persuasion (3 cr)*
Phil 201 Critical Thinking (3 cr)*

In addition to the above teaching major requirements, the following special methods sequence is also required (1-2 credits will be taken concurrently with EDCI 485) (required for this teaching minor):
EDCI 431 Secondary English Methods (3 cr)
EDCI 441 Secondary English Methods Practicum (1 cr)

**Note: Either Comm 347 or Phil 201 may be used towards the satisfaction of this requirement, but not both.*

Theatre Arts

A. 45-46 Credit Theatre Arts Teaching Major
The 103 Theatre Technology I (3 cr)
The 104 Theatre Technology II (3 cr)
The 105 Basics of Performance (3 cr)
The 106 Basics of Performance (3 cr)
The 201 Scene Design I (3 cr)
The 202 Costume Design I (3 cr)
The 305 Intermediate Acting (3 cr)
The 307 Advanced Theatrical Make-up (3 cr)
The 320 Theatre Management (2 cr)
The 371 Play Analysis (3 cr)
The 390 Theatre Practice II (2-3 cr)
The 468 Theatre History I (3 cr)
The 469 Theatre History II (3 cr)
The 471 Directing (3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:
EDCI 431 Secondary English Methods (3 cr)
EDCI 441 Secondary English Methods Practicum (1 cr)

B. 25-Credit Theatre Arts Teaching Minor
The 103 Theatre Technology I (3 cr)
The 104 Theatre Technology II (3 cr)
The 105 Basics of Performance (3 cr)
The 106 Basics of Performance (3 cr)
The 201 Scene Design I (3 cr)
The 202 Costume Design I (3 cr)
The 320 Theatre Management (2 cr)
The 471 Directing (3 cr)

Theatre Arts-Speech

46-Credit Composite Teaching Major
Comm 111 Introduction to Communication Studies (3 cr)
Comm 233 Interpersonal Communication (3 cr)
Comm 332 Communication and the Small Group (3 cr)
Comm 410 Conflict Management (3 cr)
Comm 431 Professional Presentation Techniques (3 cr)
JAMM 100 Media and Society (3 cr)
The 103 Theatre Technology I (3 cr)
The 104 Theatre Technology II (3 cr)
The 105 Basics of Performance (3 cr)
The 106 Basics of Performance (3 cr)
The 201 Scene Design I (3 cr)
The 202 Costume Design I (3 cr)
The 320 Theatre Management (2 cr)
The 471 Directing (3 cr)

One of the following (3 cr):
Comm 347 Persuasion (3 cr)
Phil 201 Critical Thinking (3 cr)

In addition to the above teaching major requirements, the following special methods sequence is also required:
EDCI 431 Secondary English Methods (3 cr)
EDCI 441 Secondary English Methods Practicum (1 cr)

Curriculum and Instruction Undergraduate Academic Certificates Requirements

Technical Workforce Training Undergraduate Academic Certificate

AOLL 473 Foundations of Adult Education and Adult Development (3 cr)
CTE 420 Evaluation in Professional-Technical Education (3 cr)
CTE 426 Occupational Analysis and Curriculum Development (3 cr)

CTE 447 Diverse Populations and Individual Differences (3 cr)
CTE 472 Teaching and Learning in Occupation Education (3 cr)
Courses to total 15 credits for this certificate

Curriculum and Instruction Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Curriculum and Instruction. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Education. General M.Ed. requirements apply. A Career and Technical Education emphasis is available by completing the following requirements:

CTE 430 Leadership and Student Organizations (2cr)
CTE 431 Supervising CTE Career and Technical Student Organizations (1cr)
CTE 464 Career Guidance & Transitioning to Work (3cr)
CTE 551 Principles and Philosophy of Career and Technical Education (3cr)

One of the following (3cr)
AOLL 573 Adult Learners: Foundations and Characteristics (3cr)
AOLL 574 Adult and Transformational Learning (3cr)
AOLL 575 Strategies for Facilitating Adult Learning (3cr)

Note: There are additional requirements for obtaining a CTE teaching credential at the secondary and post-secondary levels in the state of Idaho. See a CTE advisor for details.

Master of Education, Special Education major. Special Education is a unique program culminating in an undergraduate B.S.Ed. degree and recommendation for certification in either elementary or secondary education plus an Master of Education (M.Ed.) Degree and recommendation for the Standard Exceptional Child Certificate with a Generalist K-12 Endorsement. It is designed for students who want to become teachers in Special Education and general education.

Students must complete all requirements for a B.S.Ed in elementary or secondary education, and successfully complete with a "C" or better these prerequisites:

EDSP 300 Educating for Exceptionalities (2 cr)
EDSP 325 Classroom Applications of Learning Theories (2 cr)
EDSP 350 Language and Communication Development and Disorders (3 cr)
Math 235 Mathematics for Elementary Teachers I (3 cr)

Students must be admitted to the Special Education Masters Program through the College of Graduate Studies.

Students must also pass all three tests on the Idaho Comprehensive Literacy Assessment (ICLA) and the Praxis II Assessment in Special Education (10542 and 20353) and Elementary Education (10014) prior to beginning their special education internship.

Students will qualify for a Master of Education with a major in Special Education and an institutional recommendation for special education certification which will qualify the graduate for the Exceptional Child Certificate and Generalist K-12 Endorsement when they successfully complete the following coursework:

EDCI 570 Introduction to Research in Curriculum and Instruction (3 cr)
EDSP 423 Collaboration (3 cr)
EDSP 425 Evaluation of Children and Youth (3 cr)
EDSP 426 Developing Instructional Programs (3 cr)
EDSP 522 Advanced Evaluation Techniques (2 cr)
EDSP 540 Behavioral Analysis for Children and Youth (3 cr)
EDSP 548 Special Education Curriculum (3 cr)
EDSP 549 Language, Communication, and Social/Emotional Enhancement (3 cr)
EDSP 597 Practicum (cr arr)
EDSP 599 Non-thesis Master's Research (cr arr)

Additional Reading Requirement
For students with B.S.Ed. Elementary Education: EDCI 463 Literacy Methods for Content Learning (3 cr)
For students with B.S.Ed. Secondary Education: EDCI 320 Teaching Reading and Literacy (3 cr)

Education Specialist, Curriculum and Instruction major. General Ed.S. requirements apply. A Career and Technical Education emphasis is available by completing the following requirements:

CTE 430 Leadership and Student Organizations (2cr)
CTE 431 Supervising CTE Career and Technical Student Organizations (1cr)
CTE 464 Career Guidance & Transitioning to Work (3cr)
CTE 551 Principles and Philosophy of Career and Technical Education (3cr)

One of the following (3cr)
AOLL 573 Adult Learners: Foundations and Characteristics (3cr)
AOLL 574 Adult and Transformational Learning (3cr)
AOLL 575 Strategies for Facilitating Adult Learning (3cr)
CTE Electives to total 24 credits in the emphasis

Note: There are additional requirements for obtaining a CTE teaching credential at the secondary and post-secondary levels in the state of Idaho. See a CTE advisor for details.

Doctoral degrees. The Ed.D. and Ph.D. degrees in this field are offered through the college of education.

Teacher Certification and Professional Development. A person who holds a bachelor's degree and wishes to earn an early childhood development and education, elementary education, secondary education teaching certificate should talk to the chair of the Department of Curriculum and Instruction about entry into the certification and/or degree programs.

Department of Electrical and Computer Engineering

Fred D. Barlow, Dept. Chair (214 Buchanan Engr. Lab. 83844-1023; phone 208/885-6554; www.ece.uidaho.edu). Faculty: Touraj Assefi, David H. Atkinson, Suat U. Ay, Fred D. Barlow, Gregory W. Donohoe, Aicha Elshabini, James F. Frenzel, Karen Z. Frenzel, Saied Hemati, Herbert L. Hess, Brian K. Johnson, Joseph D. Law, Michael J. Santora, Dennis M. Sullivan, Richard W. Wall, Jeffrey L. Young.

The Department of Electrical and Computer Engineering offers degree programs in the closely related fields of electrical engineering and computer engineering. The electrical engineering program spans the subdisciplines of analog electronics, electric power, electromagnetics, computers, and communication and control systems. The computer engineering program focuses on the architecture, programming, and application of digital computers. Bachelor of Science, Master of Science, and Master of Engineering degrees are offered in both electrical engineering and computer engineering. The Doctor of Philosophy degree is offered in electrical engineering and encompasses research in both electrical and computer engineering.

Mission and Vision

The mission of the department is to educate students for the professional practice of electrical and computer engineering by offering undergraduate and graduate programs that encourage lifelong learning, foster teamwork and leadership, and promote creative discovery. The department is committed to maintaining the highest possible standards in teaching, scholarship, advising, and service. The vision of the department is to continue to expand its role in the state and region as a provider of outstanding undergraduate and graduate education programs in electrical and computer engineering.

Continuous Improvement

The department uses a continuous improvement process to attain the program educational objectives set forth below. Each of the broad objectives is associated with a number of specific student outcomes that are measured by a variety of assessment tools. Programs are assessed annually to identify problems and initiate changes to ensure that program objectives are being met. Additional information about the assessment and continuous improvement process is available under the department web page.

The department is proud of its over 100-year history and its more than 2,500 alumni. Our graduates have become productive engineers and industrial and community leaders all over the nation and the world, and are actively recruited by major employers of electrical and computer engineers. Both the Electrical and Computer Engineering programs are accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, ph. 410-347-7700. Graduates of our program consistently score higher than the national average on the Fundamentals of Engineering examination administered by the National Council of Examiners for Engineering and Surveying.

The department offices and laboratories are located in the Buchanan Engineering Laboratory and the Gauss-Johnson Laboratory on the Moscow campus. Courses are also offered through branch campuses located in Boise, Idaho Falls, and Coeur d'Alene, and through the Engineering Outreach program.

Electrical Engineering Undergraduate Program. Electrical engineering involves the application of electrical phenomena for the benefit of society. Electrical engineers design and use circuits and systems for computers, instruments, communications devices, and power conversion equipment.

Program Educational Objectives

The program educational objectives of the electrical engineering program are to produce graduates who:

1. **Learn and Integrate.** Graduates of the program will demonstrate proficiency in identifying, formulating, and solving engineering problems by applying their knowledge and understanding of mathematics, science, and engineering.
2. **Think and Create.** Graduates of the program will demonstrate proficiency in designing analog and digital circuits and systems, power systems, control systems, or computing systems. They will demonstrate the capabilities of analyzing, designing, implementing, and verifying circuits, devices, and systems to meet specified requirements while considering real-world constraints.
3. **Communicate.** Graduates of the program will demonstrate an ability to communicate effectively through oral and written media to interdisciplinary groups, including team members, constituents, and the public.
4. **Clarify Purpose and Perspective.** They will engage in lifelong learning activities to further develop their technical and professional capabilities and skills.
5. **Practice Citizenship.** Graduates of the program demonstrate knowledge of professional and ethical responsibility. They will consider the societal impact of their work, and/or add value to the profession and to society through active engagement in professional societies, community services, and outreach to future generations of engineers.

Students in the electrical engineering program are assigned a faculty advisor upon entry into the program. The advisor helps the student prepare appropriate class schedules each semester and provides guidance on other academic and professional issues. Students can take an electrical engineering course in their freshman year that introduces them to the field and helps prepare them for further study. Required courses in the freshman year help develop a solid foundation in physics, chemistry, mathematics, and writing. Foundation courses in science, mathematics, and engineering are continued in the sophomore year, including the first two courses in electrical circuits. The junior year exposes the student to a wide variety of electrical engineering courses to develop breadth in electrical engineering knowledge and skills. In the senior year, students specialize in specific areas of electrical engineering through the choice of technical electives. Students also take a two-semester sequence of design courses where students learn to design, test, and build an electrical engineering circuit or system. Additional courses in the humanities, social sciences, and English help prepare the graduate to become a well-rounded and productive member of society.

Computer Engineering Undergraduate Program. Computer engineering involves the application of the principles of electrical engineering and computer science for the benefit of society. Computer engineers design and use digital computers for instrumentation, control, communication, and power conversion systems.

Program Educational Objectives

The program educational objectives of the computer engineering program are to produce graduates who:

1. **Learn and Integrate.** Graduates of the program will demonstrate proficiency in identifying, formulating, and solving engineering problems by applying their knowledge and understanding of mathematics, science, and engineering.
2. **Think and Create.** Graduates of the program will demonstrate proficiency in analysis and design of hardware and software-based systems using modern methods and tools to meet specified requirements while considering real-world constraints.
3. **Communicate.** Graduates of the program will demonstrate an ability to communicate effectively through oral and written media to interdisciplinary groups, including team members, constituents, and the public.
4. **Clarify Purpose and Perspective.** They will engage in lifelong learning activities to further develop their technical and professional capabilities and skills.
5. **Practice Citizenship.** Graduates of the program demonstrate knowledge of professional and ethical responsibility. They will consider the societal impact of their work, and/or add value to the profession and to society through active engagement in professional societies, community services, and outreach to future generations of engineers.

Students in the computer engineering program are assigned a faculty advisor upon entry into the program. The advisor helps the student prepare appropriate class schedules each semester and provides guidance on other academic and professional issues. In the freshman year, students take introductory courses in physics, mathematics, and computer science to help develop a solid foundation based on these fundamental areas. The sophomore year continues with more physics and mathematics, but also introduces the students to more advanced courses in computer science, computer engineering, and electrical circuits. The junior year provides breadth in several areas of electrical and computer engineering and computer science including electronics, signals and systems, microcontrollers, programming languages, and operating systems. The senior year allows the student to develop some depth of knowledge in selected areas through a variety of technical elective courses. In addition, the student takes a two-semester sequence of design courses where students learn to design, test, and build a computer engineering system. Additional courses in the humanities, social sciences, English, and public speaking help prepare the graduate to become a well-rounded and productive member of society.

Note: In addition to college requirements for admission to classes (see "Admission to Classes" under the College of Engineering section), students majoring in electrical engineering or computer engineering must earn a grade of C or better in certain lower division courses and a passing grade in ECE 292 as prerequisite to any upper-division course in electrical engineering or computer engineering. Advisor's approval is required for admission to all ECE courses.

Courses

See the course description section for courses in Electrical and Computer Engineering (ECE).

Electrical and Computer Engineering Undergraduate Curricular Requirements

Computer Engineering (B.S.Comp.E.)

Required course work includes the university requirements (see regulation J-3) and:

Comm 101	Fundamentals of Public Speaking (2 cr)
CS 120	Computer Science I (4 cr)
CS 121	Computer Science II (4 cr)
CS 150	Computer Organization and Architecture (3 cr)
CS 210	Computing Languages (3 cr)
CS 240	Computer Operating Systems (3 cr)
CS 270	System Software (3 cr)
ECE 101	Foundations of Electrical and Computer Engineering (2 cr)
ECE 210	Electrical Circuits I (3 cr)
ECE 211	Electrical Circuits I Lab (1 cr)
ECE 212	Electrical Circuits II (3 cr)
ECE 213	Electrical Circuits II Lab (1 cr)
ECE 240	Digital Logic (3 cr)
ECE 241	Logic Circuit Lab (1 cr)
ECE 292	Sophomore Seminar (0 cr)
ECE 310	Microelectronics I (3 cr)
ECE 311	Microelectronics I Lab (1 cr)
ECE 340	Microcontrollers (3 cr)
ECE 341	Microcontrollers Lab (1 cr)
ECE 350	Signals and Systems Analysis (3 cr)
ECE 351	Signals and System Lab (1 cr)
ECE 440	Digital Systems Engineering (3 cr)
ECE 482	CompE Senior Design I (3 cr)
ECE 483	CompE Senior Design II (3 cr)
ECE 491	Senior Seminar (0 cr)
Engl 317	Technical Writing (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Math 175	Analytic Geometry and Calculus II (4 cr)
Math 176	Discrete Mathematics (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Math 330	Linear Algebra (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Stat 301	Probability and Statistics (3 cr)

Science elective selected from Chem 111, Geol 111/Geol 111L, MMBB 154/MMBB 155, or Phys 213/Phys 213L (4 cr)
Technical electives selected from upper-division computer engineering, electrical engineering, and computer science courses (15 cr)

One of the following (3 cr):

AmSt 301	Studies in American Culture (3 cr)
Phil 103	Ethics (3 cr)

One of the following (3-4 cr):

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
Econ 272	Foundations of Economics (4 cr)

Courses to total 128 credits for this degree, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies.

Students majoring in computer engineering must earn a grade of C or better in each of the following courses for graduation, and before registration is permitted in upper-division engineering courses: ECE 210, ECE 212, ECE 240, ECE 241, Math 170, Math 175, Math 310, Phys 211, and Phys 212. Before registration is permitted in 200-level CS courses students majoring in computer engineering must earn a grade of C or better in CS 120, CS 121 and CS 150 and Math 176. Students majoring in computer engineering must earn a grade of C or better in CS 210, CS 240, CS 270, and Math 170, Math 175, Math 176 for graduation and before registration is permitted in upper-division CS courses.

Any student majoring in computer engineering may accumulate no more than five (5) letter grades of D's and F's in mathematics, science, or engineering courses that are used to satisfy graduation requirements. Included in this number are multiple repeats of a single class or single repeats in multiple classes and courses transferred from other institutions. Specifically excluded are D or F grades from laboratory sections associated with courses.

Electrical Engineering (B.S.E.E.)

Required course work includes the university requirements (see regulation J-3) and:

Chem 111	Principles of Chemistry I (4 cr)
CS 120	Computer Science I (4 cr)
ECE 101	Foundations of Electrical and Computer Engineering (2 cr)
ECE 210	Electrical Circuits I (3 cr)
ECE 211	Electrical Circuits I Lab (1 cr)
ECE 212	Electrical Circuits II (3 cr)
ECE 213	Electrical Circuits II Lab (1 cr)
ECE 240	Digital Logic (3 cr)
ECE 241	Logic Circuit Lab (1 cr)
ECE 292	Sophomore Seminar (0 cr)
ECE 310	Microelectronics I (3 cr)
ECE 311	Microelectronics I Lab (1 cr)
ECE 320	Energy Systems I (3 cr)
ECE 321	Energy Systems I Lab (1 cr)
ECE 330	Electromagnetic Theory (3 cr)
ECE 331	Electromagnetics Lab(1 cr)
ECE 340	Microcontrollers (3 cr)
ECE 341	Microcontrollers Lab (1 cr)
ECE 350	Signals and Systems I (3 cr)
ECE 351	Signals and System Lab (1 cr)
ECE 480	EE Senior Design I (3 cr)
ECE 481	EE Senior Design II (3 cr)
ECE 491	Senior Seminar (0 cr)
Engr 210	Engineering Statics (3 cr)
Engr 220	Engineering Dynamics (3 cr)
Engr 360	Engineering Economy (2 cr)
Engl 317	Technical Writing (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Math 330	Linear Algebra (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Stat 301	Probability and Statistics (3 cr)

One of the following (3 cr):

AmSt 301	Studies in American Culture (3 cr)
Phil 103	Ethics (3 cr)

One of the following (3-4 cr):

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
Econ 272	Foundations of Economics (4 cr)

Upper-division engineering science elective chosen from Engr 320, Engr 335, Engr 350, Engr 428, Math 428, or Phys 428 (3 cr)
Technical electives taken from upper-division Engineering, Math, Physics, Statistics, and Computer Science courses. Students may request, after approval by their academic advisor and the Petition Committee, to use other upper division technical courses in the College of Science or in Engineering Management (EM) in partial fulfillment of this requirement. Of these eighteen credits a minimum of twelve credits must be selected from electrical engineering courses including at least nine credits from the follow courses: ECE 410 or ECE 418, ECE 420, ECE 430, ECE 440 or ECE 443, ECE 450 and ECE 460 or ECE 465. (18 cr)

Courses to total 128 credits for this degree, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies.

Students majoring in electrical engineering must earn a grade of P in ECE 292 and a grade of C or better in each of the following courses for graduation and before registration is permitted in upper-division electrical and computer engineering courses: Chem 111, CS 120, ECE 210, ECE 211, ECE 212, ECE 213, ECE 240 and ECE 241; Engr 210, and Engr 220; Math 170, Math 175, Math 275, and Math 310; and Phys 211, Phys 212. Students majoring in electrical engineering or computer engineering must meet the college requirements for admission to classes (see "Admission to Classes" under College of Engineering, part four).

Any student majoring in electrical engineering may accumulate no more than five (5) letter grades of D's and F's in mathematics, science, or engineering courses that are used to satisfy graduation requirements. Included in this number are multiple repeats of a single class or single repeats in multiple classes and courses transferred from other institutions. Specifically excluded are D or F grades from laboratory sections associated with courses.

Within the constraints on choice of technical electives noted above, students may choose sets of electives to develop proficiencies in certain areas of emphasis. Three such areas are currently available, one in communications, one in integrated circuit design, and one in power. The course requirements for each of these areas are described below.

The **Communications** emphasis prepares students for a variety of careers in the communications industry. Students should take a total of 18 credits from the following: (a) core courses: 9 credits from ECE 410, ECE 430, ECE 450, and (b) technical electives: 9 credits from ECE 413, ECE 432, ECE 445, ECE 452, ECE 455.

The **Microelectronics** emphasis prepares students for variety careers in the semiconductor industry. It includes courses in analog/RF and mixed-signal integrated circuit (IC) design, semiconductors, and IC packaging. Students should take a total of 18 credits from the following: (a) 6 required credits: ECE 410, ECE 460, and (b) 3 core credits: ECE 413, ECE 415, ECE 418, and (c) 3 credits of ECE 440, ECE 430, ECE 450 and ECE 465, and (d) 6 additional credits of technical electives from ECE 413, ECE 415, ECE 417, ECE 418, ECE 419, ECE 445, ECE 462, ECE 465.

The **Power** emphasis prepares students for a variety of careers with electric utilities, consulting firms, and with manufacturing and design firms. Students should take a total of 18 credits from the following: (a) 12 credits: ECE 420, ECE 422, ECE 427 and ECE 450, and (b) 3 core credits from: ECE 410, ECE 430, ECE 440, and (c) 3 additional credits of technical electives.

Electrical and Computer Engineering Graduate Academic Certificates Requirements

Analog Integrated Circuit Design Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

ECE 512	Analog Filter Design (3 cr)
ECE 515	Analog Integrated Circuit Design (3 cr)
ECE 517	Mixed Signal IC Design (3 cr)

Electives (3 cr):

ECE 416	Applications of Linear Integrated Circuits (3 cr)
ECE 430	Microwave and Millimeter Wave Circuits (3 cr)
ECE 445	Introduction to VLSI Design (3 cr)
ECE 460	Semiconductor Devices (3 cr)
ECE 513	Radio-Frequency IC Design (3 cr)

Courses to total 12 credits for this certificate

Communication and Control for Power Transmission and Distribution Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

CS 420 or CS 520	Data Communication Systems (3 cr)
ECE 421	Introduction to Power Systems (3 cr)

Electives (6 cr):

CS 448 or CS 548	Survivable Systems and Networks (3 cr)
CS 449 or CS 549	Fault Tolerant Systems (3 cr)
ECE 422	Power System Analysis (3 cr)
ECE 521	Power System Stability (3 cr)
ECE 525	Power System Protection and Relaying (3 cr)

Courses to total 12 credits for this certificate

Electric Machines and Drives Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

ECE 427	Power Electronics (3 cr)
ECE 520	Advanced Electrical Machinery (3 cr)
ECE 527	Dynamics and Control of AC Drives (3 cr)

Electives (3 cr):

ECE 470	Control Systems (3 cr)
ECE 504	Special Topics (3 cr)
ECE 522	Induction Machines (3 cr)

Courses to total 12 credits for this certificate

Power System Protection and Relaying Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all course work for this academic certificate.

ECE 422	Power Systems Analysis (3 cr)
ECE 525	Power System Protection and Relaying (3 cr)

Electives (6 cr):

ECE 452	Communication Systems (3 cr)
ECE 476	Digital Filtering (3 cr)
ECE 504	Special Topics (3 cr)
ECE 523	Symmetrical Components (3 cr)
ECE 524	Transients in Power Systems (3 cr)
ECE 526	Protection of Power Systems II (3 cr)

Courses to total 12 credits for this certificate

Semiconductor Theory and Devices Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

ECE 460	Semiconductor Devices (3 cr)
ECE 562	Semiconductor Theory (3 cr)

Electives (6 cr):

ECE 515	Analog Integrated Circuit Design (3 cr)
ECE 517	Mixed Signal IC Design (3 cr)
ECE 545	Advanced VLSI Design (3 cr)

Any 500-Level ECE course (except special topics, thesis credit, etc.) as approved by the certificate coordinator (3 cr)

Courses to total 12 credits for this certificate

Electrical and Computer Engineering Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Electrical and Computer Engineering. See the College of Graduate Studies section for the general requirements applicable to each degree.

Computer Engineering

The Computer Engineering Program offers both Master of Science and Master of Engineering degrees. Both degrees may be earned through the Engineering Outreach off campus program. These advanced degrees offer engineering students an opportunity to strengthen their knowledge of computer engineering by taking graduate courses that focus on advanced subject matter and by participating in research.

Qualifications for Admittance. Candidates must have a bachelor's degree in computer engineering, with an undergraduate GPA of 3.00 or higher. International students who are required to take the TOEFL examination by the College of Graduate Studies must have a TOEFL score of at least 79 for the Internet-based Test (iBT) version, 213 for the computer version, or 550 for the paper version. All candidates must submit scores from the general portion of the Graduate Record Examination.

Candidates who do not have a bachelor's degree in computer engineering may be admitted to the graduate program if, in addition to the requirements for candidates who have a B.S.Comp.E., they meet the following minimum requirements.

1. A bachelor's degree in electrical engineering, computer science, or another engineering discipline or in a supporting area of study such as mathematics or physics.
2. Demonstrated proficiency in the fundamentals of computer engineering emphasized in the undergraduate curriculum. Proficiency is demonstrated by successful completion of the following fundamental courses: Fundamentals of Electronics (ECE 310), Digital Logic (ECE 240), Computer Organization and Architecture (CS 150), Computer Science II (CS 121), Discrete Mathematics (Math 176), Differential Equations (Math 310), Linear Algebra (Math 330). Some deficiencies may be removed by taking background courses through Engineering Outreach. Students with undergraduate course deficiencies in the fundamentals of computer engineering must remove these deficiencies prior to admission for graduate work. Such deficiency courses cannot be used for graduate credit.
3. Two advanced undergraduate courses in electrical engineering, computer engineering, or computer science equivalent to Computer Operating Systems, Digital Systems Engineering (ECE 440). Students with undergraduate course deficiencies in the advanced areas of computer engineering must remove these deficiencies either prior to admission or in the first three semesters of graduate work. Such deficiency courses cannot be used for graduate credit.

Master of Science. To be approved, programs must satisfy both the university requirements governing the M.S. degree and must be enrolled in ECE 591, Electrical Engineering Research Colloquium, during each semester of on-campus enrollment.

Master of Engineering. To be approved, programs must satisfy both the university requirements governing the M.S. degree and must be enrolled in ECE 591, Electrical Engineering Research Colloquium, during each semester of on-campus enrollment.

Electrical Engineering

Master of Science. General M.S. requirements apply, except that the department requires at least 24 credits of course work in addition to a thesis. The master's program may provide advanced preparation for professional practice, or it may serve as the first step in graduate study leading to the Ph.D. degree. Specific courses to be taken for the program are not prescribed by the faculty. Students, with the assistance of their major professor, prepare their own program as soon as possible during their first semester, and submit it to the faculty for approval.

1. At least 18 credits in electrical engineering courses numbered 500 or above.
2. Two or more electrical engineering courses numbered above 500 in a given area for depth.
3. At least one course in each of two areas (outside the areas selected under item 2) to provide breadth.
4. Enrollment in ECE 591, Electrical Engineering Research Colloquium, during each semester of on-campus enrollment.

Master of Engineering. General M.Engr. requirements apply, except that the department requires at least 30 credits of course work. Students, with the assistance of their major professor, prepare their own program as soon as possible during their first semester, and submit it to the faculty for approval. To be approved, programs must satisfy both the university requirements governing the M.Engr. degree and the following department requirements:

1. At least 18 credits in electrical engineering courses numbered 500 or above.
2. At least three electrical engineering courses in a given area for depth, two of which must be numbered 500 or above.
3. At least one course in each of two areas (outside the areas selected under item 2) to provide breadth.
4. Enrollment in ECE 591, Electrical Engineering Research Colloquium, during each semester of on-campus enrollment.

Doctor of Philosophy. General Ph.D. requirements apply. The preliminary examination consists of both a written and an oral examination. There is no foreign language requirement. Two semesters of ECE 591, Electrical Engineering Research Colloquium, will be required for on-campus doctoral students.

Engineering

Larry Stauffer, Dean (125 Janssen Engr. Bldg.; 208/885-6470).

Engineering Management: Sandy Lieske, Program Coordinator, (322 E Front Street, Boise, ID 83702; 208/364-4568; lieske@uidaho.edu). Faculty: Dennis Keiser, Sandy Lieske, Scott Metlen, Jason Porter, Larry Stauffer, Chris Williams

Technology Management: Sandy Lieske, Program Coordinator, (322 E Front Street, Boise, ID 83702; 208/364-4568; lieske@uidaho.edu). Faculty: Dennis Keiser, Sandy Lieske, Scott Metlen, Jason Porter, Larry Stauffer, Chris Williams

Industrial Technology: Lee Ostrom, Program Coordinator, (1776 Science Center Drive, Ste 306, Idaho Falls, ID 83402; 208/282-7903; ostrom@uidaho.edu). Faculty: Raghunath Kanakala, Roger Scott, Cheryl Wilhelmsen

Engineering Undergraduate Curricular Requirements

Industrial Technology (B.S.Tech.)

The Industrial Technology Bachelor of Science degree program is designed to provide students with the opportunity to develop in-depth knowledge and hands-on experience in basic and advanced industrial processes, procedures, planning, and management.

Note: This degree is currently only available at the Idaho Falls Center

The degree program requires 128 credits and includes the university requirements (regulation J-3). There are 104 credits of required courses and 24 credits of electives. Of the 24 elective credits 13 are technical electives and 11 free electives. The required courses for this program are:

Bus 311	Introduction to Management (3 cr)
Bus 370	Introduction to Operations Management (3 cr)
CE 482	Project Engineering (3 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Econ 202	Principles of Microeconomics (3 cr)
Engl 317	Technical Writing (3 cr)
Engr 105	Engineering Graphics (2 cr)
IndT 310	Introduction to Industrial Technology (3 cr)
IndT 311	Problems in Industrial Technology (1 cr)
IndT 332	Introduction to Analog and Digital Electronics (4 cr)
IndT 333	Industrial Electronics and Control Systems (3 cr)
IndT 350	Introduction to Materials Science (3 cr)
IndT 353	Manufacturing Systems (3 cr)
IndT 362	Behavior Based Safety (3 cr)
IndT 415	Impact of Technology on Society (3 cr)
IndT 434	Power Generation and Distribution (3 cr)
IndT 435	Network Administration (3 cr)
IndT 442	Systems Integration (3 cr)
IndT 443	Government Contract Law (3 cr)
IndT 444	Quality Assurance Organization and Management (3 cr)
IndT 446	Labor Law (3 cr)
IndT 453	Computer Integrated and Robotics Manufacturing Technology (3 cr)
IndT 462	Industrial Safety (3 cr)
IndT 484	Industrial Technology Capstone I (2 cr)
IndT 485	Industrial Technology Capstone II (2 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)
Phys 112, Phys 112L	General Physics II and Lab (4 cr)
Psyc 101	Introduction to Psychology (3 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytical Geometry and Calculus I (4 cr)

One of the following (3 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Statistics (3 cr)

Technical electives can include, but are not limited to:

IndT 448	Project and Program Management (3 cr)
IndT 457	Lean to Green Sustainable Technology (3 cr)
IndT 463	Industrial Transportation Safety (3 cr)
IndT 464	Human Performance Fundamentals (3 cr)
IndT 465	Construction Safety (3 cr)
IndT 466	Human Performance Field Investigation (3 cr)
IndT 468	Applied Research in Human Performance (3 cr)
IndT 469	Safety Management through LEAN Engineering Methods (3 cr)
IndT 470	Homeland Security (3 cr)
IndT 472	National Incident Management Systems (3 cr)

Elective credit can also be obtained through Technical Competency. Up to 24 credits can be obtained in this manner. Consult with your advisor for information on this process.

Courses to total 128 credits for this degree

Engineering Undergraduate Academic Certificates Requirements

Human Safety Performance Undergraduate Academic Certificate

IndT 362	Behavior Based Safety (3 cr)
IndT 464	Human Performance Fundamentals (3 cr)
IndT 466	Human Performance Field Investigation (3 cr)

One of the following (3 cr):

CTE 450	Occupational Safety (3 cr)
TM 528	Accident Investigation (3 cr)

Courses to total 12 credits for this certificate

Engineering Graduate Academic Certificates Requirements

Emergency Planning and Management Graduate Academic Certificate

IndT 472	National Incident Management Systems (3 cr)
TM 525	Emergency Management and Planning (3 cr)
TM 526	Community Emergency Planning (3 cr)

Two of the following (6 cr):

IndT 470	Homeland Security (3 cr)
TM 533	Chemical Hazards (3 cr)
TM 534	Biological Hazards (3 cr)

Courses to total 15 credits for this certificate

Engineering Graduate Degree Programs

Master of Science, Technology Management major. Master's degree candidates must fulfill the requirements of the College of Graduate Studies and of the College of Engineering. See the College of Graduate Studies section for the general requirements applicable to each degree.

Engineering Management

Sandy Lieske, Program Coordinator (322 E Front Street, Boise, ID 83702; lieske@uidaho.edu; www.uidaho.edu/engr/engineeringmanagement); Denise Engebrecht, Student Advisor; phone 208/364-6123 denisee@uidaho.edu. Core Faculty: Dennis Keiser and Sandy Lieske Accounting Faculty: Jason Porter; Business Faculty: Scott Metlen and Barry Willis; Civil Engineering Faculty: Mechanical Engineering Faculty: Larry Stauffer; Statistics Faculty: Chris Williams.

The Engineering Management Program at University of Idaho is designed for engineering professionals moving into technical management roles. The Program is multidisciplinary, supported by faculty in the colleges of engineering, business, and science. Students will explore the analytical, technical, and human resource aspects of managing in a technical environment. Students will have the opportunity to expand their knowledge in their chosen field of expertise. Since the vast majority of engineers assume management roles sometime during their career, this degree program is typically pursued on a part-time basis by working engineers. Classes are offered by resident and adjunct faculty in Idaho Falls, Boise, and Moscow. All courses required for the program are available for distance learners through the College of Engineering's Engineering Outreach Program www.outreach.uidaho.edu/eo.

The College of Engineering offers a M.Engr. (non-thesis) degree in Engineering Management. Admission to the program is based on: ability to complete graduate-level work evidenced by undergraduate transcripts; a B.S. in Engineering from an ABET/EAC accredited program, **TOEFL** score higher than 550 for International students, at least 2 years of engineering work experience beyond B.S. degree or currently employed as an engineer, and three letters of recommendation. One of the three letters of recommendation must be from a current or former employer.

Courses

See the course description section for courses in Engineering Management (EM). Other course descriptions are listed in each of the department sections in Accounting, Business, Engineering, and Statistics.

Engineering Management Graduate Degree Requirements

Candidates must fulfill the requirements of the College of Graduate Studies and of the College of Engineering. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Engineering. General M.Engr. requirements apply. The Engineering Management degree requires 30 credits; a minimum of 15 credits must be engineering courses. The degree program includes 12 credits of required courses (see below) and the rest are electives based on particular program requirements. Each student will design a study plan in consultation with the Engineering Management Student Advisor which is then approved by the Director. Nearly all of the Engineering Management students do not live in Moscow and are allowed to take classes from other universities, especially elective classes, as appropriate and following University of Idaho policy for transfer courses.

Required Courses (12 credits):

Acct 582	Enterprise Accounting (3 cr)
Bus 513	Leadership and Organizational Behavior (3 cr)
EM 510	Engineering and Technology Management Fundamentals (3 cr)
Stat 431	Statistical Analysis (3 cr)

Department of English

Gary Williams, Department Chair (200 Carol Ryrie Brink Hall 83844-1102; phone 208/885-6156; englishdept@uidaho.edu). Faculty: Anna Banks, Kim M. Barnes, Mary Clearman Blew, Steven R. Chandler, Thomas A. Drake, Stephan P. Flores, Doug Heckman, Walter A. Hesford, Erin James, Janis Johnson, Mary Ann Judge, Diane Kelly-Riley, Jennifer Ladino, Ronald E. McFarland, Jodie Nicotra, Daniel Orozco, Joy Passanante, Caroline Payant, Kurt Queller, Brandon R. Schrand, David Sigler, Scott Slovic, Alexandra Teague, Karen L. Thompson, Gary Williams, Robert A. Wrigley.

English majors develop skills in writing, textual interpretation, and critical thinking as they study the nature of language and rhetoric and learn how English and American literary traditions develop and relate to world literature. They learn the formal qualities of texts as well as their historical and cultural contexts. Advanced courses allow students to pursue interests in literature, expository and creative writing, cultural studies, literary criticism and theory, linguistics, and English pedagogy. Students write extensively in all courses and gain speaking experience through oral reports and class discussions. (For this reason, international students must have a TOEFL score of 560 or above.)

The Department of English encourages students to plan their curricula according to personal and career goals. Aspiring writers emphasize creative writing courses; future teachers of English as a Second Language (ESL) study linguistics; pre-professionals take advanced writing and career-related courses. Those heading for graduate school in literature, linguistics, or ESL choose courses that prepare them for graduate study in their area. English majors who intend to teach English in secondary schools plan their program to satisfy state certification requirements (see "Secondary School Teaching Certification for Majors Outside the College of Education" in the College of Education section).

To enable students to focus on such interests within a coherent program of study, the English Department offers the choice of four emphases within the major: literature, creative writing, professional, and teaching.

The Department of English offers four graduate degrees at the master's level: the M.F.A, the M.A., the M.A.T., the M.A. in Teaching English as a Second Language. Through course selection and choice of thesis topic, and with the approval of appropriate faculty members, students pursuing the M.A. may emphasize literary studies or studies in composition/rhetoric. Through course selection and choice of thesis topic, and with the approval of appropriate faculty members, those pursuing the M.F.A. may emphasize fiction, poetry, or creative nonfiction. Students planning to work for the M.F.A., M.A. or M.A.T. should be well prepared through the curriculum outlined below. The MFA also offers students the tools to work and teach as literary writers. Those planning to pursue the M.A. in Teaching English as a Second Language should take extra course work in linguistics.

The purposes of the graduate program in English are to enable students to acquire a broad background in English and American language and literature and to develop specialized skills in independent, scholarly research and in mature, original criticism of literary works, to hone their skills as creative writers, or to deal with the theoretical and practical issues pertaining to English as a second language. The graduate program in English serves those who plan to teach English at junior or community colleges, those who plan to teach English at the secondary level, those who plan to seek employment in business, commerce, industry, or government, and those who plan to pursue the Ph.D.

For admission to the graduate program in English, the student must have a bachelor's degree with a major in English or equivalent preparation and should have an overall grade-point average of 3.00 (on a 4.00 scale) to be granted full admission. Non-native speakers of English must score at least 560 on the TOEFL exam.

Courses

See the course description section for courses in English (Engl).

English Undergraduate Curricular Requirements

English (B.A.)

Where specific courses are listed with the area requirements, the department may approve equivalencies.

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, and one of the following emphases:

A. Literature Emphasis

Foundations (9 cr):

Engl 215	Introduction to English Studies (3 cr)
Engl 230	Introduction to Film Studies(3 cr)
Engl 310	Literary Theory (3 cr)

Literary History (15 cr):

Engl 345	Shakespeare or a 400-level course in literature before 1800 (3 cr)

One upper-division course in literature before 1900 (3 cr)

One course from the following (3 cr):

Engl 221	History of World Cinema I (3 cr)
Engl 222	History of World Cinema II (3 cr)
Engl 257	Literature of Western Civilization (3 cr)

Engl 258 Literature of Western Civilization (3 cr)

Two courses from the following (6 cr):
Engl 341 Survey of British Literature (3 cr)
Engl 342 Survey of British Literature (3 cr)
Engl 343 Survey of American Literature (3 cr)
Engl 344 Survey of American Literature (3 cr)

Linguistics (3 cr):
Engl 241 Introduction to the Study of Language (3 cr)
Engl 496 History of the English Language (3 cr)

Cultural Diversity (One course in non-canonical or underrepresented literatures) (3 cr):
AIST 320 The Celluloid Indian: American Indians in Popular Film (3 cr)
Engl 380 Introduction to U.S. Ethnic Literatures (3 cr)
Engl 481 Women's Literature (3 cr)
Engl 483 African American Literature (3 cr)
Engl 484 American Indian Literature (3 cr)
Engl 485 Global Literature in English (3 cr)
Or an adviser-approved special topics or extra-departmental course (3 cr)

Electives (12 cr):
Four 400-level courses in literature

Capstone (3 cr):
Engl 490 Senior Seminar (3 cr)
Courses to total 120 credits for this degree

B. Creative Writing Emphasis

Foundations (3 cr):
Engl 215 Introduction to English Studies (3 cr)

Literary History (12 cr):
Engl 257 or Literature of Western Civilization (3 cr)
Engl 258
Engl 345 Shakespeare or another course in literature before 1800 (3 cr)
Two courses from the following (6 cr):
Engl 341 Survey of British Literature (3 cr)
Engl 342 Survey of British Literature (3 cr)
Engl 343 Survey of American Literature (3 cr)
Engl 344 Survey of American Literature (3 cr)

Genre Craft/Workshop Courses (Students must take a full numerical sequence in their major genre (ex. 291/391/491), plus two additional creative writing courses in a sequence in one other genre for a minor genre and either a beginning writing course in a third genre or an advanced writing course in the minor genre.) (18 cr):
Engl 291 Beginning Poetry Writing (3 cr)
Engl 292 Beginning Fiction Writing (3 cr)
Engl 293 Beginning Nonfiction Writing (3 cr)
Engl 391 Intermediate Poetry Writing (3 cr)
Engl 392 Intermediate Fiction Writing (3 cr)
Engl 393 Intermediate Nonfiction Writing (3 cr)
Engl 491 Advanced Poetry Writing (3 cr)
Engl 492 Advanced Fiction Writing (3 cr)
Engl 493 Advanced Nonfiction Writing (3 cr)

Cultural Diversity (One course in non-canonical or underrepresented literatures) (3 cr):
Engl 380 Introduction to U.S. Ethnic Literatures (3 cr)
Engl 481 Women's Literature (3 cr).
Engl 483 African American Literature (3 cr).
Engl 484 American Indian Literature (3 cr).
Or an adviser-approved special topics or extra-departmental course (3 cr)

Electives (6 cr):
Two literature courses at the 400-level

Capstone (3 cr):
Engl 490 Senior Seminar (3 cr)
Courses to total 120 credits for this degree

C. Professional Emphasis

The professional emphasis is an individualized program for students wishing to stress preparation for professions such as law, writing and editing, government service, and business.

Foundations (3 cr)
Engl 215 Introduction to English Studies (3 cr)

Literary History (9 cr)
Engl 257 or Literature of Western Civilization (3 cr)
Engl 258
Two courses from the following (6 cr):
Engl 341 Survey of British Literature (3 cr)
Engl 342 Survey of British Literature (3 cr)
Engl 343 Survey of American Literature (3 cr)
Engl 344 Survey of American Literature (3 cr)

Writing (9 cr)
Two courses from the following (6 cr):
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 309 Advanced Prose Writing (3 cr)
One course from the following (3 cr):
Engl 313 Business Writing (3 cr)
Engl 316 Environmental Writing (3 cr)
Engl 317 Technical Writing (3 cr)

Cultural Diversity (One course in non-canonical or underrepresented literatures) (3 cr)
Engl 380 Introduction to U.S. Ethnic Literatures (3 cr)
Engl 481 Women's Literature (3 cr).
Engl 483 African American Literature (3 cr).
Engl 484 American Indian Literature (3 cr).
Or an adviser-approved special topics or extra-departmental course (3 cr)

One 400-level linguistics course (3 cr)
One 400-level English course (3 cr)
Two English courses (6 cr)
Note that Engl 208 and Engl 293 cannot both count towards fulfillment of the requirements in the Professional Emphasis.

Capstone (3 cr)
Engl 440 Reading, Writing, and Rhetoric (3 cr)
Courses to total 120 credits for this degree

D. Teaching Emphasis

Foundations (3 cr)
Engl 215 Introduction to English Studies (3 cr)

Literary History (15 cr)
Engl 257 or Literature of Western Civilization (3 cr)
Engl 258
Engl 341 or Survey of British Literature (3 cr)
Engl 342
Engl 343 Survey of American Literature (3 cr)
Engl 344 Survey of American Literature (3 cr)
Engl 345 Shakespeare (3 cr)

Language (10 cr):
Engl 201 English Grammar, Key Concepts and Terms (1 cr)
Engl 241 Intro to the Study of Language (3 cr)
Two linguistics courses from the following (6 cr)
Engl 442 Introduction to English Syntax (3 cr)
Engl 444 Sociolinguistics (3 cr)
Engl 496 History of the English Language (3 cr)

Writing (9 cr):
Engl 309 Advanced Prose Writing (3 cr)
Engl 401 Writing Workshop for Teachers (3 cr)
One course from the following (3 cr):
Engl 208 (s) Personal and Exploratory Writing (3 cr)
Engl 291 Beginning Poetry Writing (3 cr)
Engl 292 Beginning Fiction Writing (3 cr)
Engl 293 Beginning Nonfiction Writing (3 cr)

Cultural Diversity (One course in non-canonical or underrepresented literatures) (3 cr):
Engl 380 Introduction to U.S. Ethnic Literatures (3 cr)
Engl 481 Women's Literature (3 cr).
Engl 483 African American Literature (3 cr)
Engl 484 American Indian Literature (3 cr)
Or an adviser-approved special topics or extra-departmental course (3 cr)

One 400-level literature course (3 cr)
One 300 or 400-level literature course (3 cr)
One elective course at the 300 or 400-level (3 cr)
Capstone
This requirement is fulfilled for Teaching Emphasis majors by EDCI 485, Internship.
Courses to total 120 credits for this degree

Teacher Certification

CLASS English majors wishing secondary teaching certification must complete the appropriate English and education courses listed in the "Teaching Majors and Minors" in the Department of Curriculum and Instruction section of this catalog. Students should plan their programs with their English advisor; they should also see a College of Education advisor regarding certification requirements.

English Academic Minor Requirements

English Minor

Engl 215 Introduction to English Studies (3 cr)

Two of the following courses (6 cr)
Engl 341 or Survey of British Literature (3 cr)
Engl 342
Engl 343 or Survey of American Literature (3 cr)
Engl 344
Four English courses chosen from any course at the 300 or 400 level, excluding non majors courses; at least two must be literature courses, and at least one must be at the 400 level (12 cr)
Courses to total 20 credits for this minor

Teaching English as a Second Language Minor

Engl 241 Introduction to the Study of Language (3 cr)
Engl 442 Introduction to English Syntax (3 cr)

One of the following (3 cr):
Anth 261 Language and Culture (3 cr)
Anth 427 or Racial and Ethnic Relations (3 cr)
Soc 427

One of the following (3 cr):
EDCI 437 Secondary Foreign Language Methods (3 cr)
Engl 413 ESL Methods I: Basic Oral/Aural Skills (3 cr)

Electives chosen from among other courses in English language and linguistics or from Anth 261 or Anth 427 if not chosen above (9 cr)
Courses to total 20 credits for this minor

Writing Minor

The Writing Minor is not open to English majors.
Engl 440 Reading, Writing, and Rhetoric (3 cr)

One of the following courses (3 cr):
Engl 202 Introduction to Professional Writing (3 cr)
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)

Two of the following courses (if not taken above); also note that Engl 208 and Engl 293 cannot both count towards fulfillment of the requirements for the Writing Minor (6 cr):
Engl 202 Introduction to Professional Writing (3 cr)
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 215 Introduction to English Studies (3 cr)
Engl 291 Beginning Poetry Writing (3 cr)
Engl 292 Beginning Fiction Writing (3 cr)
Engl 293 Beginning Nonfiction Writing (3 cr)
JAMM 121 Media Writing (3 cr)

Three of the following courses (9 cr)
Engl 309 Advanced Prose Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)
Engl 391 Intermediate Poetry Writing (3 cr)
Engl 392 Intermediate Fiction Writing (3 cr)
Engl 393 Intermediate Nonfiction Writing (3 cr)
Engl 402 Internship in Tutoring Writing (3 cr)
Engl 491 Advanced Poetry Writing (3 cr, max arr)
Engl 492 Advanced Fiction Writing (3 cr, max arr)
Engl 493 Advanced Nonfiction Writing (3 cr, max arr)
JAMM 425 Feature Article Writing (3 cr)
Courses to total 20 credits for this minor

English Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of English. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Arts. Of the minimum of 33 credits required for the degree, at least 24 credits must be earned in the Department of English at the University of Idaho, and of these no more than nine credits earned at the Grace Nixon Summer English Institute may be applied to the degree; included in the total credits required, 3 credits are to be taken in a theory course (which may include Engl 506, Engl 511, or a theory course approved by the department's director of graduate studies) and 3 credits in pre-1900 literature. Course work for the M.A. in English is normally at the 500s level; however, up to six credits of work at the 400s level may be included, but only with the approval of the student's major professor and the department's director of graduate studies. Students are allowed to take 3 credits maximum in practica applying toward the degree.

Thesis and Non-Thesis Options:

Plan A requires 27 credits of coursework and 6 thesis credits, leading to the submission of an acceptable thesis of 60 pages or more. See the College of Graduate Studies "Graduate Handbook for Theses and Dissertations."

Plan B requires 30 credits of coursework and 3 credits Engl 599 Non-thesis Masters Research, leading to the completion of two papers suitable to be submitted for publication, an abstract for each paper, and a concise explanation of initial and additional research and revisions (3-5 pages), accompanied by an annotated bibliography.

Students and their major professors and committees will design their programs.

Theses or papers may address topics in literature and literary theory and criticism or composition and rhetorical theory.

Candidates for the master's degree in English are required to demonstrate reading proficiency in one of the following languages: French, German, Italian, Latin, Classical Greek, Spanish, or Russian.

For options under Plan A or Plan B, each student will take an M.A. examination following completion of work submitted in acceptable form, as confirmed by the major professor. The oral examination will be designed to test the student's ability to defend his or her work articulately with respect to research methodology, critical perspective, and applicability to related work in the area.

Students and their major professors and committees will design their programs.

Theses or papers may address topics in literature and literary theory and criticism or composition and rhetorical theory.

Candidates for the master's degree in English are required to demonstrate reading proficiency in one of the following languages: French, German, Italian, Latin, Classical Greek, Spanish, or Russian.

For options under Plan A or Plan B, each student will take an M.A. examination following completion of work submitted in acceptable form, as confirmed by the major professor. The oral examination will be designed to test the student's ability to defend his or her work articulately with respect to research methodology, critical perspective, and applicability to related work in the area.

Master of Arts in Teaching. The M.A.T. is a non-thesis degree designed for teachers who are certified in English and who wish to strengthen their English preparation and improve their teaching effectiveness.

Of the minimum of 33 credits required for the degree, at least 24 must be earned in the UI Department of English, and at least 24 credits must be at the 500 level (or equivalent, in the case of transfer credits). The remaining course work in English may be at either the 400 or 500 level (300-level courses are not acceptable toward the M.A.T. in English). Six credits must be taken in professional courses in education taught by the UI College of Education or equivalent college of education; at least 3 credits must be earned in a standard university course, as opposed to district in-service workshops. The student earns 3 credits for the M.A.T. teaching project. The combined number of credits earned in English in another graduate school or through correspondence study may not exceed nine; the College of Education may accept such credits in the professional courses in education at its discretion.

Area requirements for the degree, which may have been satisfied prior to enrolling in the M.A.T. program, include an upper-division or graduate course in each of the following areas: medieval through 18th-century literature, romantic through modern British literature; early American literature (before Civil War); later American literature; linguistics; history of the English language (or a second linguistics course); literature of women, minorities, third-world cultures, or non-dominant discourses. In addition, students must complete, or have completed within five years prior to enrolling in the M.A.T. program, course work in these areas: literary criticism; theory/practice of teaching literature to adolescents; theo-

ry/practice of teaching writing (may be satisfied by a Northwest Inland Writing Project course taken during the summer in a 3-credit or larger block). There is no language requirement for the M.A.T.

Master of Arts in Teaching English as a Second Language. The M.A. in TESL is intended for students who are interested in learning to teach English as a second language. The curriculum provides both theoretical background and practical training in the field. Students take course work in theoretical and applied linguistics and in teaching methods.

Of the minimum of 33 credits required for the degree, at least 24 must be earned while enrolled in residence at UI. At least 12 credits are to be taken from approved courses in language and linguistics, 12 credits are to be taken from approved courses in pedagogy (at least 9 of these credits are to be from English department courses), and 9 credits are to be taken from approved electives in English and education. At least 21 credits must be earned in courses numbered 500 and above.

TESL students will write either a thesis in addition to 27 credits of classes or take 33 credits of classes.

Native speakers of English in the TESL program must complete or have completed two years of college work (or its equivalent) in a modern foreign language. They must have studied a foreign language for at least one semester (or equivalent) within the preceding five years. Non-native speakers of English are excused from this requirement.

In the second year candidates will take a comprehensive examination on linguistics, pedagogy and TESL theory, and teaching methodology.

Master of Fine Arts. The M.F.A. is the terminal degree for those wishing to teach creative writing at the college or university level; it is also among the credentials expected of those seeking employment in arts administration, editing, and related fields. The curriculum provides theoretical and practical training in fiction, poetry, creative nonfiction, and editing and publishing.

The program's principle aim is to teach aspiring writers their craft and at the highest possible level. We gladly speak to students about publishing their work, or about teaching or editing, but our first concern is teaching and learning the craft of writing. While we encourage applicants to *apply only in one genre*, once they are admitted, we encourage them to "cross-pollinate": we like to see poets working at narrative pacing in a fiction or nonfiction class, and we like to see the prose writers attentive to individual syllables in poetry. We encourage students to experiment and to push themselves in new directions. We also insist that they know where they fit in the continuum of writers, and that they understand and can speak with conviction of where they might place themselves in any of several literary traditions.

Of the minimum 54 credits required for the degree, at least 15 are to be taken in graduate-level literature (which may include ENGL 506); 15 in graduate-level creative writing courses; 3 in workshops taught by Distinguished Visiting Writers; 3 in a Techniques course (ENGL 581, 582, or 583); 9 elective credits; and 9 in thesis. A minimum of four semesters in residence is required.

The thesis will take the form of a collection of poetry, short stories, creative nonfiction, or novel, and will be prefaced by an introduction. Upon completion of the thesis in acceptable form, each student will take an oral examination designed to test the student's ability to discuss articulately his or her creative process, intellectual and creative influences, chosen genre, aesthetic perspective, design, and intent.

Students who enter the program with advanced work in creative writing at the undergraduate level will ordinarily take only 500-level courses in English. Those who have not completed an advanced undergraduate course in one of the three major genres (fiction, poetry, creative nonfiction) will in addition to the above ordinarily take advanced undergraduate courses, as advised by the director of creative writing.

Program in Environmental Engineering

Thomas Hess, Director (419 Engineering Physics 83844-0904; phone 208/885-6182; fax 208/885-7908; enve@uidaho.edu; www.web1.uidaho.edu/enve). Biological and Agricultural Engineering Faculty: Jan Boll, Barbara C. Williams, Brian He, Thomas F. Hess, Russell J. Qualls. Chemical Engineering Faculty: Wudneh Admassu, D. Eric Aston, David C. Drown, Vivek Utgikar, Civil Engineering Faculty: Erik Coats, Fritz R. Fiedler, Jim Liou.

Environmental engineering is a specialty of engineering focused on identifying and designing solutions for environmental problems. Major areas include air pollution control, water and wastewater treatment, hazardous waste management, and pollution prevention. Environmental engineers have the technical and scientific knowledge to identify, monitor, design, build, and operate systems that protect the environment from damage and correct existing problems. Environmental engineers typically work in consulting firms, industries, state and federal agencies, universities, or waste treatment companies.

Graduate environmental engineering education builds on traditional engineering components, typically found in departments of biological and agricultural, civil, and chemical engineering. The breadth and multidisciplinary nature of environmental problems requires that environmental engineers possess skills beyond those normally associated with a single engineering field. Knowledge in geology, hydrology, soil and Land Resources, computers, microbiology and water, atmospheric chemistry, and other disciplines provides breadth to enhance technical skills. Good communication skills are also essential.

The College of Engineering offers M.S. (thesis) and M.Engr. (non-thesis) environmental engineering (EnvE) degrees at the Moscow and Idaho Falls campuses. The interdisciplinary program combines the resources of three departments (Biological and Agricultural Engineering, Chemical Engineering, and Civil Engineering) to provide a solid design-based environmental engineering curriculum. Environmental engineering research is actively supported both externally and by several interdisciplinary centers on campus including the Idaho Water Resources Research Institute, the Center for Hazardous Waste Remediation Research, the Environmental Research Institute, and the National Center for Advanced Transportation Technology. The College of Engineering collaborates with environmental engineering faculty from Washington State University, located just eight miles west of Moscow, in research, cooperative courses, and seminars. The Idaho Falls program is coordinated with Idaho State University's master's program in environmental engineering.

Admission to the program is based on: ability to complete graduate-level work evidenced by undergraduate transcripts; the applicant's statement of research and career objectives; the compatibility of the student's objectives with faculty expertise and program objectives; and availability of graduate faculty to act as major advisor for the applicant. The GRE, applicant's statement of objectives, and three letters of recommendation are required. Students without backgrounds in engineering may be admitted after certain undergraduate deficiencies are completed.

Financial assistance, in the form of research and teaching assignments with out-of-state tuition waivers, is available. The normal matriculation period is 18 to 21 months. A broad range of opportunities for research includes water quality engineering, hazardous waste management, water and wastewater treatment, bioremediation, ground and surface water resources, air pollution control, and energy conservation.

Courses

See the course description section for courses in Environmental Engineering (EnvE).

Environmental Engineering Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the College of Engineering. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. General M.S. requirements apply in addition to courses listed below. A minimum of 30 credits is required, including 6 credits of thesis research.

Master of Engineering. General M.Engr. requirements apply in addition to courses listed below. A minimum of 33 credits is required for graduation, including 3 credits of research that is not directly related to a thesis.

A common set of core courses is required in both programs as follows:

Chem 418	Environmental Chemistry (3 cr)
CE 531	Environmental Engineering Unit Operations (3 cr)
ChE 570	Hazardous Waste Management (3 cr)
ChE 575	Air Pollution Control (3 cr)

One of the following (3 cr):

CE 534	Environmental Engineering Unit Processes (3 cr)

One of the following (3-6 cr):

EnvE 500	Master's Research and Thesis (6 cr)
EnvE 599	Non-thesis Master's Research (3 cr).

In addition to the core, the student will select supporting courses based on career objectives to add depth to his or her curriculum. A minimum of 9 to 15 credits (for the thesis or non-thesis option, respectively) must be selected by the student with the concurrence of his or her advisor and committee. The following is a partial list of typical supporting courses:

BAE 533	Bioremediation
BAE 551	Advanced Hydrology
BAE 552	Environmental Water Quality
BAE 558	Fluid Mechanics of Porous Materials
CE 522	Hydraulic Design
CE 532	Design of Water and Wastewater Systems II
CE 533	Water Quality Management
ChE 560	Biochemical Engineering
ChE 580	Engineering Risk Assessment for Hazardous Waste Evaluations
Geol 309	Ground Water Hydrology

Fundamental knowledge contained in some lower-division courses is essential to the program. Students who have not taken these, or similar, courses will be required to remove these deficiencies. Some of these deficiency courses must be completed before admission; others may be incorporated into the student's required program. Minimum prerequisite courses include:

Chem 112	Principles of Chemistry II
Engr 320	Engineering Thermodynamics and Heat Transfer
Engr 335	Engineering Fluid Mechanics
Math 310	Ordinary Differential Equations
Stat 301	Probability and Statistics

One of the following (2-3 cr):

ChE 453	Process Analysis and Design I (3 cr)
Engr 360	Engineering Economy (2 cr)

Courses that may be required based on input from student's major professor/graduate committee:

CE 325 or BAE 355	Fundamentals of Hydrologic Engineering (3 cr)
CE 330	Fundamentals of Environmental Engineering (3 cr)
ChE 223	Material and Energy Balances (3 cr)

An EnvE faculty committee evaluates deficiencies and makes recommendations for students entering the program without an undergraduate degree in engineering.

Program in Environmental Science

Jan Boll, Director (216 Morrill Hall 83844-3006; phone 208/885-6113; FAX 208/885-4674; envs@uidaho.edu; www.uidaho.edu/envs). Core Faculty: Erik Coats, Maxine Dakins, Jeffrey Hicke, John Lawrence, Robert L. Mahler, Adam Sowards, Lee Vierling, J.D. Wulfhorst. Affiliate Biological Science Option Faculty: Jocelyn L. Aycrigg, Nilsa Bosque-Perez, Aurelio Briones, Stephen C. Bunting, Allan B. Caplan, Mark D. Coleman, Stephen P. Cook, Anthony S. Davis, Sanford D. Eigenbrode, Paul E. Gessler, Thomas F. Hess, Jodi Johnson-Maynard, Alexander Karasev, Kathleen Kavanagh, Brian Kennedy, Guy Knudsen, John D. Marshall, Christine Moffitt, Amber Moore, Matthew J. Morra, George Newcombe, Beth Newingham, Andrzej Paszczynski, Timothy Prather, Kerry P. Reese, Ronald Robberecht, Dennis L. Scarnecchia, Mark Schwarzlaender, Eva Strand, David C. Tank, Kerri Vierling, Lisette P. Waits, Frank Wilhelm. Affiliate Physical Science Option Faculty: Crystal Abatzoglou, John Abatzoglou, Vladimir Aizen, Eric Aston, I. Francis Cheng, Donald Elger, Jerry P. Fairley, Fritz Fiedler, Timothy Frazier, Alexander K. Fremier, Thomas Gorman, Mickey E. Gunter, Karen Harpp, Robert Heinse, Philip Higuera, Karen Humes, Gary S. Johnson, Tim Link, Paul A. McDaniel, Armando McDonald, Gregory Moller, James L. Osiensky, Sofie Pasilis, Batric Pesic, P. Steven Porter, You Qiang, Russell Qualls, Bahman Shafii, Alistair Smith, Daniel G. Strawn, Vivek Utgikar, Ray von Wandruszka, Chien M. Wai, Von P. Walden, Barbara Cooke Williams . Affiliate Social Science Option Faculty: Rula Z. Awaad-Rafferty, Barbara Cosens, Stephen R. Drown, Levan Elbakidze, Jo Ellen Force, Dale D. Goble, James Gregson, Bruce T. Haglund, Charles C. Harris, Lorie Higgins, Steven J. Hollenhorst, Leontina Hormel, Anne Kerns, Douglas Lind, Michael O'Rourke, Sandra Pinel, Abelardo Rodriguez, Gundars Rudzitis, Nick Sanyal, Philip Watson, Patrick Wilson. General Faculty: Katherine G. Aiken, Donald Crowley, Dennis J. Geist, Harley E. Johansen, James B. Johnson, Gary E. Machlis, Robert W. Smith, Scott Wood .

The Environmental Science Program offers B.S., M.S., and Ph.D. degrees that emphasize the importance of an interdisciplinary approach for students committed to studying and solving environmental issues. The multidisciplinary faculty represents all colleges at the university and includes soil scientists, engineers, geographers, biologists, ecologists, political scientists, sociologists, chemists, and hydrologists.

Career opportunities in the environmental sciences are diverse and numerous. Graduates are employed in the private and public sectors in areas such as natural resource management, pollution prevention, air and water quality monitoring, hazardous waste management, environmental and land use planning, and environmental regulation and compliance.

The curriculum leading to the B.S. degree in environmental science offers students the opportunity to combine studies in several disciplines and professional fields in order to gain an understanding of the complex nature of environmental problems. In addition to understanding relationships among traditional disciplines, the program creates an integrated and coherent approach to environmental problem solving.

The curriculum includes the university core (general education) requirements, a common set of required courses and breadth electives for all environmental science majors, and the student's choice of one of three options. The required courses and electives for all majors are designed to build a strong base of knowledge in biological, physical, and social sciences, supplemented by a set of electives, in consultation with an environmental science advisor, from four areas (ecology, natural resource economics and sociology, management, and social sciences). All students complete a senior project as part of their course of study.

Three option areas are offered: biological science, physical science, and social science.

Professional Certificates: Twelve-credit professional certificates in water science and environmental contamination assessment are also available through the Environmental Science Program. The certificates can be completed on the Moscow campus or through distance education. Procedural details are available in the program office.

Graduate training in the Environmental Science Program provides students with the opportunity to specialize in one of eight emphasis areas: ecology/biological science, waste management, earth science/hydrology, natural resource management, physical science, policy and law, environmental health/toxicology, and water science.

Admission to the graduate program is based on: ability to complete graduate-level work evidenced by undergraduate transcripts; the applicant's statement of research and career objectives; the compatibility of the student's objectives with faculty expertise and program objectives; and availability of graduate faculty to act as major advisor for the applicant. The GRE, applicant's statement of objectives, and three letters of recommendation and resume are required. Students without backgrounds in environmental science may be admitted after certain undergraduate deficiencies are completed.

Questions regarding the B.S.Env.S., M.S., or Ph.D. programs should be directed to the program coordinator (208/885-6113).

Courses

See the course description section for courses in Environmental Science (EnvS).

Environmental Science Undergraduate Curricular Requirements

Environmental Science (B.S.Env.S.)

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.S. degree, and:

Biol 115	Cells and the Evolution of Life (4 cr)
Chem 111	Principles of Chemistry I (students in social science option may substitute Chem 101) (4 cr)
Comm 101	Fundamentals of Public Speaking or 3-4 cr in foreign language courses (2-4 cr)
EnvS 101	Introduction to Environmental Science (3 cr)
EnvS 102	Field Activities in Environmental Sciences (1 cr)
EnvS 225	International Environmental Issues Seminar (3 cr)
EnvS 400	Seminar (1 cr)
Phil 452	Environmental Philosophy (3 cr)

One of the following (3 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Statistics (3 cr)

And one of the following options:

A. Biological Science Option

This option is suitable for students wishing to pursue technically oriented careers in environmental professions such as natural resource management, bioremediation, and environmental impact analysis.

Biol 250	General Microbiology (3 cr)
Chem 112	Principles of Chemistry II (5 cr)

Engl 317	Technical Writing (3 cr)
EnvS 497	Senior Research (4 cr)

One of the following (4 cr):

Geog 100, Geog 100L	Physical Geography and Lab (4 cr)
Geol 101, Geog 101L	Physical Geology and Lab (4 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Advisor-directed breadth electives, including at least one course from the first four areas and 9 credits from the technical area (24 cr):

Ecology

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
Geog 410	Biogeography (3 cr)
REM 221	Ecology (3 cr)

Natural Resource Economics and Sociology

AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Econ 385	Environmental Economics (3 cr)
For 235	Society and Natural Resources (3 cr)

Management

Bus 378	Project Management (3 cr)
CSS 486	Public Involvement in Natural Resource Mgt (3 cr)
EnvS 428	Pollution Prevention (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 411	Natural Hazards and Society (3 cr)

History, Philosophy, and Political Science

AgEc 477	Law, Ethics, and the Environment (3 cr)
CSS 489	Personalities and Philosophies in Conservation (2 cr)
EnvS 484	History of Energy (3 cr)
Hist 424	American Environmental History (3 cr)
Phil 351	Philosophy of Science (3 cr)
PolS 364	Politics of the Environment (3 cr)

Technical

Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 275	Carbon Compounds (3 cr)*
Chem 277	Organic Chemistry (3 cr)*
EnvS 498	Internship (1-3 cr)
For 472 or REM 472	Remote Sensing of Environment (4 cr)
Geog 301	Meteorology (3 cr)
Geog 313	Global Climate Change (3 cr)
Geog 401	Climatology (3 cr)
Geog 385	GIS Primer (3 cr)
Geol 309	Ground Water Hydrology (3 cr)
Geol 361	Geology and the Environment (3 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)**
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)**
Phys 112, Phys 112L	General Physics II and Lab (4 cr)***
Phys 212, Phys 212L	Engineering Physics II and Lab (4cr)***
Soil 205	The Soil Ecosystem (3 cr)

**Note: Either Chem 275 or Chem 277 may be used as a technical breadth elective.*

***Note: Either Phys 111/111L or Phys 211/211L may be used as a technical breadth elective.*

****Note: Either Phys 112/112L or Phys 212/212L may be used as a technical breadth elective.*

Advisor-approved depth electives – take 4 courses in any depth area unless otherwise noted from at least two of the following areas (20 cr):

Plant Protection

Ent 322	General and Applied Entomology (3 cr)
PlSc 338	Weed Control (3 cr)
PlSc 410	Invasive Plant Biology (3 cr)
PlSc 415	Plant Pathology (3 cr)
Soil 446	Soil Fertility (1-3 cr, max 3)

Animal Ecology

WLF 314	Wildlife Ecology I (3 cr)
WLF 315	Wildlife Ecology I Laboratory (1 cr)
WLF 316	Wildlife Ecology II (4 cr)
WLF 440	Conservation Biology (3 cr)*
WLF 448	Fish and Wildlife Population Ecology (4 cr)*

**Note: Either WLF 440 or WLF 448 may be used as a depth elective.*

Aquatic Ecology

Take 3 of the 4 courses listed below:

Ent 472	Aquatic Entomology (3 cr)
Fish 314	Fish Ecology (3 cr)
Fish 415	Limnology (4 cr)
Fish 430	Riparian Ecology and Management (3 cr)

Forest and Range Systems

For 330	Forest Soil and Canopy Processes (4 cr)
For 426	Global Fire Ecology and Management (3 cr)
REM 411	Ecological Monitoring and Analysis (2 cr)
REM 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)

Soils

FS 409	Principles of Environmental Toxicology (3 cr)
Soil 425	Microbial Ecology (3 cr)
Soil 438	Pesticides in the Environment (3 cr)
Soil 454	Pedology (3 cr)

Water

EnvS 450	Environmental Hydrology (3 cr)
EnvS 446	Drinking Water and Human Health (3 cr)
For 462	Watershed Management (3 cr)
Geol 309	Ground Water Hydrology (3 cr)
Geol 410	Techniques of Ground Water Study (3 cr)
Hydr 412	Environmental Hydrogeology (3 cr)

Geospatial Tools

Take at least 3 of the 6 courses listed below:

For 472 or REM 472	Remote Sensing of Environment (4 cr)
Geog 385	GIS Primer (3 cr)
Geog 424	Hydrogeologic Applications in GIS and Remote Sensing (3 cr)
Geog 475	Intermediate GIS (3 cr)
Geog 483	Remote Sensing/GIS Integration (3 cr)
LArc 495	Computer-Aided Regional Landscape Planning (3 cr)

Climate Change and Ecosystems (take all 3):

CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Geog 313	Global Climate Change (3 cr)
Geog 410	Biogeography (3 cr)

Courses to total 120 credits for this degree

B. Physical Science Option

This option is suitable for students wishing to pursue technical careers in environmental professions such as air, soil, and water pollution abatement, hazardous waste management, waste minimization, and ecological restoration.

Chem 112	Principles of Chemistry II (5 cr)
Engl 317	Technical Writing (3 cr)
EnvS 497	Senior Research (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)

One of the following (4 cr):

Geog 100, Geog 100L	Physical Geography and Lab (4 cr)
Geol 101, Geog 101L	Physical Geology and Lab (4 cr)

Advisor-directed breadth electives, including at least one course from the first four areas and 9 credits from the technical area (24 cr):

Ecology

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)

Geog 410	Biogeography (3 cr)
REM 221	Ecology (3 cr)

Natural Resource Economics and Sociology

AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Econ 385	Environmental Economics (3 cr)
For 235	Society and Natural Resources (3 cr)

Management

Bus 378	Project Management (3 cr)
CSS 486	Public Involvement in Natural Resource Mgt (3 cr)
EnvS 428	Pollution Prevention (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 411	Natural Hazards and Society (3 cr)
REM 456	Integrated Rangeland Management

History, Philosophy, and Political Science

AgEc 477	Law, Ethics, and the Environment (3 cr)
CSS 489	Personalities and Philosophies in Conservation (2 cr)
Hist 424	American Environmental History (3 cr)
Phil 351	Philosophy of Science (3 cr)
PolS 364	Politics of the Environment (3 cr)

Technical

Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 275	Carbon Compounds (3 cr)*
Chem 277	Organic Chemistry (3 cr)*
EnvS 498	Internship (1-3 cr)
For 472 or REM 472	Remote Sensing of Environment (4 cr)
Geog 301	Meteorology (3 cr)
Geog 313	Global Climate Change (3 cr)
Geog 401	Climatology (3 cr)
Geog 385	GIS Primer (3 cr)
Geol 309	Ground Water Hydrology (3 cr)
Geol 361	Geology and the Environment (3 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 112, Phys 112L	General Physics II and Lab (4 cr)**
Phys 212, 212L	Engineering Physics II and Lab (4cr)**
Soil 205	The Soil Ecosystem (3 cr)

**Note: Either Chem 275 or Chem 277 may be used as a technical breadth elective.*

***Note: Either Phys 112/112L or Phys 212/212Lmay be used as a technical breadth elective.*

Advisor-approved depth electives – take 4 courses in any depth area unless otherwise noted from at least two of the following areas (20 cr):

Water

EnvS 446	Drinking Water and Human Health (3 cr)
EnvS 450	Environmental Hydrology (3 cr)
For 462	Watershed Management (3 cr)
Geol 309	Ground Water Hydrology (3 cr)
Geol 410	Techniques of Ground Water Study (3 cr)
Hydr 412	Environmental Hydrogeology (3 cr)

Hazardous Waste

BAE 433	Bioremediation (3 cr)
BAE 452	Environmental Water Quality (3 cr)
Biol 380	Biochemistry I (4 cr)
Chem 418	Environmental Chemistry (3 cr)
EnvS 479	Introduction to Environmental Regulations (3 cr)
FS 409	Principles of Environmental Toxicology (3 cr)

Geology

Geol 335	Geomorphology (3 cr)
Geol 361	Geology and the Environment (3 cr)
Geol 422	Principles of Geophysics (4 cr)
Geol 423	Principles of Geochemistry (3 cr)

Mathematics and Statistics

Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Stat 431	Statistical Analysis (3 cr)

Soils

Chem 418	Environmental Chemistry (3 cr)
Soil 415	Soil Physics (3 cr)
Soil 422	Environmental Soil Chemistry (3 cr)
Soil 454	Soil Development and Classification (3 cr)

Economics and Management

Take all three courses listed below:

Bus 378	Project Management (3 cr)
Econ 385	Environmental Economics (3 cr)
EnvS 428	Pollution Prevention (3 cr)

Geospatial Tools

Take at least 3 of the 4 courses listed below:

For 472 or REM 472	Remote Sensing of Environment (4 cr)
Geog 385	GIS Primer (3 cr)
Geog 424	Hydrogeologic Applications in GIS and Remote Sensing (3 cr)
Geog 483	Remote Sensing/GIS Integration (3 cr)

Climate Change and Emissions Reduction:

EnvS 485	Energy Efficiency and Conservation (3 cr)
Geog 313	Global Climate Change (3 cr)
Geog 401	Climatology (3 cr)
Geog 435	Climate Change Mitigation (3 cr)

Courses to total 120 credits for this degree

C. Physical Science 2 Option

This option is only available to students in Coeur d'Alene and Idaho Falls

Chem 112	Principles of Chemistry II (5 cr)
Engl 317	Technical Writing (3 cr)
EnvS 497	Senior Research (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)

One of the following (4 cr):

Geog 100, Geog 100L	Physical Geography and Lab (4 cr)
Geol 101, Geog 101L	Physical Geology and Lab (4 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Advisor-directed breadth electives, including at least one course from the first four areas and 9 credits from the technical area (24 cr):

Ecology

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

Natural Resource Economics and Sociology

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
Econ 272	Foundations of Economic Analysis (4 cr)
IndT 415	Impact of Technology on Society (3 cr)

Management

EnvS 436	Principles of Sustainability (3 cr)
EnvS 479	Introduction to Environmental Regulations (3 cr)
For 426	Global Fire Ecology and Management (3 cr)
Geog 424	Hydrologic Applications of GIS and Remote Sensing (3 cr)

History, Philosophy, and Political Science

EnvS 484	History of Energy (3 cr)
Geog 364	Idaho and the Pacific Northwest (3 cr)
Hist 423	Idaho and the Pacific Northwest (3 cr)
PolS 364	Politics of the Environment (3 cr)

Technical

Biol 116	Organisms and Environments (4 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry I (3 cr)
EnvS 428	Pollution Prevention (3 cr)
EnvS 429	Environmental Audit (3 cr)
EnvS 498	Internship (1-3 cr)
Geog 385	GIS Primer (3 cr)
Geol 309	Ground Water Hydrology (3 cr)

Geol 375	Geology of National Parks (3 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Phys 112, Phys 112L	General Physics II and Lab (4 cr)*
Phys 212, Phys 212L	Engineering Physics II and Lab (4cr)*
REM 407	GIS Application in Fire Ecology and Management (2 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)
Soil 205	The Soil Ecosystem (3 cr)

**Note: Either Phys 112/112L or Phys 212/212Lmay be used as a technical breadth elective.*

Advisor-approved depth electives – take 4 courses in any depth area unless otherwise noted from at least two of the following areas (20 cr):

Water

CE 433	Water Quality Management (3 cr)
EnvS 450	Environmental Hydrology (3 cr)
EnvS 483	Water and Energy Systems (3 cr)
Fish 540	Wetland Restoration (3 cr)
Geol 309	Ground Water Hydrology (3 cr)
Hydr 414	Ground Water-Surface Water Interaction (3 cr)

Mathematics and Statistics

Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Stat 431	Statistical Analysis (3 cr)

Management Tools
Take 3 courses:

EnvS 415	Environmental Lifecycle Assessment (3 cr)
EnvS 428	Pollution Prevention (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 475	Intermediate GIS (3 cr)
Geog 424	Hydrologic Applications of GIS and Remote Sensing (3 cr)
IndT 364	Hazardous Materials (3 cr)
IndT 448	Project and Program Management (3 cr)

Environmental Policy & Regulations
Take 3 courses:

CSS 572	Human Dimensions of Restoration Ecology (3 cr)
EnvS 429	Environmental Audit (3 cr)
EnvS 436	Principles of Sustainability (3 cr)
EnvS 479	Introduction to Environmental Regulations (3 cr)
EnvS 482	Natural Resource Policy and Law (3 cr)
EnvS 581	Applications of Environmental Regulations (3 cr)

Energy Systems

EnvS 483	Water and Energy Systems (3 cr)
EnvS 484	History of Energy (3 cr)
EnvS 485	Energy Efficiency and Conservation (3 cr)
IndT 415	Impact of Technology on Society (3 cr)
IndT 434	Power Generation and Distribution (3 cr)

Sustainability Science

EnvS 415	Environmental Lifecycle Assessment (3 cr)
EnvS 428	Pollution Prevention (3 cr)
EnvS 436	Principles of Sustainability (3 cr)
FS 409	Principles of Environmental Toxicology (3 cr)
IndT 457	Lean to Green Sustainable Technology (3 cr)

Courses to total 120 credits for this degree

D. Social Science Option

This option is suitable for students wishing to pursue careers in environmental professions such as environmental regulation, land use planning, environmental administration, and as a pre-law program for environmental law.

EnvS 497	Senior Research (4 cr)
Geog 100, Geog 100L	Physical Geography and Lab (4 cr)
Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)

One of the following (3 cr):

Engl 309	Advanced Prose Writing (3 cr)
JAMM 428	Environmental Journalism (3 cr)

One of the following (3 cr):

Engl 316	Environmental Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3 cr):

Phil 201	Critical Thinking (3 cr)
PolS 235	Political Research Methods and Approaches (3 cr)

Advisor-directed breadth electives, including at least one course from the first four areas and 9 credits from the technical area (24 cr):

Ecology

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
Geog 410	Biogeography (3 cr)
REM 221	Ecology (3 cr)

Natural Resource Economics and Sociology

AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
EnvS 428	Pollution Prevention (3 cr)
Econ 385	Environmental Economics (3 cr)
For 235	Society and Natural Resources (3 cr)

Management

Bus 378	Project Management (3 cr)
CSS 486	Public Involvement in Natural Resource Mgt (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 411	Natural Hazards and Society (3 cr)
REM 456	Integrated Rangeland Management (3 cr)

History, Philosophy, and Political Science

AgEc 477	Law, Ethics, and the Environment (3 cr)
CSS 489	Personalities and Philosophies in Conservation (2 cr)
EnvS 484	History of Energy (3 cr)
Hist 424	American Environmental History (3 cr)
Phil 351	Philosophy of Science (3 cr)
PolS 364	Politics of the Environment (3 cr)

Technical

Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 275	Carbon Compounds (3 cr)*
Chem 277	Organic Chemistry (3 cr)*
EnvS 498	Internship (1-3 cr)
For 472 or REM 472	Remote Sensing of Environment (4 cr)
Geog 301	Meteorology (3 cr)**
Geog 313	Global Climate Change (3 cr)
Geog 401	Climatology (3 cr)**
Geog 385	GIS Primer (3 cr)
Geol 309	Ground Water Hydrology (3 cr)
Geol 361	Geology and the Environment (3 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)***
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)***
Phys 112, Phys 112L	General Physics II and Lab (4 cr)****
Phys 212, Phys 212L	Engineering Physics II and Lab (4cr)****
Soil 205	The Soil Ecosystem (3 cr)

**Note: Either Chem 275 or Chem 277 may be used as a technical breadth elective.*

***Note: Either Geog 301 or Geog 401 may be used as a technical breadth elective*

****Note: Either Phys 111/111L or Phys 211/211Lmay be used as a technical breadth elective.*

*****Note: Either Phys 112/112L or Phys 212/212Lmay be used as a technical breadth elective.*

Advisor-approved depth electives chosen from the following, including five courses from one of the following areas:

Policy and Law

EnvS 479	Introduction to Environmental Regulations (3 cr)
Phil 470	Philosophy of Law (3 cr)
PolS 364	Politics of the Environment (3 cr)
PolS 467	Constitutional Law (3 cr)
PolS 468	Civil Liberties (3 cr)

Administration and Planning

Acct 482	Enterprise Accounting (3 cr)
Comm 410	Conflict Management (3 cr)
CSS 385	Conservation Management and Planning I (3 cr)
CSS 387	Environmental Communication Skills (3 cr)
Econ 385	Environmental Economics (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 330	Urban Geography (3 cr)
PolS 364	Politics of the Environment (3 cr)
PolS 451	Public Administration (3 cr)
PolS 454	Public Organization Theory (3 cr)
PolS 462	Natural Resource Policy (3 cr)
Psyc 416	Industrial/Organizational Psychology (3 cr)

Green Building and Community Design

Arch 151	Introduction to the Built Environment (2 cr)
Arch 266	Materials and Methods (3 cr)
Arch 463	Environmental Control Systems I (4 cr)
Arch 464	Environmental Control Systems II (4 cr)
Geog 435	Climate Change Mitigation (3 cr)
Geog 486	Transportation, GIS and Planning (3 cr)
LArc 380	Water in the Urban Context (2 cr)
LArc 480	The Emerging Landscape (3 cr)
RMat 365	Wood Building Technology (3 cr)

Climate Change - Human Dimensions:

CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Econ 385	Environmental Economics (3 cr)
EnvS 479	Introduction to Environmental Regulations (3 cr)
EnvS 484	History of Energy (3 cr)
EnvS 485	Energy Efficiency and Conservation (3 cr)
Geog 313	Global Climate Change (3 cr)
Geog 435	Climate Change Mitigation (3 cr)
Geog 455	Societal Resilience and Adaptation to Climate Change (3 cr)

Courses to total 120 credits for this degree

Environmental Science Graduate Academic Certificates Requirements

Environmental Contamination Assessment Graduate Academic Certificate

ChE 580	Engineering Risk Assessment for Hazardous Waste Evaluations (3 cr)
EnvS 509	Principles of Environmental Toxicology (3 cr)
EnvS 541	Sampling and Analysis of Environmental Contaminants (3 cr)

Technical Elective approved by the Director of the Environmental Science Program (3 cr)

Courses to total 12 credits for this certificate

Environmental Water Science Graduate Academic Certificate

Water Quality Elective (3 cr)

BAE 552	Environmental Water Quality (3 cr)
CE 533	Water Quality Management (3 cr)
EnvS 546	Drinking Water and Human Health (3 cr)
Geol 564	The Geochemistry of Natural Waters (3 cr)

Hydrology Elective (3 cr)

BAE 450	Environmental Hydrology (3 cr)
BAE 458	Open Channel Hydraulics (3 cr)
BAE 558	Fluid Mechanics of Porous Materials (3 cr)
CE 421	Engineering Hydrology (3 cr)
For 462	Watershed Science and Management (3 cr)
Soil 415	Soil and Environmental Physics (3 cr)

Water Management & Policy (3 cr)

AgEc 404	Special Topics (cr arr)
CSS 573	Planning & Decision Making for Watershed Management (3 cr)
Geog 524	Hydrologic Applications of GIS and Remote Sensing (3 cr)
PolS 562	Natural Resource Policy (3 cr)

Courses to total 12 credits for this certificate

Environmental Science Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Program in Environmental Science. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. Each student will design a study plan in consultation with an advisor. The study plan is subject to approval by the director and the Graduate College.

There are five requirements for the M.S. degree in environmental science: (1) Depth requirement: the graduate program is structured around three option areas, biological science, physical science, or social science. A student must complete a minimum of 12 credits (thesis degree) or 15 credits (non-thesis degree) in one of the three option areas; (2) Breadth requirement: A student must complete a minimum of 3 credits at the MS level in each of the other two option areas; (3) A student must complete one course (3 cr) in appropriate research methods or statistics at the 500 level; (4) Three seminar credits, including at least 1 credit in EnvS 501; (5) EnvS 500 (6 cr., thesis degree) or EnvS 599 (3 cr., non-thesis degree). These requirements may be augmented to compensate for undergraduate deficiencies.

The thesis degree consists of at least 30 graduate credits, including at least 6 credits and a maximum of 10 credits of thesis and a minimum of 24 credits of course work. For the thesis option, at least 21 credits in the option and supporting area must be at the 500 level, including a minimum of 6 hours of research and thesis (EnvS 500). The non-thesis degree program requires at least 30 graduate credits, including a minimum of 3 credits of EnvS 599 (Non-thesis Master's Research) and 27 credits of course work. For the non-thesis option, at least 21 credits in the option and supporting area must be at the 500 level. For both thesis and non-thesis options, a student can take up to 9 credits at the 400 level in the option and supporting area (one class can be at the 300 level in a supporting area with committee approval). The thesis or non-thesis research part of the program for each student consists of a substantial project in which the student demonstrates ability to do rigorous independent work.

Professional Science Master, Natural Resources and Environmental Science major. Major in Natural Resources and Environmental Science. Contact the Director of the Environmental Sciences and Water Resources programs for information regarding this degree.

Doctor of Philosophy. Admission to the doctoral program is based on the compatibility of the student's research interests with those of the major professor, the availability of research support, and the student's academic record and potential. Applicants are expected to have the prerequisites as specified for the M.S. degree. The student develops a graduate program of at least 78 semester hours in consultation with his or her major professor and supervisory committee. The student is expected to actively participate in one or more seminar presentations during the course of his or her graduate career. Teaching experience is required and is obtained through participation in the program's course offerings. Qualifying examinations are required for those students entering the Ph.D. program without a master's degree. Preliminary examinations are required prior to admission to final candidacy for the degree. All candidates prepare a formal dissertation reflecting original thought and independent investigation and defend it during an oral presentation as a final step toward their degree. Publication in the peer-reviewed, scientific literature is expected. Contact the program office for specific program requirements and procedures.

Distance Education. The M.S. with a water science emphasis is available in Idaho Falls, Coeur d'Alene, and Boise and nationwide as part of our distance education offerings. The M.S. degrees in waste management, and policy and law are also available in Idaho Falls. The Ph.D. degree is offered in Moscow and in Idaho Falls.

Concurrent J.D./M.S. Environmental Science Degrees. The concurrent J.D./M.S. degree program offers students an opportunity to combine the study of scientific, social, philosophical, and legal aspects of environmental issues. This program equips students for jobs in which the technical knowledge offered through the Environmental Science Program and the professional expertise provided by the College of Law would be beneficial.

Students must apply separately to and be admitted by the College of Graduate Studies/Environmental Science Program, the College of Law, and the Concurrent J.D./M.S. Degree Program. Admission into the concurrent degree program is dependent on a demonstrated ability to excel in an intense, interdisciplinary educational environment.

Students must complete the requirements set out above for an M.S. degree in environmental science and the requirements for a J.D. (see the

College of Law section), subject to the following conditions. The first year of study will be exclusively in the College of Law. Because the concurrent degree program requires an M.S. thesis, the fourth year of the program will be primarily in the Environmental Science Program. Up to 12 hours of M.S. graduate credit will be allowed toward the J.D. degree and up to 6 hours of law credit will be allowed toward the M.S. degree from pre-approved lists of classes. This will permit a student to complete the concurrent degree program in as little as four years. If a student fails to complete the master's degree program, no more than 6 credits will be allowed toward the J.D. degree; if a student fails to complete the law program, the student will be required to satisfy all requirements of the Environmental Science Program before receiving the M.S. degree. See the College of Graduate Studies and the College of Law sections for additional information on the graduate/law concurrent degrees.

Questions regarding the concurrent degree program should be addressed to the Environmental Science Program coordinator (208/885-6113) or to the College of Law (208/885-6423).

Margaret Ritchie School of Family and Consumer Sciences

Sonya S. Meyer, Dept Head (105 Mary Hall Niccolls Family and Consumer Sciences Bldg. 83844-3183; phone 208/885-6546; famcon@uidaho.edu). Faculty: Marilyn C. Bischoff, Laurel J. Branen, Myung-Hee Chae, Nancy Deringer, Michelle Eaton, Janice W. Fletcher, Sandra M. McCurdy, Sonya S. Meyer, Katie R. Miner, Suzanne M. Planck, Elizabeth A. Price, Martha A. Raidl, SeAnne J. Safaii-Fabiano, Cynthia J. Schmiege, Harriet L. Shaklee, Ling-Ling Tsao Susan J. Torntore. Affiliate Faculty: A. Larry Branen, Judith Brown, Mimi Hartman, Arlinda K. Nauman.

Family and consumer sciences focuses on the relationships, resources, and services contributing to individual and family well being. The discipline analyzes the needs of individuals and families using social, psychological, physical, biological, economic, and aesthetic theories and concepts.

Three majors leading to the degree of Bachelor of Science in Family and Consumer Sciences (B.S.F.C.S.) are offered by the School of Family and Consumer Sciences and are designed to meet professional and individual goals of students. These are: (1) child, family, and consumer studies, (2) food and nutrition, and (3) clothing, textiles and design.

Students may choose one of three program options in the child, family, and consumer studies major. Child development/family relations focuses on the normal, healthy development of children and families. Family Life offers a general preparation in Family and Consumer Sciences that provides a foundation for further specialization.

The food and nutrition major offers the dietetics and nutrition options. The Coordinated Program in Dietetics includes a senior year experience in Spokane where students complete a supervised practicum in community and medical center settings. This program is accredited by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606, 312/899-0040, ext. 5400. After successful completion of the program, students can take the national registration exam to become Registered Dietitians. The nutrition option prepares students for careers with government agencies, commodity groups, health and fitness agencies and businesses, and some components of the food industry. In addition, the course work would provide excellent background for those wishing to pursue advanced degrees in medicine or nutrition. The first two years of courses are very similar in these two options. Students apply for acceptance into the Coordinated Program in Dietetics at the end of the sophomore year.

The clothing, textiles, and design major offers both apparel design and fashion merchandising emphases. Combining courses from art or business with the clothing, textile, and design courses offered in the school prepares students for careers in retail and wholesale sectors of the apparel and textile industries. Designers, product development specialists, retail buyers and managers, and merchandise managers are some of the career titles held by UI graduates.

The Bachelor of Science in Early Childhood Development and Education is offered jointly between the College of Education and the School of Family and Consumer Sciences. Coursework will prepare students to be recommended for Idaho Early Childhood Education/Early Childhood Special Education (ECE/ECSE) Blended Teacher Certification. Students will be certified to teach children birth through grade three.

The Margaret Ritchie School of Family and Consumer Sciences offers graduate course work and research opportunities concerning individuals and families across their life spans. An integrated approach prepares students for the complexities of our global society through the analysis and application of relevant theories, practices, and research. Issues important to individuals and families, such as human development, consumption, resource management, education, aesthetics, and public policy, are studied in the context of cultural and physical environments.

Graduate students apply communication, analytical, evaluation, and synthesis skills to the study of families and consumers through classroom, practica, and research experiences. The school's Child Development Laboratory provides a special resource for both teaching and research activities. Internships in community agencies and business, practica in teaching and supervision, and graduate teaching and research assistantships also provide valuable graduate student experiences. Graduate student research is closely aligned with faculty interests that currently include work and family, quality child care, feeding young children, at-risk youth, financial management through the life span, sports nutrition, family and consumer sciences education, international textile trade patterns, and cultural aspects of dress. The program prepares students to be teachers in the public schools and community colleges; child or human development specialists in public and private organizations such as nonprofit and social services agencies, hospitals, child care centers, and the extension system; and for the future pursuit of the Ph.D. degree in family and consumer sciences, social work, education, or related fields.

The Margaret Ritchie School of Family and Consumer Sciences has an outstanding scholarship program for entering first-year students, continuing undergraduate majors, and graduate students. Most scholarships are awarded on the basis of academic excellence regardless of financial need.

Courses

See the course description section for courses in Family and Consumer Sciences (FCS).

Family and Consumer Sciences Undergraduate Curricular Requirements

Child, Family, and Consumer Studies (B.S.F.C.S.)

This major has an interdisciplinary focus on the child, the family as an institution, and families as consumers.

The minimum credits required for graduation are 128, including at least 36 credits at the 300-level or above. Required course work includes the university requirements (see regulation J-3) and one of the following options:

A. Child Development/Family Relations Option

The CDFR option allows students to develop individualized programs to meet personal and career goals. Careers include opportunities to provide direct services to children and families through teaching or child care, to fill advocacy roles, or to be involved with parent education.

Comm 101	Fundamentals of Public Speaking (2 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
FCS 105	Individual and Family Development (3 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
FCS 234	Infancy and Early Childhood (3 cr)
FCS 235	Principles and Methods of Child Observation (3 cr)
FCS 240	Intimate Relationships (3 cr)
FCS 333	Developmental Curriculum for Young Children (3 cr)
FCS 334	Middle Childhood-Adolescence (3 cr)
FCS 340	Parent-Child Relationships in Family and Community (3 cr)
FCS 346	Personal and Family Finance and Management (4 cr)
FCS 436	Theories of Child and Family Development (3 cr)
FCS 440	Contemporary Family Relationships (3 cr)
FCS 445	Issues in Work and Family Life (3 cr)
FCS 497	Internship Preschool (9 cr)
H&S 288	First Aid: Emergency Response (2 cr)

Math 130 or higher; or Stat 251 or higher (3 cr)

Courses to total 128 credits for this degree

B. Family Life Option

The Family Life Option provides a general preparation in family science. Students may select to pursue course preparation for Accredited Financial Counselor or Certified Family Life Educator. Career options include

jobs in business firms, government agencies, and nonprofit organizations. Students could also declare a minor in Aging. See Advisor for specific coursework to pursue these options.

FCS 105	Individual and Family Development (3 cr)
FCS 123	Textiles (3 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
FCS 234	Infancy and Early Childhood (3 cr)
FCS 240	Intimate Relationships (3 cr)
FCS 329	History of Western Dress (3 cr)
FCS 334	Middle Childhood-Adolescence (3 cr)
FCS 346	Personal and Family Finance and Management (4 cr)
FCS 419	Dress and Culture (3 cr)
FCS 428	Housing America's Families (3 cr)
FCS 434	Adulthood and Aging Within the Context of Family (3 cr)
FCS 445	Work and Family Issues (3 cr)
FCS 448	Consumer Economic Issues (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3 cr):

FCS 340	Parent-Child Relationships in Family & Community (3 cr)
FCS 440	Contemporary Family Relationships (3 cr)

Courses to total 128 credits for this degree

Clothing, Textiles and Design (B.S.F.C.S.)

This major considers clothing, textiles and design as basic human needs, consumer products, historical and cultural artifacts, and communication tools. Career emphasis areas include apparel product development, creative and technical design of apparel, retail buying and selling, and international marketing.

Required course work includes the university requirements (see regulation J-3) and:

Art 100	World Art and Culture (3 cr)
Bus 321	Marketing (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
FCS 105	Individual and Family Development (3 cr)
FCS 119	Introduction to Fashion and the Apparel Industry (3 cr)
FCS 123	Textiles (3 cr)
FCS 224	Apparel Construction and Assembly Processes (3 cr)
FCS 323	Apparel Product Development (3 cr)
FCS 324	Patternmaking (3 cr)
FCS 329	History of Western Dress (3 cr)
FCS 419	Dress and Culture (3 cr)
FCS 424	Apparel Product Line Development: Senior Capstone (3 cr)
FCS 448	Consumer Economic Issues (3 cr)

One of the following (3 cr):

Psyc 101	Intro to Psychology (3 cr)
Soc 101	Intro to Sociology (3 cr)

One of the following (3-4 cr):

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
Econ 272	Foundations of Economic Analysis (4 cr)

Anthropology elective (3 cr)
Computer applications elective (2-3 cr)
Additional FCS credits outside of the CTD curriculum (6 cr)
An area of emphasis selected with the guidance of an advisor (18 cr)
Courses to total 128 credits for this degree

Early Childhood Development and Education (B.S.Erly.Chldhd.Dev.Ed.)

Coursework will prepare students to be recommended for Idaho Early Childhood Education/Early Childhood Special Education (ECE/ECSE) Blended Teacher Certification. Students will be certified to teach children birth through grade three.

Required course work includes the university requirements (see regulation J-3) and:

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 302	Teaching Culturally Diverse Learners (4 cr)
EDCI 401	Internship Seminar (1 cr)
EDCI 320	Teaching Reading and Literacy (3 cr)
EDCI 321	Literature for Children (3 cr)
EDCI 322	Teaching Writing/Language Arts (3 cr)
EDCI 325	Elementary Art Education (3 cr)
EDCI 327	Elementary Mathematics Education (3 cr)
EDCI 328	Elementary Social Studies Education (3 cr)
EDCI 329	Elementary Science Education (3 cr)
EDCI 408	Integrated Methods Practicum I (1 cr)
EDCI 409	Integrated Methods Practicum II (1 cr)
EDCI 410	Technology, Teaching and Learning (2 cr)
EDCI 483	Elementary Internship I (7 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
EDSP 325	Classroom Applications of Learning Theories (2 cr)
EDSP 350	Language, Communication Development, and Disorders (3 cr)
EDSP 484	Special Education Internship II (7 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
FCS 210	Intro to Early Childhood Educ (2 cr)
FCS 234	Infancy and Early Childhood Dev (3 cr)
FCS 235	Principles & Methods of Child Observation (3 cr)
FCS 333	Developmental Curriculum for Young Children (4 cr)
FCS 340	Parent-Child Relationships in Family & Community (3 cr)
FCS 435	Feeding Young Children in Group Settings (1 cr)
FCS 436	Theories of Child & Family Development (3 cr)
FCS 480	Assessment: Early Childhood/SPED (3 cr)
FCS 481	Early Childhood SPED Curriculum (3 cr)
FCS 490	Infant & Toddler SPED Internship (1-7 cr)
FCS 497	Internship Preschool (8 cr)
Math 301	Early Childhood Mathematics (4 cr)
PEP 350	Elementary Health & Physical Education (3 cr)

General Education Humanities Course (3 cr)
General Education Mathematics Course (3 cr)
English Literature Elective (3 cr)
Natural Science electives (8 cr)
Social Science electives (9 cr)
US History course (Hist) or US Government course (PolS) (3 cr)
Courses to total 139 credits for this degree

Food and Nutrition (B.S.F.C.S.)

Required course work includes the university requirements (see regulation J-3) and one of the following options.

A. Coordinated Program in Dietetics

Upon acceptance to the professional phase of the CPD during the second semester of the sophomore year, students must maintain a cumulative grade-point average of at least 2.80 to remain in and graduate from the program. Students must also obtain at least a B (80%) in all CPD courses required by the American Dietetic Association.

Acct 201	Introduction to Financial Accounting (3 cr)
Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
Biol 300	Survey of Biochemistry (3 cr)
FCS 170	Introductory Foods (3 cr)
FCS 175	Introductory Foods Laboratory (1 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
FCS 270	Intermediate Foods (3 cr)
FCS 301	Professional Skills in Dietetics I (1 cr)
FCS 361	Advanced Nutrition (3 cr)
FCS 362	Introduction to Clinical Dietetics (3 cr)
FCS 363	Medical Nutrition Therapy (4 cr)
FCS 364	Clinical Dietetics I (4 cr)
FCS 365	Advanced Nutrition Lab (1 cr)
FCS 384	Quantity Food Production and Equipment (3 cr)
FCS 385	Intro Dietetics Supervised Practice I (2 cr)
FCS 387	Food Systems Management (3 cr)
FCS 388	Food Systems Management Lab (1 cr)
FCS 411	Global Nutrition (3 cr)
FCS 463	Helping Skills in Dietetics (2 cr)
FCS 472	Clinical Dietetics II (8 cr)
FCS 473	Community Nutrition (3 cr)
FCS 486	Nutrition in the Life Cycle (3 cr)
FCS 487	Community Nutrition Supervised Practice (4 cr)
FCS 488	Management Supervised Practice (8 cr)
FCS 491	Research Methods in Food Nutrition (3 cr)
FCS 492	Nutrition Education in the Life Cycle (2 cr)
Psyc 101	Introduction to Psychology (3 cr)
Soc 101	Introduction to Sociology (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr):

Chem 101	Intro to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3 cr):

Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry I (3 cr)

One of the following (3 cr):

FCS 105	Individual and Family Development (3 cr)
Psyc 305	Developmental Psychology (3 cr)

One of the following (3-4 cr):

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

One of the following (4-5 cr):

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
MMBB 154, MMBB 155	Introductory Biology of Bacteria and Viruses and Lab (4 cr)

2 credits selected from the following:

FCS 305	Nutrition Related to Fitness and Sport (2 cr)
FCS 435	Feeding Young Children in Group Settings (1 cr)
FCS 462	Eating Disorders (2 cr)
FCS 475	Food Preservation (1 cr)

Courses to total 132 credits for this degree

B. Nutrition Option

This option prepares students for careers with government agencies, commodity groups, health and fitness agencies and businesses, and some components of the food industry. In addition, the course work would provide excellent background for those wishing to pursue advanced degrees in medicine or nutrition.

Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
Biol 300	Survey of Biochemistry (3 cr)
FCS 170	Introductory Foods (3 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
FCS 270	Intermediate Foods (3 cr)
FCS 305	Nutrition Related to Fitness and Sport (2 cr)
FCS 361	Advanced Nutrition (3 cr)
FCS 462	Eating Disorders (2 cr)
FCS 486	Nutrition in the Life Cycle (3 cr)
Stat 251	Statistical Methods (3 cr)

FCS electives (12 cr)

One of the following (3 cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3 cr):

Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry I (3 cr)

One of the following (3 cr):

FCS 105	Individual and Family Development (3 cr)
Psyc 305	Developmental Psychology (3 cr)

One of the following (3-4 cr):

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

One of the following (4-5 cr):

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
MMBB 154, MMBB 155	Introductory Biology of Bacteria and Viruses and Lab (4 cr)

Courses to total 120 credits for this degree

Family and Consumer Sciences Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the School of Family and Consumer Sciences. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. A letter of intent, which includes a statement of goals, objectives, and academic interests, and three letters of recommendation are required for admission. Information may be obtained at the school. (A) Thesis Option: Thirty credits of course work including a 13-credit emphasis area in family and consumer sciences and related areas, two graduate seminars, courses in theory and research methods and analysis, and at least 6 credits of thesis research. (B) Non-thesis Option: Thirty-four credits of course work including a 17-19 credit emphasis area in family and consumer sciences and related areas, two graduate seminars, courses in theory and research methods and analysis, and a master's project.

Department of Fish and Wildlife Sciences

Kerry Paul Reese, Dept. Head (104 CNR Bldg. 83844-1136; phone 208/885-6434; fish_wildlife@uidaho.edu). Faculty: Cort L. Anderson, Kenneth D. Cain, Brian C. Dennis, Christopher C. Caudill, Courtney J. Conway, Brian P. Kennedy, Christine M. Moffitt, Michael C. Quist, Janet L. Rachlow, Kerry P. Reese, David A. Roon, Dennis L. Scarnecchia, Kerri T. Vierling, Lisette P. Waits, Frank M. Wilhelm.

Fish and wildlife sciences deals with the application of principles of biology and ecology to the understanding of how fish and wildlife populations interact with each other and with their environment, which includes humans. There are five areas of emphasis within the department: **aquaculture, fisheries, wildlife, conservation biology, and conservation genetics.** Persons interested in aquaculture or fisheries can design their major within the B.S. in Fishery Resources, those interested in wildlife, within the B.S. in Wildlife Resources, and those interested in conservation biology, within the B.S. in Ecology and Conservation Biology. Conservation genetics courses may be incorporated into either degree.

Fishery biologists and scientists conduct research or apply management principles to aquatic ecosystems. They may become involved with biological monitoring, environmental impact assessment, maintenance of endangered fish, hatchery operation, commercial fish farming, control and prevention of fish diseases, and management of stream or lake ecosystems.

Wildlife biologists, or managers, attempt to maintain adequate populations of game and nongame wildlife species. This involves studying wildlife and its habitat so that management programs can be biologically based. The job often involves coordinating wildlife management programs with other natural resource activities such as forest management, range management, and land use planning.

Professionals within Ecology and Conservation Biology use the tools and basic principles of ecology (such as population dynamics and genetics) and then incorporate social science principles to solve critical issues related to conserving species and ecosystems. They write species recovery plans, design parks and protected areas, and advise policy makers and land-use planners.

The professions offer opportunities in law enforcement, communications, and public relations. A common saying, and one with a great deal of truth, is that natural resource management is largely people management.

Bachelor of Science degrees are offered in fishery resources, wildlife resources, and ecology and conservation biology. In the fishery resources degree, students may design a program that emphasizes fisheries ecology, aquatic ecology, aquaculture, or fisheries management. In the wildlife resources degree, the program emphasizes the principles of wildlife ecology, population dynamics, and management. Elective courses in all programs provide an opportunity to gain additional knowledge in a special area of interest or to broaden into other fields. To ensure that the student gains practical experience, one season of approved work experience before graduation is required. For information on the Ecology and Conservation Biology program, see the section on "Natural Resources."

Our graduates find employment with numerous federal and state agencies, educational institutions, and in the private sector. These include the U.S. Fish and Wildlife Service, the Bureau of Land Management, the U.S. Forest Service, the National Marine Fisheries Service, the Army Corps of Engineers, state fish and game or conservation departments, tribal agencies, and private organizations such as power companies, commercial fish growers, consulting agencies, and non-profit organizations. Recent surveys have shown that baccalaureate graduates from the department obtain employment at a rate considerably above the national average.

The graduate program is offered to meet the needs of students who are interested in either specialized or generalized advanced study. Because specific requirements for each degree are determined by the student's supervisory committee, individual study plans allow for differences in preparation while providing all students with a comparable background by the time the graduate program is completed.

In addition to the admission requirements of the College of Graduate Studies, the prospective student should have maintained a cumulative grade-point average of at least 3.00 (on a 4.00 scale) during the undergraduate program. Acceptance of students who do not have this minimum grade-point average or other stated requirements is possible, subject to recommendation by the department head and approval of the

College of Graduate Studies. The decision will be based on an analysis of the applicant's situation. The Graduate Record Examination is required for admission. At least one summer's experience with a natural resource agency is strongly recommended.

The graduate program in **fishery resources** is oriented toward the applied and basic aspects of fishery management, aquatic ecology, and fish health management. The fishery management area includes population analysis, management systems, and environmental stresses; the aquatic ecology area includes limnology and habitat management; and the fish health management area includes finfish culture (coldwater and warmwater), fish disease diagnostics and epidemiology, and fish physiology. The Idaho Cooperative Fish and Wildlife Research Unit and the Aquaculture Research Institute also provide important opportunities for graduate studies in fishery resources and aquaculture.

Students planning to begin graduate studies in fishery resources should have a broad background in the life sciences with specific emphasis on courses in the fishery sciences. They should also have a background in quantitative data processing and communication, both oral and written.

Admission to the graduate program in **wildlife resources** requires an undergraduate degree with a major in wildlife resources or a closely related field emphasizing the principles of wildlife ecology, population dynamics, and management. Students with differing backgrounds are also admitted if they have substantial preparation in the biological and physical sciences. Candidates must fulfill entrance requirements of the Graduate College and of the Department of Fish and Wildlife Sciences.

Graduate work in wildlife resources offers students the opportunity to do research in one of several areas including wildlife behavior, predator ecology, population dynamics, habitat relationships, and conservation biology, as well as big game, nongame, upland game, and waterfowl management. Students are encouraged to select topics that will benefit some portion of the wildlife program at the state or national level. Graduate projects in wildlife resources may be developed in cooperation with the Idaho Cooperative Fish and Wildlife Research Unit, an active participant in the department and research program of the college.

In addition to the requirements listed above, graduate admission is based on the compatibility of the student's research interests with the areas of concentration in the department and the availability of research faculty.

The **research mission** of the department is attainment of new knowledge and the understanding of natural resources, their interrelationships and uses. The objectives of the research program are to attain knowledge of the environment and to develop management alternatives that will assist in the conservation of resources while meeting society's needs. The dissemination of this knowledge through publications, continuing education, and other channels of communication is an essential departmental function.

For additional information, please call the department at (208) 885-6434 or visit the web at www.cnrhome.uidaho.edu/fishwild.

Courses

See the course description section for courses in Fishery Resources (Fish) and Wildlife Resources (WLF).

Fish and Wildlife Sciences Undergraduate Curricular Requirements

Fishery Resources (B.S.Fish.Res.)

Students pursuing a B.S. degree in fishery resources (management or aquaculture emphasis) must have received a grade of C or better in each of the following four indicator courses to register for fish- and wildlife-prefixed upper-division courses and to graduate with a B.S.Fish.Res.: Biol 116 and 213, Stat 251, and For 221.

To graduate, students must achieve a grade of C or better in Biol 481, and each fish- and wildlife-prefixed upper-division course listed in the requirements for the B.S. degree in fishery resources.

Required course work includes the university requirements (see regulation J-3) and:

First and Second Years

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms & Environments (4 cr)
Biol 213	Principles of biological Structure and Function (4 cr)
Chem 101	Introduction to Chemistry I (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Microeconomics (3 cr)
Fish 102	The Fish and Wildlife Professions (1 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
Math 160	Survey of Calculus (4 cr)
NR 101	Exploring Natural Resources (1 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3 cr):

Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry (3 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

One of the following (4 cr):

Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
Soil 205, Soil 206	The Soil Ecosystem and Lab (4 cr)

One of the following (4 cr):

Phys 100, Phys 100L	Fundamentals of Physics and Lab (4 cr)
Phys 111, Phys 111L	General Physic I and Lab (4 cr)

Third and Fourth Years

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Biol 481	Ichthyology (4 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Fish 314	Fish Ecology (3 cr)
Fish 315	Fish Ecology Lab (1 cr)
Fish 316	Principles of Population Dynamics (2 cr)
Fish 415	Limnology (4 cr)
Fish 418	Fisheries Management (4 cr)
Fish 495	Seminar (1 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
WLF 448	Fish and Wildlife Population Ecology (4 cr)

Approved work experience in major field required

One of the following (3 cr):

AVS 371	Anatomy and Physiology (3 cr)
Biol 423	Comparative Vertebrate Physiology (3 cr)

One of the following (3 cr):

Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3-4 cr):

Fish 422	Concepts in Aquaculture (3 cr)
Fish 424	Fish Health Management (4 cr)

One of the following (3-4 cr):

Biol 310, Biol 315	Genetics and Lab (4 cr)
Gene 314	General Genetics (3 cr)

Courses to total 120 credits for this degree

Ecology and Conservation Biology (B.S.Ecol.Cons.Biol.)

See the section on "Natural Resources."

Wildlife Resources (B.S.Wildl.Res.)

Students pursuing a B.S. in wildlife resources must have received a grade of C or better in each of the following four indicator courses to register in fish- and wildlife-prefixed upper-division courses and to graduate with a B.S. in wildlife resources: Biol 116 and 213, Stat 251, and For 221.

To graduate, a student must receive a grade of C or better in each fish- and wildlife-prefixed upper-division course listed in the requirements for the B.S. in wildlife resources.

Required course work includes the university requirements (see regulation J-3) and:

First and Second Years

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms & Environments (4 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Chem 101	Introduction to Chemistry I (4 cr)

Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Microeconomics (3 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
NR 101	Exploring Natural Resources (1 cr)
Stat 251	Statistical Methods (3 cr)
WLF 102	The Fish and Wildlife Professions (1 cr)

One of the following (3 cr):

Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry I (3 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

One of the following (3-4 cr):

For 320	Dendrology (4 cr)
REM 341	Systematic Botany (3 cr)

One of the following (4 cr):

Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
Soil 205, Soil 206	The Soil Ecosystem and Lab (4 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Third and Fourth Years

AVS 371	Anatomy and Physiology (3 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
WLF 314, WLF 315	Wildlife Ecology I and Lab (4 cr)
WLF 316	Wildlife Ecology II (4 cr)
WLF 440	Conservation Biology (3 cr)
WLF 448	Fish and Wildlife Population Ecology (4 cr)
WLF 492	Wildlife Management (4 cr)
WLF 495	Wildlife Seminar (1 cr)

One of the following (3-4 cr):

Biol 310, Biol 315	Genetics and Lab (4 cr)
Gene 314	General Genetics (3 cr)

One of the following (4 cr):

Phys 111, Phys 111L	General Physics I and Lab (4 cr)

One of the following (3 cr):

Comm 431	Applied Business and Professional Communication (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 317	Technical Writing (3 cr)

Restricted electives, choose two courses from the following (must receive a grade of C or better):

Biol 481	Ichthyology (4 cr)
Biol 483	Mammalogy (3 cr)
Biol 489	Herpetology (4 cr)
WLF 482	Ornithology (4 cr)

Approved work experience in major field required

Courses to total 120 credits for this degree

Fish and Wildlife Sciences Academic Minor Requirements

Aquaculture Minor

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Biol 481	Ichthyology (4 cr)
Fish 422	Concepts in Aquaculture (3 cr)
Fish 424	Fish Health Management (4 cr)

Three of the following courses:

AgEc 278	Farm and Agribusiness Management (4 cr)
Fish 398	Renewable Natural Resources Internship (cr arr)
ASM 107	Beginning Welding (2 cr)
AVS 305	Animal Nutrition (3 cr)
Bus 321	Marketing (3 cr)

Courses to total 18 credits for this minor

Fishery Resources Minor

Fish 314	Fish Ecology (3 cr)
Fish 315	Fish Ecology Lab (1 cr)
Fish 495	Seminar (1 cr)

Three of the following courses:

Biol 481	Ichthyology (4 cr)
Fish 415	Limnology (4 cr)
Fish 418	Fisheries Management (4 cr)
Fish 422	Concepts in Aquaculture (3 cr)
Fish 424	Fish Health Management (4 cr)
Fish 430	Riparian Ecology and Management (3 cr)

One of the following (3-4 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)
Biol 314	Ecology and Population Biology (4 cr)

Courses to total 18 credits for this minor

Wildlife Resources Minor

WLF 314, WLF 315	Wildlife Ecology I and Lab (4 cr)
WLF 316	Wildlife Ecology II (4 cr)

One of the following (3-4 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)
Biol 314	Ecology and Population Biology (4 cr)

Any combination of the courses below:

Biol 483	Mammalogy (3 cr)
Biol 489	Herpetology (4 cr)
WLF 440	Conservation Biology (3 cr)
WLF 448	Fish and Wildlife Population Ecology (4 cr)
WLF 482	Ornithology (4 cr)
WLF 492	Wildlife Management (4 cr)

Courses to total 18 credits for this minor

Fish and Wildlife Sciences Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Fish and Wildlife Sciences. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. Major in Natural Resources. The M.S. degree with major study in either fishery resources or wildlife resources is awarded when a student has met the requirements listed below. A formal graduate program of at least 30 semester hours is chosen in consultation with the major professor and the student's supervisory committee. At least 18 credits must be courses numbered 500 and above. For the thesis option, no more than 10 of the 500-level credits of Research and Thesis may be applied toward the degree. (A) Thesis option: General M.S. requirements apply except that the thesis requirement may be fulfilled by one or more journal publications at the discretion of the candidate's supervisory committee. (B) Non-thesis option: General M.S. requirements apply. A professional paper is required.

The Ph.D. degree is available with a major in natural resources. General Ph.D. requirements apply; see the section on "Natural Resources" for details.

UI/WSU Bistate School of Food Science

Denise Smith, Director (111 Agricultural Science, 83844-2312, phone 208-885-0707); School of Food Science faculty: C. Bohach, B. Chew, J. Culbertson, R. Dougherty, C. Edwards, G. Ganjyal, J. Harbertson, T. Henick-Kling, H. Joyner, K. Killinger, S. Minnich, G. Moller, A. Paszczynski, B. Rasco, C. Ross, D. Ryu, G. Unlu, M. Zhu.

The School of Food Science (SFS), jointly administered by the University of Idaho and Washington State University, offers courses of study in the undergraduate major field of food science. Students complete a prescribed course of study leading to the Bachelor of Science in Food Science with emphasis areas in processing, business, science, or nutrition. Graduate degrees are also offered leading to Masters and Doctor of Philosophy in Food Science.

Food Science is the scientific discipline that supports the food and beverage manufacturing industry. Food Science is a multidisciplinary science that applies biology, chemistry, physics, engineering, nutrition, and

other sciences to improve the safety and quality of food products; create healthy food products; and design new, safer, and more sustainable food preservation methods. Food scientists strive to improve the quality and nutrition of foods through traditional and emerging preservation technologies. Food scientists conduct research to mitigate chemical and microbial risk factors in foods and to understand the causes of food deterioration and spoilage. Food scientists are employed around the world by large and small food processing companies, food ingredient suppliers, food quality assurance and testing labs, federal and state governmental agencies, and academia. Food scientists also work with existing and emerging companies preparing organic, natural, kosher and halal food products.

Gaining a food science education provides students with a challenging career not only in the Pacific Northwest, but also nationally and internationally. Food science graduates begin careers in food plant operations, food quality assurance, food safety microbiology, technical sales, food product development, regulatory affairs, or research in the food/allied industries or federal/state regulatory agencies. Food science students learn to convert raw agricultural commodities into high quality, safe and nutritious food products–the complete farm-to-table process. As part of the B.S. degree, students receive training and learn skills relative to the preservation, safety, risk management, nutrition, chemistry and sensory evaluation of foods. The food processing industry is continually challenged to improve food quality, as well as enhance the sustainable development of new foods to better meet consumer demands and the nutritional needs of the world.

A student graduating with a B.S. in Food Science should be able to: 1) show a depth of knowledge that reflects an appropriate degree of specialization in food science, 2) understand how the methods and concepts of food science relate to those of other disciplines, and possess the ability to engage in cross-disciplinary activities, 3) communicate in writing, speech, and presentation to convey meaning, significance, emotion and values in and beyond peer groups, and 4) effectively organize and articulate information to promote understanding and communicate significance of the issue or problem.

In the first two years of college, students enroll in science courses and complete most general university requirements. Many of the general university requirements and introductory science and math courses can be completed at community colleges. In the junior and senior years, the curriculum emphasizes courses in food processing, food chemistry and analysis, food microbiology, sensory evaluation, and other specialized areas such as the processing of cereal, dairy, wine, fruit, and vegetable products. Students with specific interests can gain additional education by taking elective courses, participating in internships with food companies, joining student clubs or competitions, or conducting a research project with a faculty member. Contact a SFS advisor for more information.

Students planning to transfer to the School of Food Science should coordinate their programs of study with an advisor to select courses applicable to the degree requirements. Many of the general university course requirements and introductory chemistry, biology, and physics courses can be completed at community colleges. We especially recommend students take the appropriate science and mathematics courses required in our first two years of study, so students are on track with transferring to the University of Idaho.

Students who identify an interest in graduate work early in their studies are encouraged to contact the advisor no later than the end of the junior year so a course of study can be planned which schedules appropriate prerequisites to graduate courses and an introduction to research projects. Students from other science majors who wish to obtain an advanced degree in food science are encouraged to apply as they may be well prepared for graduate studies. Students are required to take certain core courses required of food science undergraduates in addition to those needed for their graduate program. For more complete information on research opportunities, please see faculty profiles on the School of Food Science website.

Admission to the graduate program is based on ability to complete graduate-level work as evidenced by undergraduate transcripts; the compatibility of the student's objectives with faculty expertise and program objectives; and availability of graduate faculty to act as major advisor for the applicant. The School of Food Science requires GRE scores, in addition to admission materials required by the College of Graduate Studies.

The School of Food Science welcomes inquiries about our program. Potential students can contact the School via phone (208-885-0707), email (foodscience@uidaho.edu) or visit the School of Food Science website (http://www.cals.uidaho.edu/sfs/).

Courses

See the course description section for courses in Food Science (FS).

Food Science Undergraduate Curricular Requirements

Food Science (B.S.F.S.)

Required course work includes the university requirements (see regulation J-3) and:

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 317	Technical Writing (3 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
FS 110	Introduction to Food Science (3 cr)
FS 220	Food Safety and Quality (3 cr)
FS 302, FS 303	Food Processing and Lab (4 cr)
FS 416, FS 417	Food Microbiology and Lab (5 cr)
FS 418	Oral Seminar in Food Science (1 cr)
FS 422, FS 423	Sensory Evaluation of Food and Wine and Lab (4 cr)
FS 432, FS 433	Food Engineering and Lab (4 cr)
FS 460, FS 461	Food Chemistry and Lab (4 cr)
FS 462	Food Analysis (3 cr)
FS 470	Advanced Food Technology (3 cr)
FS 489	Food Product Development (3 cr)
Phys 111	General Physics I (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3-4 cr):

Biol 115	Cells and the Evolution of Life (4 cr)
MMBB 154	Introductory Microbiology (3 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytical Geometry and Calculus I (4 cr)

And one of the following emphasis areas:

A. Processing Emphasis

Biol 300	Survey of Biochemistry (3 cr)
Chem 275	Carbon Compounds (3 cr)
Chem 276	Carbon Compounds Lab (1 cr)

Select 12 credits from the following:

FS 304	Cereal Products (2 cr)
FS 363	Animal Products for Human Consumption (4 cr)
FS 398	Internship (1-4 cr, max 4)
FS 406	Evaluation of Dairy Products I (1 cr)
FS 429	Dairy Products (3 cr)
FS 430	Dairy Products Lab (1 cr)
FS 464	Food Toxicology (3 cr)
FS 465	Wine Microbiology and Processing (3 cr)
FS 499	Directed Study (1-4 cr, max 4)

Courses to total 120 credits for this degree

B. Business Emphasis

Biol 300	Survey of Biochemistry (3 cr)
Chem 275	Carbon Compounds (3 cr)
Chem 276	Carbon Compounds Lab (1 cr)

Select 12 credits from the following:

Acct 201	Intro to Financial Accounting (3 cr)
Acct 202	Intro to Managerial Accounting (3 cr)
Bus 301	Financial Resources Management (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)
Bus 350	Managing Information (3 cr)
Bus 370	Process Management (3 cr)
Econ 202	Principles of Microeconomics (3 cr)*
Econ 272	Foundations of Economic Analysis (4 cr)*
FS 398	Internship (1-4 cr, max 4)

Courses to total 120 credits for this degree

**Note: Either Econ 202 or Econ 272 may be used to satisfy the requirement, but not both.*

C. Science Emphasis

Biol 380	Biochemistry I (4 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)

Select 11 credits from the following:

Biol 382	Biochemistry I Laboratory (2 cr)
Chem 253	Quantitative Analysis (3 cr)
Chem 254	Quantitative Analysis: Lab (2 cr)
Chem 302	Principles of Physical Chemistry (3 cr)
Chem 303	Principles of Physical Chemistry Lab (1 cr)
FS 398	Internship (1-4 cr, max 4)
FS 464	Food Toxicology (3 cr)
FS 465	Wine Microbiology and Processing (3 cr)
FS 466	Wine Microbiology and Processing Lab (1 cr)
FS 499	Directed Study (1-4 cr, max 4)
Gene 314	General Genetics (3 cr)
MMBB 412	Pathogenic Microbiology (3 cr)
MMBB 425	Microbial Ecology (3 cr)
MMBB 440	Advanced Laboratory Techniques (4 cr)
MMBB 460	Microbial Physiology (3 cr)

Courses to total 120 credits for this degree

D. Nutrition Emphasis

Biol 300	Survey of Biochemistry (3 cr)
Chem 275	Carbon Compounds (3 cr)
Chem 276	Carbon Compounds Lab (1 cr)

Select 12 credits from the following:

FCS 270	Intermediate Foods (3 cr)
FCS 384	Quantity Food Production and Equipment (3 cr)
FCS 387	Food Systems Management (3 cr)
FCS 411	Global Nutrition (3 cr)
FCS 462	Eating Disorders (2 cr)
FCS 305	Nutrition Related to Fitness and Sport (2 cr)
FS 398	Internship (1-4 cr, max 4)
FS 499	Directed Study (1-4 cr, max 4)

Courses to total 120 credits for this degree

Medical Technology (B.S.)

The medical technologist performs critical laboratory tests and analytical procedures that aid physicians in the diagnosis and treatment of disease. The curriculum is of interest to students desiring professional careers in hospital and clinical laboratories, public health and research laboratories, and pharmaceutical laboratories. Students will have two options to obtain a BS degree in Medical Technology:

1. Upon completion of the B.S. degree in microbiology (medical technology option), those students who successfully complete 32 credits in a 12-month training course at an accredited hospital school of medical technology with a curriculum including clinical bacteriology, medical mycology, parasitology, clinical chemistry, toxicology, urinalysis, hematology, immunology-serology, immunohematology, and clinical correlations will be awarded the B.S. degree with major in medical technology.
2. Students may also receive a BS in Medical Technology by completing the below coursework. With this option a student must successfully complete the below 96 credits of coursework in Microbiology, Molecular Biology and Biochemistry at the U of I and 32 credits in a 12-month training course at an accredited hospital school of medical technology with a curriculum including clinical bacteriology, medical mycology, parasitology, clinical chemistry, toxicology, urinalysis, hematology, immunology-serology, immunohematology, and clinical correlations.

Required course work includes the university requirements (see regulation J-3) and:

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Biol 380	Biochemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Chem 372	Organic Chemistry II (3 cr)
MMBB 154	Introductory Microbiology (3 cr)
MMBB 400	Seminar (1 cr)
MMBB 409	Immunology (3 cr)
MMBB 412	Pathogenic Microbiology (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3-4 cr):

Biol 310, Biol 315	Genetics and Lab (4 cr)
Gene 314	General Genetics (3 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

One of the following (4 cr):

Phys 111, Phys 111L	General Physics I and Lab (4 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)

One of the following (4 cr):

Phys 112, Phys 112L	General Physics II and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)

One of the following English Courses (3 cr):

Engl 207	Persuasive Writing (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following MMBB electives (3 cr):

MMBB 422	Cellular and Molecular Basis of Disease (3 cr)
MMBB 432	Virology (3 cr)
MMBB 463	Molecular Parasitology (3 cr)

Courses to total 120 credits for this degree

Food Science Academic Minor Requirements

Food Science Minor

A minor in food science will provide undergraduates with an introduction to the discipline of food science and technology. The minor is designed to supplement technical or business skills obtained in other majors. The minor will allow a student to broaden his or her educational background and enhance employment options in the food industry.

FS 110	Introduction to Food Science (3 cr)
FS 220	Food Safety and Quality (3 cr)
FS 303	Food Processing (3 cr)
FS 416, FS 417	Food Microbiology and Lab (5 cr)
FS 418	Oral Seminar in Food Science (1 cr)

Additional courses in food science (FS) (5 cr)

Courses to total 20 credits for this minor

Food Science Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the UI/WSU Bistate School of Food Science. See the College of Graduate Studies section for general requirements applicable to degree programs.

Master of Science. Thesis and non-thesis options are offered. (A) *Thesis option*: University M.S. degree requirements apply along with specific department requirements for the M.S. in food science as described on the department webpage (www.sfs.wsu.edu/graduate-program/ui-graduate-students). The degree will prepare students for a variety of careers in the food and related industries, as well as for further academic studies. Each student will design a study plan in consultation with an advisor and thesis committee and present a thesis proposal to their committee. The degree program emphasizes research and a thesis is required for graduation. An oral examination covering graduate course work and thesis research is required during the student's final semester. (B) *Non-thesis option*: The non-thesis degree is designed to provide students with a broad perspective in food science. The student should have career goals that do not include a research emphasis. University M.S. degree requirement apply plus additional requirements described on the department webpage (www.sfs.wsu.edu/graduate-program/ui-graduate-students). The non-thesis option requires a minimum of 33 credits, the appointment of a graduate committee and a final oral examination. Along with specific course requirements, the student is required to complete a substantial project, paper or presentation to demonstrate ability for inde-

pendent work and critical thinking. Students are not eligible for the non-thesis option if they have been supported on a graduate assistantship.

Doctor of Philosophy. University Ph.D. requirements apply, along with specific departmental requirements described on the department webpage (www.sfs.wsu.edu/graduate-program/ui-graduate-students/phd-req-ui) for a Ph.D. in food science. Admission to the doctoral program is based on compatibility of the student's research interests with those of the major professor, on availability of research support, and the student's academic record and potential. An oral preliminary exam and written dissertation proposal are required prior to admission to final candidacy for the degree. All candidates prepare a dissertation based on independent laboratory research and defend it as part of the final oral exam. Publication of data from the dissertation in a peer-reviewed scientific journal is expected. Participation in research seminars and in department teaching programs is designed to prepare students for professional opportunities.

Department of Forest, Rangeland, and Fire Sciences

Anthony S. Davis, Department Head (204 CNR Bldg. 83844-1133; phone 208/885-7952; fores@uidaho.edu). Forest, Rangeland, and Fire Sciences Faculty: Luigi Boschetti, Randall H. Brooks, Stephen C. Bunting, Mark D. Coleman, Steven Daley Laursen, Anthony S. Davis, Jan U. Eitel, Jo Ellen Force, Amanda L. Gearhart, Paul E. Gessler, Thomas M. Gorman, Philip E. Higuera, Kathleen L. Kavanagh, Robert F. Keefe, Andrew D. Kliskey, Karen L. Launchbaugh, Timothy E. Link, John D. Marshall, Armando G. McDonald, Penelope Morgan, A. George Newcombe, Beth A. Newingham, Kurt S. Pregitzer, Ronald Robberecht, Alistair Smith, Eva K. Strand, Lee A. Vierling. Affiliate Faculty: Cort Anderson, Mark J. Kimsey Jr., Jay O'Laughlin, Steven R. Shook.

The Department of Forest, Rangeland, and Fire Sciences (FRFS, www.uidaho.edu/frfs) offers four undergraduate degrees: Bachelor of Science in Forest Resources; Bachelor of Science in Fire Ecology and Management; Bachelor of Science in Rangeland Ecology and Management; and Bachelor of Science in Renewable Materials. While graduate degrees are administered through the College of Natural Resources, students can select a specialization within FRFS that would lead to either a Master of Science in Natural Resources (thesis and non-thesis options); or a Doctor of Philosophy in Natural Resources (see Forest, Rangeland, and Fire Sciences Graduate Degree Programs for more information). Students seeking an advanced degree of the professional nature should explore the Master of Natural Resources program, for which faculty in FRFS serve as mentors.

Undergraduate and graduate students in the Department of Forest, Rangeland, and Fire Sciences are provided with an opportunity to learn from globally-recognized faculty. Using a mix of teaching methods, students are exposed to both the scientific background and hands-on practice needed to become leaders in their chosen field. Extensive opportunities exist for students to develop as practitioners and scientists through partnership with our Experimental Forest, Pitkin Forest Nursery, Stillinger Herbarium, numerous laboratories (Fire, Forest Operations, Paleoecology, Rangeland Ecology, Renewable Materials, Stable Isotopes) and regional cooperative units.

Department faculty and administration strive to provide graduates with diverse opportunities for personal growth while maintaining curricula that ensure competency upon entering the workforce or continuing into advanced study. Students are provided with courses that expand critical thinking skills and understanding of concepts rather than rote learning of facts and principles. Class sizes are manager to appropriate student to faculty ratios for the subject matter to be taught effectively. Courses emphasize the dynamic nature of forest, rangeland, and fire sciences and technologies by teaching new concepts and methods and incorporating new knowledge as it emerges. Field and lab-based study is also an integral part of all curricula. The faculty and staff of the college encourage and assist students in finding seasonal professional employment and opportunities for involvement in student clubs and professional organizations. Faculty members seek to provide research opportunities for students that advance science in the broad fields of study in which they have expertise.

Bachelor of Science in Fire Ecology and Management. The College of Natural Resources has provided over 35 years of leadership in fire education. We offer more courses focused on fire than any other natural resources school in the country. Our courses and degree programs are developed to help students understand fundamental concepts, the science behind issues, and the skills to become leaders in fire and natural resource management. Our fire research program attracts top graduate students and collaborates both with the leading fire scientists and innovative effective fire managers. Our research and outreach efforts provide useful, timely and sound science to address fire ecology and management issues across the state, region and nation.

We provide a range of educational opportunities for wildland fire managers and others interested in a career in wildland fire research with a focus on solving real world problems through an interdisciplinary approach that focuses on educating current and future fire professional leaders. The BS in Fire Ecology and Management has recently been recognized by the national Association for Fire Ecology as a leading program in the US.

A fire ecology and management academic minor, and academic certificates in fire ecology, management, and technology are also available.

Bachelor of Science in Forest Resources. Forestry is "managing and using for human benefit the forest lands and natural resources that occur on and in association with forest lands." These benefits may include values, services, or products such as stable human communities, aesthetics, biodiversity, recreational opportunities, clean water and air, soil protection, forage, fish and wildlife, medicinal and ornamental items, wood products, and many others. One-third of the nation's land area and 40 percent of Idaho's land area are forested. Present-day forest management requires professionals highly trained in an interdisciplinary approach that adapts to scientific developments and sociological and economic constraints while sustaining healthy forest ecosystems.

The B.S. Forest Resources is accredited by the Society of American Foresters, the specialized accrediting body recognized by the Commission on Recognition of Post-secondary Accreditation as the accrediting agency for forestry in the United States.

The B.S. Forest Resources curriculum provides students with an interdisciplinary education founded on the principles of science-based stewardship. Students are given an opportunity to strengthen their understanding of ecology, forest ecosystem processes, social sciences, remote sensing and geographic information systems, silviculture, pest management, forest operations, and other specialties by selective use of elective credits. Graduates with a professional forestry degree are employed by a wide range of federal and state forestry and natural resource agencies; private forestland companies, such as Potlatch, Forest Capital, Weyerhaeuser; consulting companies that work with private non-industrial forest landowners and others that do environmental assessments and monitoring of forest lands; and non-governmental agencies that manage and/or are interested in forest ecosystem land management.

Specific learning outcomes associated with the B.S. Forest Resources include developing the ability to:

- Communicate effectively by listening actively, formulating, articulating, and explaining ideas clearly using oral and written techniques
- Demonstrate critical thinking and problem-solving skills
- Demonstrate skills in working with teams of people, including effective leadership of groups working toward a common goal
- Develop and apply scientific knowledge (i.e. ecological, social, and economic) to evaluate and justify forest management decisions
- Access, evaluate and appropriately use scientific literature, technologies, and expert advice when considering critical resource issues and management alternatives
- Forecast potential outcomes of forestry decisions in time and space, while considering risks and uncertainty
- Assess forest, site, and socioeconomic conditions across temporal and spatial scales using appropriate metrics

Bachelor of Science in Rangeland Ecology and Management. The term RANGELAND was invented in the United States to describe the extensive, unforested lands dominating the western half of the continent. Rangelands around the world are known by many names including prairie, plains, grassland, shrubland, savanna, steppe, desert, semi-desert, sward, tundra, and alpine. These lands form about half of the earth's land surface. Idaho is 48% rangeland. Limited precipitation, generally sparse vegetation, sharp climatic extremes, highly variable soils, frequent salinity, and diverse topography characterize the kind of land called RANGELAND. Rangelands produce a wide variety of goods and services desired by society, including livestock forage, wildlife habitat, water, mineral resources, wood products, wild-land recreation, open space, and natural beauty. The geographic extent and many important resources of

rangelands make their proper use and management vitally important to people everywhere.

Rangeland managers enjoy careers with a variety of private organizations and government agencies. State and federal land management agencies, such as the US Forest Service, Bureau of Land Management, and State Departments of Lands, hire rangeland professionals to oversee the management of public rangelands. Wildlife management agencies also hire range managers to maintain and improve wildlife habitat. Private land owners employ range consultants and managers to oversee livestock operations, enhance hunting programs, maintain forage resources and control weeds. Biological assessment companies require the careful measurement and assessment of vegetation resources; therefore they often hire rangeland professionals. A growing number of rangeland professionals work as natural resource facilitators to bring rangeland stakeholders together to craft plans for environmental stewardship. Internships are also available. Over 85% of the graduates of the B.S. Rangeland Ecology and Management program at the University of Idaho in the last 10 years have secured careers in natural resource management or advanced to graduate school.

Bachelor of Science in Renewable Materials. Renewable materials are those that can be replaced by biological means, such as sustainably-managed forests or residues from agricultural food crops, and offer environmental benefits as well as useful products for society. Renewable and biodegradable materials typically consume less energy in their preparation, and can be reused, recycled or composted at the end of their useful life. Wood is a primary renewable, recyclable and biodegradable material in the U.S. and the world and is used to produce over 5,000 different products for shelter, packaging, and chemicals. Renewable, bio-based energy sources reduce greenhouse gas emissions and contribute to energy self-reliance.

The B.S. Renewable Materials curriculum prepares students for a wide range of careers in the manufacture, marketing, and utilization of sustainable, renewable materials. Interdisciplinary coursework and project-based learning opportunities lead to a choice of several career tracks including procurement of timber and other renewable materials; production management, marketing and distribution of bio-based products; green building materials selection, construction and design; and bio-based energy production systems. This degree program is accredited by the Society of Wood Science and Technology. The undergraduate curriculum is structured, but still allows students to follow specific interests through course selection from restricted and unrestricted electives in the areas of architecture, business, entrepreneurship, forest operations, and agriculture.

Fire Ecology, Management and Technology Academic Certificate. This 15-credit certificate program is designed for traditional and non-traditional students who would like to receive more depth in the concepts, science and tools currently used in fire ecology and management, or for those seeking educational requirements required for federal employment. After completing this certificate program students will be able to apply sound science to solving complex issues facing fire management. Many of our students combine this certificate with other degrees.

Students who wish to complete the certificate program may register for courses online. We strongly recommend that you contact us at fire@uidaho.edu to talk to an advisor who will help you develop an individualized program of study to help meet your educational needs. Note that there is an additional fee for all online courses and for some campus-based courses and that there is no additional fee for part-time non-resident students who are taking online courses.

University of Idaho Academic Certificate Requirements: Course work must not be more than five years old unless it is being used in conjunction with the completion of a graduate degree; Up to six of the required credits may consist of course work completed at another regionally accredited institution. For more information please contact us or visit the following website: www.cnr.uidaho.edu/wildlandfire.

Graduate Programs. Graduate programs are offered in many specialization areas across five general topic areas in which FRFS faculty are conducting research: (1) Ecology and Biogeosciences of Forest and Rangeland Ecosystems: ecosystem processes/modeling, biometrics, biogeochemistry, hydrology and ecohydrology, remote sensing and geospatial ecology, landscape ecology, community ecology, population ecology, ecosystem ecology, disturbance ecology, paleoecology, restoration ecology, ecophysiology, global environmental change, conservation biology/genetics, and molecular plant systematic; (2) Forest Sciences and Management: forest mensuration, forest egeneration, forest ecosystem management, tree physiology, forest pathology, forest policy, forest operations, silviculture, forest ecology, and forest genetics; (3) Renewable Materials: procurement of timber and other renewable materials; production management, marketing and distribution of bio-based products; green building materials selection, construction and design; and bio-based energy production systems; (4) Fire Sciences and Management: fire effects and recovery, fire behavior, fuels management, biophysical controls of fire and fire regimes, air quality and smoke management, fire history, and fire ecology; and (5) Rangeland Sciences and Management: grazing behavior and management, invasive plant management, livestock-wildlife relations, rangeland and habitat management, rangeland riparian management, and rangeland ecology.

Admission to the graduate program is based on: evidence of ability to complete graduate-level work as discerned from undergraduate transcripts, the applicant's statement of career objectives, and letters of recommendation; the compatibility of the student's educational and career objectives with faculty expertise and departmental objectives; and availability of graduate faculty to act as major advisor for an applicant. The GRE is required. An undergraduate degree related to our programs is also recommended but an applicant may be accepted with the understanding that certain course deficiencies may be required by the student's advisory committee.

Students can transfer up to 12 approved credits taken as a non-degree seeking student into a MS or PhD program in the College of Natural Resources with permission of the departmental graduate committee. Students who are considering transferring non-degree credits into a CNR graduate program should request early advising from the appropriate department.

Further information can be obtained from the department head (208/885-7952).

Courses

See the course description section for courses in Forest Resources (For), Rangeland Ecology and Management (REM) and Renewable Materials (RMat).

Forest, Rangeland, and Fire Sciences Undergraduate Curricular Requirements

Forest Resources (B.S.For.Res.)

Students pursuing a B.S. degree in forest resources must receive a grade of C or better in the following indicator courses to register for upper-division courses in forest resources and to graduate with a B.S.For.Res.: Math 143, Stat 251, For 221, and For 274. Students must also have a minimum cumulative grade-point average of 2.00 in forest resource (For) courses to qualify for the B.S. degree in forest resources.

Required course work includes the university requirements (see regulation J-3) and:

Biol 115	Cells and the Evolution of Life (4 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
For 102	Introduction to Forest Management (1 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
Ent 469	Introduction to Forest Insects (2 cr)
For 274	Forest Measurement and Inventory (3 cr)
For 320	Dendrology (4 cr)
For 324	Forest Regeneration (3 cr)
For 330	Forest Soil and Canopy Processes (4 cr)
For 373	Forestry Sampling Methods (2 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 424	Forest Dynamics and Management (4 cr)
For 430	Forest Operations (3 cr)
For 462	Watershed Science and Management (3 cr)
For 468	Forest and Plant Pathology (2 cr)
For 484	Forest Policy and Administration (2 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)*
Math 144	Analytic Trigonometry (1 cr)
NR 101	Exploring Natural Resources (1 cr)
Soil 205, 206	The Soil Ecosystem and Lab (4 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr):

Biol 116	Organisms and Environments (4 cr)
PlSc 205	General Botany (4 cr)

One of the following (4 cr):

Chem 101	Introduction to Chem I (4 cr)
Chem 111	Principles of Chem I (4 cr)

One of the following (3 cr):

Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

One of the following (4 cr):

Phys 100, Phys 100L	Fundamentals of Physics and Lab (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)

Restricted Electives (11 cr):

AgEc 477	Law, Ethics, and the Environment (3 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Biol 421	Advanced Evolutionary Biology (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 490	Wilderness and Protected Area Management (3 cr)
Fish 314	Fish Ecology (3 cr)
Fish 415	Limnology (4 cr)
Fish 430	Riparian Ecology and Management (3 cr)
For 326	Fire Ecology and Management (3 cr)
For 427	Prescribed Burning Lab (3 cr)
For 431	Low Volume Forest Roads (2 cr)
For 436	Cable Systems (2 cr)
For 472 or REM 472	Remote Sensing of the Environment (4 cr)
For 497	Senior Thesis (2-4 cr)
Geog 301	Meteorology (3 cr)
Geog 385	GIS Primer (3 cr)
Geol 111, Geol 111L	Physical Geology for Science Majors (4 cr)
Math 160	Survey of Calculus (4 cr)**
Math 170	Analytic Geometry and Calculus I (4 cr)**
PolS 364 or CSS 364	Politics of the Environment (3 cr)
REM 407	GIS Applications in Fire Ecology and Management (2 cr)
REM 410	Principles of Vegetation Measurement and Assessment (2 cr)
REM 411	Ecological Monitoring and Analysis (2 cr)
REM 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology (2 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Integrating GIS and Field Studies in Rangelands (2 cr)
RMat 321	Renewable Materials Anatomy and Properties (3 cr)
RMat 444	Primary Products Manufacturing (3 cr)
Soil 446	Soil Fertility (1-3 cr)
Soil 454	Soil Development and Classification (3 cr)
Stat 431	Statistical Analysis (3 cr)
WLF 314	Wildlife Ecology I (3 cr)
WLF 316	Wildlife Ecology II (3 cr)
WLF 440	Conservation Biology (3 cr)

Courses to total 120 credits for this degree

**Note: A SAT math score of 610 or above, or ACT math score of 27 or above can be used to satisfy the Math 143 and Math 144 requirements.*

***Note: Either Math 160 or Math 170 may be used as a restricted elective, but not both.*

Fire Ecology and Management (B.S.Fire.Ecol.Mgmt.)

Students pursuing a B.S. degree in fire ecology and management must receive a grade of C or better in the following indicator courses to register for upper-division courses in the fire core and to graduate with a B.S.Fire.Ecol.Mgmt.: Math 143, Stat 251, REM 244, either For 274 or REM 411, and either For 221 or REM 221. Students must also have a minimum cumulative grade-point average of 2.00 in Forest Resource and Rangeland Ecology and Management courses to qualify for the B.S. degree in Fire Ecology and Management.

Required course work includes the university requirements (see regulation J-3) and:

Biol 115	Cells and the Evolution of Life (4 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
For 235	Society and Natural Resources (3 cr)
For 274	Forest Measurement and Inventory (3 cr)
For 326	Fire Ecology and Management (3 cr)
For 330	Forest Soil and Canopy Processes (4 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 427	Prescribed Burning Lab (3 cr)
For 433	Fire and Fuel Modeling (2 cr)
For 435 or For 535	Remote Sensing of Fire (3 cr)
For 450	Fire Behavior (2 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 301	Meteorology (3 cr)
NR 101	Exploring Natural Resources (1 cr)
Phys 100, Phys 100L	Fundamentals of Physics and Lab (4 cr)
REM 244	Wildland Fire Management (2 cr)
REM 459	Rangeland Ecology (2 cr)
Soil 205	The Soil Ecosystem (3 cr)
Soil 206	The Soil Ecosystem Lab (1 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr):

Biol 116	Organisms and Environments (4 cr)
PlSc 205	General Botany (4 cr)

One of the following (4 cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3 cr):

Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

One of the following groups of courses (4 cr):

Group A:

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 144	Analytic Trigonometry (1 cr)

or

Group B:

Math 160	Survey of Calculus (4 cr)

One of the following courses (3 cr):

Comm 332	Communication and the Small Group (3 cr)
CSS 287	Foundations of Conservation Leadership and Management (3 cr)
CSS 387	Environmental Communication Skills (3 cr)
CSS 481	Conservation Leadership (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)

One of the following courses (3-4 cr):

For 320	Dendrology (4 cr)
REM 252	Wildland Plant Identification Field Studies (3 cr)
REM 341	Systematic Botany (3 cr)

Ecology (5-6 cr):

Ent 469	Introduction to Forest Insects (2 cr)
REM 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 450	Global Environmental Change (3 cr)
WLF 314	Wildlife Ecology I (3 cr)
WLF 440	Conservation Biology (3 cr)

Applied Tools and Technology (3-4 cr):

Geog 385	GIS Primer (3 cr)
Geog 401	Climatology (3 cr)
REM 411	Ecological Monitoring and Analysis (2 cr)

Natural Resources Management, Planning and Policy (6 cr):

CSS 385	Conservation Management and Planning I (4 cr)
CSS 490	Wilderness and Protected Area Management (3 cr)
For 324	Forest Regeneration (3 cr)
For 424	Forest Dynamics and Management (4 cr)
For 430	Forest Operations (3 cr)

For 454 or For 554	Air Quality and Smoke Management (3 cr)
For 462	Watershed Science and Management (3 cr)
REM 456	Integrated Rangeland Management (3 cr)

Courses to total 120 credits for this degree

Rangeland Ecology and Management (B.S.Rangeland Ecol.-Mgt.)

Required course work includes the university requirements (see regulation J-3) and:

First and Second Years

Biol 115	Cells and the Evolution of Life (4 cr)
Chem 275	Carbon Compounds (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Microeconomics (3 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
NR 101	Exploring Natural Resources (1 cr)
REM 151	Rangeland Principles (2 cr)
REM 152	Rangeland Ecosystem Exploration (1 cr)
Soil 205	The Soil Ecosystem (3 cr)
Soil 206	The Soil Ecosystem Lab (1 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr):

Biol 213	Principles of Biological Structure and Function (4 cr)
PlSc 205	General Botany (4 cr)

One of the following (4 cr):

Chem 101	Introduction to Chem I (4 cr)
Chem 111	Principles of Chem I (4 cr)

One of the following (3-4 cr):

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 160	Survey of Calculus (3-4 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

Third and Fourth Years

CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
REM 252	Wildland Plant Identification Field Studies (3 cr)
REM 341	Systematic Botany (3 cr)
REM 410	Principles of Vegetation Measurement and Assessment (2 cr)
REM 411	Ecological Monitoring and Analysis (2 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 456	Integrated Rangeland Management (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Integrating GIS and Field Studies in Rangelands (2 cr)
Soil 454	Pedology (3 cr)

One of the following (3 cr):

AVS 474	Beef Cattle Science (3 cr)

One of the following (3 cr):

Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3 cr):

Fish 430	Riparian Ecology and Management (3 cr)
For 462	Watershed Science and Management (3 cr)

Students must also complete 12 credits of advisor approved electives in emphasis areas that include: Restoration Ecology, Field Botany, Spatial Ecology, Watershed Science, Wildland Fire Management, Invasive Plant Management, Wildlife Habitat Management, Tribal Land Management, Rangeland Economics, Natural Resource Communication, and Environmental Consulting.

Courses to total 122 credits for this degree

Renewable Materials (B.S.Renew.Mat.)

The Renewable Materials degree program is designed to fill the growing demand for professionals in the manufacture, marketing, and utilization of sustainable natural materials. Interdisciplinary coursework and project-based learning opportunities lead to a variety of career directions, including procurement of timber and other renewable materials; production management, marketing and distribution of bio-based products; green building materials selection, construction and design; and bio-based energy production systems.

Required course work includes the university requirements (see regulation J-3) and one of the following options:

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
Biol 102, Biol 102L	Biology and Society and Lab (4 cr)
BLaw 265	Legal Environment of Business (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
NR 101	Exploring Natural Resources (1 cr)
Phys 111	General Physics I (3 cr)
RMat 100	Introduction to Renewable Materials (2 cr)
RMat 321	Properties of Renewable Materials (3 cr)
RMat 436	Biocomposites (3 cr)
RMat 438	Introduction to Lignocellulosic Chemistry (1 cr)
RMat 444	Primary Products Manufacturing (3 cr)
RMat 450	Biomaterials Deterioration and Protection (2 cr)
RMat 491	Biomaterial Product and Process Development Lab (2 cr)
RMat 495	Product Development and Brand Management (3 cr)
RMat 498	Renewable Natural Resources Internship (1 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3 cr):

Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry I (3 cr)

One of the following (3-4 cr):

Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Restricted Electives (21 cr):

Acct 482	Enterprise Accounting (3 cr)
Arch 154	Introduction to Architectural Graphics (3 cr)
Arch 266	Materials and Methods (3 cr)
Arch 462	Building Technology II - Concrete (2 cr)
Arch 463	Environmental Control Systems I (3 cr)
Arch 464	Environmental Control Systems II (3 cr)
BAE 485	Fundamentals of Bioenergy and Bioproducts (3 cr)
BAE 492	Biofuels (3 cr)
BAE 494	Thermochemical Technologies for Biomass Conversion (3 cr)
Bus 101	Introduction to Business Enterprises (3 cr)
Bus 190	Integrated Business and Value Creation (3 cr)
Bus 301	Financial Resources Management (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)
Bus 350	Managing Information (3 cr)
Bus 351	Introduction to Electronic Commerce (3 cr)
Bus 370	Process Management (3 cr)
Bus 378	Project Management (3 cr)
Bus 414	Entrepreneurship (3 cr)
Bus 415	New Venture Creation (3 cr)
Bus 424	Pricing Strategy and Tactics (3 cr)
Bus 456 or Stat 456	Quality Management (3 cr)
Econ 272	Foundations of Economic Analysis (4 cr)
For 430	Forest Operations (3 cr)
For 431	Low Volume Forest Roads (2 cr)
For 436	Cable Systems (2 cr)

LArc 251	Introduction to Principles of Site Design (3 cr)
MSE 434	Fundamentals of Polymeric Materials (3 cr)
RMat 365	Wood Building Technology (3 cr)
RMat 538	Lignocellulosic Biomass Chemistry (3 cr)
Stat 301	Probability and Statistics (3 cr)

Courses to total 120 credits for this degree

Ecology and Conservation Biology (B.S.Ecol.-Cons.Biol.)

For information on an undergraduate major in ecology and conservation biology, see the Natural Resources section.

Forest, Rangeland, and Fire Sciences Academic Minor Requirements

Fire Ecology and Management Minor

Fire Core (5 cr):

For 326	Fire Ecology and Management (3 cr)
REM 244	Wildland Fire Management (2 cr)

One of the following (2-3 cr):

For 427	Prescribed Burning Laboratory (3 cr)
For 433	Fire and Fuel Modeling (2 cr)
For 450	Fire Behavior (2 cr)

Ecology (2-4 cr):

For 330	Forest Soil and Canopy Processes (4 cr)
REM 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Integrating GIS and Field Studies in Rangelands (2 cr)
WLF 314	Wildlife Ecology I (3 cr)

Applied Tools and Technology (3 cr):

For 435	Remote Sensing of Fire (3 cr)
Geog 301	Meteorology (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 401	Climatology (3 cr)
Geog 475	Intermediate GIS (3 cr)

Management, Planning, & Policy (6 cr):

CSS 490	Wilderness and Protected Area Management (3 cr)
For 324	Forest Regeneration (3 cr)
For 424	Forest Dynamics and Management (4 cr)
For 430	Forest Operations (3 cr)
For 462	Watershed Science and Management (3 cr)
For 484	Forest Policy and Administration (2 cr)
REM 456	Integrated Rangeland Management (3 cr)

Courses to total 20 credits for this minor, with at least 12 credits in courses numbered 400 or above.

Forest Operations Minor

Acct 201	Introduction to Financial Accounting (3 cr)
For 430	Forest Operations (3 cr)
For 431	Low Volume Forest Roads (2 cr)
For 436	Cable Systems (2 cr)
RMat 100	Introduction to Renewable Materials (2 cr)
RMat 321	Properties of Renewable Materials (3 cr)
RMat 444	Primary Products Manufacturing (3 cr)

Courses to total 18 credits for this minor

Forest Resources Minor

Courses from the following to total 18 credits:

For 274	Forest Measurement and Inventory (3 cr)
For 320	Dendrology (4 cr)
For 324	Forest Regeneration (3 cr)
For 326	Fire Ecology and Management (3 cr)
For 330	Forest Soil and Canopy Processes (4 cr)
For 373	Forestry Sampling Methods (2 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 424	Forest Dynamics and Management (4 cr)
For 430	Forest Operations (3 cr)
For 462	Watershed Science and Management (3 cr)
For 468	Forest and Plant Pathology (2 cr)

Courses to total 18 credits for this minor

Rangeland Ecology and Management Minor

Note: At least 12 credits in courses numbered 300 or higher are required to satisfy the requirements of this minor.

REM 151	Rangeland Principles (2 cr)
REM 252	Wildland Plant Identification Field Studies (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Integrating GIS and Field Studies in Rangelands (2 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

Six credits from the following courses (6 cr):

REM 410	Principles of Vegetation Measurement and Assessment (2 cr)
REM 411	Ecological Monitoring and Analysis (2 cr)
REM 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 452	Western Wildland Landscapes (2 cr)
REM 456	Integrated Rangeland Management (3 cr)

One of the following courses (or a course not chosen above) (2-3 cr):

AVS 474	Beef Cattle Science (3 cr)
Fish 430	Riparian Ecology and Management (3 cr)
For 326	Fire Ecology and Management (3 cr)
For 462	Watershed Management (3 cr)
PlSc 338	Weed Control (3 cr)
PlSc 410	Invasive Plant Biology (3 cr)
REM 244	Wildland Fire Management (2 cr)
Soil 454	Pedology (3 cr)
WLF 314	Wildlife Ecology I (3 cr)

Courses to total 20 credits for this minor

Renewable Materials Minor

For students in business, engineering, forestry, or vocational education who wish to gain specific background and knowledge related to the forest products industry.

For 430	Forest Operations (3 cr)
RMat 321	Properties of Renewable Materials (3 cr)
RMat 444	Primary Products Manufacturing (3 cr)

Electives in renewable materials (9 cr)

Courses to total 18 credits for this minor

Forest, Rangeland, and Fire Sciences Undergraduate Academic Certificate Requirements

Fire Ecology, Management and Technology Undergraduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

Fire Ecology Course Group (3 cr):

For 326	Fire Ecology and Management (3 cr)
For 426	Global Fire Ecology and Management (3 cr)
For 526	Fire Ecology (3 cr)

Ecology Course Group (2-4 cr):

For 330	Forest Soil and Canopy Processes (4 cr)
For 531	Invasion Biology (3 cr)
REM 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Integrating GIS and Field Studies in Rangelands (2 cr)

Fuels and Fuels Management Course Group (2-3 cr):

For 427	Prescribed Burning Lab (3 cr)
For 433	Fire and Fuel Modeling (2 cr)
For 450	Fire Behavior (2 cr)
For 451	Fuels Inventory and Management (3 cr)

Applied Tools and Analysis Course Group (3 cr):

For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 435 or For 535	Remote Sensing of Fire (3 cr)
For 472 or REM 472	Remote Sensing of the Environment (4 cr)
For 570	Advanced Remote Sensing Measurement Methods (3 cr)
For 572	Spatial and Biophysical Modeling (3 cr)

Geog 475	Intermediate GIS (3 cr)
REM 407	GIS Application in Fire Ecology and Management (2 cr)

Management, Planning and Policy Course Group (2-4 cr):

CSS 490	Wilderness and Protected Area Management (3 cr)
CSS 573	Planning & Decision Making for Watershed Management (3 cr)
For 424	Forest Dynamics and Management (4 cr)
For 430	Forest Operations (3 cr)
For 454	Air Quality and Smoke Management (3 cr)
For 462	Watershed Science and Management (3 cr)
For 484	Forest Policy and Administration (2 cr)
For 529	Forest Ecosystem Analysis (3 cr)
For 585	Natural Resources Policy Analysis (2 cr)
REM 456	Integrated Rangeland Management (3 cr)
WLF 492	Wildlife Management (4 cr)

Electives to total 15 for the certificate

Forest, Rangeland, and Fire Sciences Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the College of Natural Resources. Graduate programs are offered in many forest and rangeland specialization areas including Ecology and Biogeosciences of Forest and Rangeland Ecosystems: ecosystem processes/modeling, biometrics, biogeochemistry, hydrology and ecohydrology, remote sensing and geospatial ecology, landscape ecology, community ecology, population ecology, ecosystem ecology, disturbance ecology, paleoecology, restoration ecology, ecophysiology, global environmental change, conservation biology/genetics, and molecular plant systematic; Forest Sciences and Management: forest mensuration, forest regeneration, forest ecosystem management, tree physiology, forest pathology, forest policy, forest operations, silviculture, forest ecology, and forest genetics; Fire Sciences and Management: fire effects and recovery, fire behavior, fuels management, biophysical controls of fire and fire regimes, air quality and smoke management, fire history, and fire ecology; Rangeland Sciences and Management: grazing behavior and management, invasive plant management, livestock-wildlife relations, rangeland and habitat management, rangeland riparian management, and rangeland ecology.

Admission to the graduate program is based on: evidence of ability to complete graduate-level work as discerned from undergraduate transcripts, the applicant's statement of career objectives, and letters of recommendation; the compatibility of the student's educational and career objectives with faculty expertise and departmental objectives; and availability of graduate faculty to act as major advisor for an applicant. The GRE is required. An undergraduate degree related to our programs is also recommended but an applicant may be accepted with the understanding that certain course deficiencies may be required by the student's advisory committee.

Students can transfer up to 12 approved credits taken as a non-degree seeking student into a MS or PhD program in the College of Natural Resources with permission of the departmental graduate committee. Students who are considering transferring non-degree credits into a CNR graduate program should request early advising from the appropriate department.

Master of Science. The M.S. degree is available with a major in natural resources. Thesis and non-thesis options are offered. (A) Thesis option: General M.S. requirements apply. However, the thesis may be comprised of a manuscript(s) in a form acceptable for publication in a refereed journal, while otherwise fulfilling format requirements of the Graduate College. (B) Non-thesis option: General M.S. requirements apply. A written and/or oral examination that covers graduate course work must be taken during the final semester in residence. At least one professional paper is required and will be evaluated by the candidate's supervisory committee.

Doctor of Philosophy. The Ph.D. degree is available with a major in natural resources. General Ph.D. requirements apply; see the NR section for details.

General Studies

Katherine G. Aiken, Director (113 Admin. Bldg.; 208/885-6426); Kristine A. Roby, General Studies Advisor (208/885-7765).

The General Studies program serves students in two ways: it is elected by many entering students who wish to examine a number of possible academic options before selecting a major in a traditional discipline, and elected by students who wish to graduate with the BGS degree, having developed a coherent program of study with the aid of their advisor. Students who have declared a major in General Studies, whether to explore academic options or graduate in this curriculum, are strongly encouraged to utilize programs and services offered by the Career Center and the Counseling and Testing Center to assist them in identifying possible career paths and in understanding how their interests may impact on their choice of a degree program at the UI. Students in the General Studies program may transfer to any degree program at any time if they satisfy the grade-point average and curricular requirements of those programs.

Admission to the Program

New students wishing to enroll in the General Studies program may indicate their choice on the application form for admission to the university. Students currently enrolled in one of the colleges of the university may transfer to the program by completing a change of curriculum form.

General Regulations

Students participating in General Studies while exploring their choice of majors are strongly advised to complete courses that meet requirements as described in Regulation J of the General Catalog. At the same time, these students are strongly advised to select elective courses that will give them exposure to various academic programs at the UI. Through satisfaction of requirements as described in Regulation J of the General Catalog, selection of elective courses offering a wide exposure to various UI programs, and utilization of career workshops, career exploration courses, and testing through the Counseling and Testing Center, these students can move efficiently toward a reasoned academic major and career decision. Within their first year of enrollment at the UI as a General Studies major, students are advised to take a career exploration course. Particular attention is paid to identifying critical prerequisite courses so that students are able to enter a major on track for graduation. Students may transfer from General Studies to a new major at any time if they satisfy the prerequisite and grade-point requirements of that major. Students must have at least a 2.00 grade-point average to transfer into many of the university's colleges.

Bachelor of General Studies Curriculum

The curriculum leading to the degree of Bachelor of General Studies is designed to provide maximum flexibility for undergraduates while planning their program of studies. Since the only specific subject requirements are the general university requirements, students can plan their programs to the best advantage of their particular educational objectives. This means that students must bear the major responsibility for their choice of courses. Those who plan wisely have the opportunity to obtain an excellent education. The key admonition is: plan your program carefully.

The major thrust of the B.G.S. degree program is nonspecialized education. Although a student could take his or her work in a limited number of departments, the intent of this program is to permit great latitude in the choice of subjects so that students may satisfy their particular objectives. No student may become a candidate for the B.G.S. degree who has already earned a baccalaureate degree or who is a candidate for another degree offered by the university.

Major. No major other than "general studies" will be certified on the student's diploma or official transcript. Students who wish to have a designated major should pursue a departmental baccalaureate degree (B.A., B.S., etc).

Minor. Students graduating with a Bachelor of General Studies may satisfy requirements for one or more minors. In these cases their transcript will reflect these minors.

Degree Requirements. In addition to the general university requirements for the baccalaureate degree (see regulation J-3), sufficient electives must be taken to total 120 credits. A minimum of 45 credits must be earned in courses numbered 300 and above. Not more than 36 credits in any one discipline may be counted in the 120 credits.

Suggestions to Students. Students are advised not to make a firm decision with respect to the B.G.S. degree before the end of the freshman year. During the freshman year, and probably during the sophomore year, students should consider following one of the curricula leading to a departmental baccalaureate degree, deviating from the departmental requirements only where it appears educationally advisable to do so.

It is very important that the student working toward the B.G.S. "look ahead" to see in which departments he or she wishes to accumulate the required 45 credits in upper-division courses (those numbered 300 and above). Many upper-division courses have prerequisites that must be

completed during the early semesters of the student's undergraduate career. If planning is delayed, it may be that some courses will be "unavailable" because the student has not taken the prerequisites.

Department of Geography

Karen Humes, Dept. Head (201 McClure Hall, 83844-3021; phone 208/885-6216; geog@uidaho.edu; www.uidaho.edu/sci/geography). Faculty: John Abatzoglou, Crystal Kolden Abatzoglou, Raymond J. Dezzani, Tim Frazier, Jeffrey Hicke, Karen S. Humes, Harley E. Johansen. Research Faculty: Vladimir Aizen. Affiliate Faculty: Elena M. Aizen. Affiliate Instructor: Edwin J. DeYoung. Adjunct Faculty: William J. Elliot, Andrew T. Hudak, Piotr Jankowski, Michael D. Jennings, Albert Rango, Dar A. Roberts, Hengchun Ye.

Geography explores the distribution and interaction of natural and human systems on global, regional, and local scales. Environmental issues involving natural resources, population, political, and economic systems are the subjects of, geography, along with practical issues in planning and resource management. Selecting locations, or designing optimal development or delivery systems are geographic problems common to business and government around the world. Geographic training in geographic information systems (GIS), remote sensing, spatial analysis, and cartography, along with knowledge of patterns and processes inherent in natural and human social systems provides the background necessary to work in the expanding fields of GIS applications and scientific or applied geography.

To prepare students for many rewarding and important career opportunities, the Department of Geography, in the College of Science, offers the B.S. Geography with options in physical science and environment, global and regional studies and geographic information systems (GIS).

Recent shifts in personnel have strengthened the department's programs in GIS, climatology, remote sensing and economic geography.

The department has over 50 undergraduate and 30 graduate majors. Students benefit from close contact with their instructors and hands-on experience within their course work and through internships with industries and agencies involved in geographic and cartographic applications.

Graduate Programs. M.S. and Ph.D. degrees in geography are offered. Geography graduate programs provide training in research methods and applications of theory and spatial modeling to problems in regional development, cartography, and the physical environment. Students learn problem definition, research design, and data analysis using a variety of techniques including GIS, remote sensing, spatial analysis, and computer assisted cartography. Students without an undergraduate degree in geography are usually required to complete some undergraduate courses in the department to provide adequate background.

Certificate Program in GIS. A certificate program in geographic information systems is available in addition to our degree programs. Requirements for this program are listed in the website www.uidaho.edu/sci/geography.

Career Opportunities. Geography and GIS applications continue to be one of the fast-growing job markets world-wide. Most jobs today involve the use and adaptation of geographic information systems in both the public and private sectors. Geographers also work in industry using their skills in research, locational analysis, site selection, mapping, and management of geographical information, with the aid of computers. Industrial jobs for geographers range from research, planning, and data management in primary resources to deciding where to locate a new supermarket or shopping mall. Many jobs for geographers involve computer mapping or GIS. Cartographers from our program are employed in a variety of positions working with map design, graphics, and production cartography, international employment with government agencies and NGOs, are increasing opportunities for geographers with the area studies and global systems option. Geographers are also employed in the public and private sector for jobs, which involve monitoring of air and water quality, management of natural resources and other environmental, and land management issues. The department arranges student internships with industries and agencies to provide on-the-job training and maintains a close relationship with the UI Career Services Center to aid students in their search for employment.

Faculty members in the department will answer questions about specific programs and courses. Prospective majors in geography or cartography should contact the department office (phone 208/885-6216), or visit the department's website, www.uidaho.edu/sci/geography.

Courses

See the course description section for courses in Geography (Geog).

Geography Undergraduate Curricular Requirements

Geography (B.S.)

This program is offered through the College of Science. Required course work includes the university requirements (see regulation J-3) and:

Note: Students must earn a grade of "C" or better in all Geography courses.

Engl 313	Business Writing or
Engl 317	Technical Writing (3 cr)
Geog 100, Geog 100L	Physical Geography and Lab (4 cr)
Geog 165	Human Geography (3 cr)
Geog 200	World Regional Geography (3 cr)
Geog 313	Global Climate Change (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 390	Cartographic Design & Geovisualization (3 cr)
Geog 493	Senior Capstone in Geography (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Stat 251	Statistical Methods (3 cr)

Students must also choose 3 credits from the following courses in human geography (3 cr):

Geog 240	Economic Geography (3 cr)
Geog 330	Urban Geography (3 cr)
Geog 340	Business Location Decisions (3 cr)
Geog 350	Geography of Development (3-4 cr)
Geog 360	Population Dynamics and Distribution (3-4 cr)
Geog 365	Political Geography (3 cr)
Geog 409	Rural Development (3 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Geog 440	The New Global Economy (3 cr)

Student must also choose 3 credits from the following courses in physical geography (3 cr):

Geog 301	Meteorology (3 cr)
Geog 401	Climatology (3 cr)
Geog 410	Biogeography (3 cr)
Geog 412	Applied Meteorology and Climatology (3 cr)
REM 450	Global Environmental Change (3 cr)

Student must also choose 3 credits from the following courses in human-environment interactions (3 cr):

Geog 364	Idaho and the Pacific Northwest (3 cr)
Geog 411	Natural Hazards and Society (3 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Geog 435	Climate Change Mitigation (3 cr)
Geog 455	Societal Resilience and Adaptation to Climate Change (3 cr)
Geog 491	Field Techniques (3 cr)

6 additional credits in Geography courses, for a total minimum number of 36 credits in Geography

Courses to total 120 credits for this degree

Students interested in obtaining more depth in any of the departmental focus areas (Geographic Information Science (GIS), spatial analysis, physical science and the environment, regional/global development) are encouraged to discuss with their advisor recommended courses in Geography and other departments appropriate to those depth areas.

Geography Academic Minor Requirements

Climate Change Minor

Geog 313	Global Climate Change (3 cr)

Choose two of the following courses (6 cr):

Geog 401	Climatology (3 cr)
Geog 435	Climate Change Mitigation (3 cr)
Geog 455	Societal Resilience and Adaptation to Climate Change (3 cr)

Choose one of the following courses (3 cr):

EnvS 497	Senior Research (3 cr)
Geog 493	Senior Capstone in Geography (3 cr)
REM 450	Global Environmental Change (3 cr)

An additional six credits chosen from the following (6 cr):

AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
AgEc 477	Law, Ethics, and Environment (3 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Econ 385	Environmental Economics (3 cr)
EDCI 329	Elementary Science Education (3 cr)
EDCI 433	Secondary Science Methods (3 cr)
EnvS 101	Introduction to Environmental Science (3 cr)
EnvS 225	International Environmental Issues Seminar (3 cr)
EnvS 438	Western US Water Resource Policy and Environmental Equity (3 cr)
EnvS 483 or EnvS 583	Water and Energy Systems (3 cr)
For 235	Society and Natural Resources (3 cr)
For 330	Forest Soil and Canopy Processes (4 cr)
For 426	Global Fire Ecology and Management (3 cr)
Geog 100, Geog 100L	Physical Geography and Lab (4 cr)
Geog 301	Meterology (3 cr)
Geog 350	Geography of Development (3-4 cr)
Geog 410	Biogeography (3 cr)
Geog 411	Natural Hazards and Society (3 cr)
JAMM 341	Mass Media Ethics (3 cr)
JAMM 428	Environmental Journalism (3 cr)

Courses to total 18 credits for this minor

Geography Undergraduate Academic Certificates Requirements

Geographic Information Systems Undergraduate Academic Certificate

Note: A grade of 'C' or higher is required in all coursework for this academic certificate.

Geog 385	GIS Primer (3 cr)
Geog 475	Intermediate GIS (3 cr)

Electives (9 cr)

Geog 390	Cartographic Design & Geovisualization (3 cr)
Geog 407	Spatial Analysis and Modeling (3 cr)
Geog 424 or Geog 524	Hydrologic Applications of GIS and Remote Sensing (3 cr)
Geog 483 or Geog 583	Remote Sensing/GIS Integration (3 cr)
Geog 486 or Geog 586	Transportation, GIS and Planning (3 cr)
Geog 479	GIS Programming (3 cr)
Geog 587	Advanced Topics in Remote Sensing (3 cr)

Courses to total 15 credits for this certificate

Geography Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Geography for all degree programs. See the College of Graduate Studies section for the general requirements applicable to each degree. Scores on the Graduate Record Examination (aptitude section) are required for admission to all programs. Examples of the specialty areas in which the department can provide suitable depth and mentoring for graduate study include: Geographic Information Science, spatial analysis and modeling, remote sensing, polar atmospheres, glaciology, climate change mitigation and adaptation, global environmental change, business geography, rural and regional development, transportation systems.

Master of Science (Thesis Option). Each student's training and research plan is developed by the student and the major professor with the advisory committee's approval. Admission is based on the compatibility of the student's research interests with the areas of concentration offered by the department and the availability of a faculty member to serve as the student's mentor. A written thesis is required, but the thesis may be comprised of a manuscript in a form acceptable for publication in a refereed journal, while otherwise fulfilling the requirements of the Graduate College.

Master of Science (Non-thesis Professional Option). This program is designed for individuals who wish to place less emphasis upon research in their plan of study, but want to gain experience in applying their knowledge to a substantial project of an applied nature. Projects may be aligned with internships or other work experiences. The student's advisory committee will consist of two faculty members from the Department of Geography. Projects must be documented and presented according to guidelines in the department handbook and approved by the student's committee.

Doctor of Philosophy. All general Ph.D. requirements apply. An M.S. degree is required. Admission is by faculty approval based on evaluation of the applicant's potential to carry out original research. Each student's training and research plan is developed by the student and the major professor with the advisory committee's approval. The advisory committee typically consists of three faculty members in the department and one faculty member from another department. Students are not allowed to register for dissertation credits (Geog 600) until they have advanced to candidacy via successful completion of their preliminary examination. The dissertation must be of an original research nature and be in a topic spanned by the research interests and expertise of the major professor and committee members.

Department of Geological Sciences

Mickey E. Gunter, Dept. Chair (203 McClure Bldg. 83844-3022; phone 208/885-6192; www.uidaho.edu/sci/geology). Faculty: Leslie Baker, Elizabeth Cassel, Jerry Fairley, Dennis Geist, Mickey Gunter, Peter Isaacson, Simon Kattenhorn, Eric Mittelstaedt, James Osiensky, Kenneth Sprenke. Tom Williams, Brian Yanites.

Geology is the study of the origin and evolution of the earth, emphasizing the concepts of geologic time and plate tectonics. The applied aspects of geology include the search for hydrocarbons, ores, and water; the assessment of geologic hazards associated with earthquakes, volcanoes, and landslides; and the study of the global environment. Also included in these studies are geologic aspects of waste disposal and pollution abatement.

The bachelor's degrees offered in geology is one that emphasizes practical and field science along with theory. It is the goal of the department that our graduates not only be ready for immediate employment, but also that they have the broad education that will help them to grow professionally, be successful in graduate school, and advance through positions of greater responsibility during their careers.

The geology program provides the student with the necessary background courses in cognate sciences and mathematics plus a spectrum of courses in the sub-disciplines of geology. Specialized elective courses can be chosen to prepare for various careers such as exploration for minerals or petroleum, the search for and management of ground water, environmental geology, and earth science education.

A minor in geology is offered for students in allied fields who have an interest in geology. The minor curriculum can be tailored to meet the needs of individual students.

Research laboratories are equipped for work in applied economic geology, geochemistry, geochronology, geomechanics, geophysics, hydrogeology, mineralogy, paleontology, petrology, structural analysis, tectonics and volcanology. Laboratories are maintained for work in all of the basic courses, with large study collections of fossils, rocks, minerals, crystal models, ore suites, thin sections, polished sections, and topographic and geologic maps. Equipment used in advanced courses includes several sets of microscopes, photomicrographic apparatus, x-ray diffraction equipment, and a variety of instruments for geochemical analysis. Also available are computers, resistivity survey equipment, gravity meters, GPS receivers, seismographs, magnetometer, soil drilling and sampling kits, and water-level recorders.

The department offers Master of Science degrees in geology and hydrology. A thesis is required in the geology program, whereas a non-thesis option is available in hydrology. The Doctor of Philosophy is offered in geology.

The undergraduate preparation expected of the entering graduate candidates depends upon the degree sought. Some of our most promising graduate students have come to us with bachelor's degrees in other subjects. Deficiencies for master's candidates are determined by the major professor.

BSU-ISU Cooperative Programs. The department participates in cooperative programs with the Earth Science Departments at Boise State University and at Idaho State University. Students interested in pursuing bachelor's degrees in geology at those institutions may take transferable preparatory courses at UI.

Courses

See the course description section for courses in Geology (Geol) and Hydrology (Hydr).

Geological Sciences Undergraduate Curricular Requirements

Geological Sciences (B.S.)

Required course work includes the university requirements (see regulation J-3) and:

Chem 111	Principles of Chemistry I (4 cr)
Engl 317	Technical Writing (3 cr)
Geog 385	GIS Primer (3 cr)
Geol 102, Geol 102L	Historical Geology and Lab (4 cr)
Geol 249	Mineralogy and Optical Mineralogy (4 cr)
Geol 290	Field Geology I (3 cr)
Geol 324	Principles of Stratigraphy and Sedimentation (4 cr)
Geol 326	Igneous and Metamorphic Petrology (4 cr)
Geol 345	Structural Geology (4 cr)
Geol 422	Principles of Geophysics (4 cr)
Geol 423	Principles of Geochemistry (3 cr)
Geol 490	Field Geology II (3 cr)

One of the following (4 cr):

Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
Geol 111, Geol 111L	Physical Geology for Science Majors and Lab (4 cr)

One of the following (4 cr):

Phys 111, Phys 111L	General Physics I and Lab (4 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)

And the completion of one of the following options:

A. General Geology Option

Geol 212	Principles of Paleontology (4 cr)
Geol 335	Geomorphology (3 cr)

Advisor-approved electives in geology (9 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

One of the following (3-4 cr):

Math 175	Analytic Geometry and Calculus II (4 cr)
Math 330	Linear Algebra (3 cr)
Stat 251	Statistical Methods (3 cr)

Courses to total 120 credits for this degree

B. Hydrogeology Option

Geol 410	Techniques of Ground Water Study (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)

One of the following (3 cr):

Geol 309	Ground Water Hydrology (3 cr)
Hydr 409	Quantitative Hydrogeology (3 cr)

One of the following (3 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Statistics (3 cr)

Hydrology electives chosen from the following (6 cr):

Hydr 409 or Hydr 509	Quantitative Hydrogeology (3 cr)
Hydr 412 or Hydr 512	Environmental Hydrogeology (3 cr)
Hydr 414 or Hydr 514	Ground Water-Surface Water Interaction (3 cr)
Hydr 496	Hydrogeology Senior Thesis (3 cr)
Hydr 564	The Geochemistry of Natural Waters (3 cr)
Hydr 576	Fundamentals of Modeling Hydrogeologic Systems (3 cr)

Hydrogeology electives chosen from the following if not used above (3 cr):

BAE 450	Environmental Hydrology (3 cr)
CE 421	Engineering Hydrology (3 cr)
ChE 470 or ChE 570	Hazardous Waste Management (3 cr)
Engr 210	Engineering Statics and Engr 335 Engr Fluid Mechanics (6 cr)
Hydr 409 or Hydr 509	Quantitative Hydrogeology (3 cr)
Hydr 412 or Hydr 512	Environmental Hydrogeology (3 cr)
Hydr 414 or Hydr 514	Ground Water-Surface Water Interaction (3 cr)
Hydr 496	Hydrogeology Senior Thesis (3 cr)
Hydr 564	The Geochemistry of Natural Waters (3 cr)
Hydr 576	Fundamentals of Modeling Hydrogeologic Systems (3 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Soil 205, 206	The Soil Ecosystem and Lab (4 cr)
Soil 415	Soil and Environmental Physics (3 cr)
Stat 428	Geostatistics (3 cr)

Courses to total 120 credits for this degree

C. Resource Exploration Option

Econ 272	Foundations of Economic Analysis (4 cr)
Geol 212	Principles of Paleontology (4 cr)
Geol 407 or Geol 507	Basin Analysis (3 cr)

Advisor approved electives in geology (6 cr)

One of the following (4cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geom and Calculus I (4 cr)

One of the following (3 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Statistics (3 cr)

Courses to total 120 credits for this degree

D. Environmental Geology Option

Geol 212	Principles of Paleontology (4 cr)
Geol 335	Geomorphology (3 cr)

One of the following (3 cr):

Geol 309	Ground Water Hydrology (3 cr)
Hydr 409	Quantitative Hydrogeology (3 cr)

One of the following (3 cr):

Geol 344	Earthquakes and Seismic Hazards (3 cr)
Geol 361	Geology and the Environment (3 cr)

One of the following (4cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geom and Calculus I (4 cr)

One of the following (3-4cr):

Math 175	Analytic Geometry and Calculus II (4 cr)
Math 330	Linear Algebra (3 cr)
Stat 251	Statistical Methods (3 cr)

Environmental geology electives chosen from the following (9 cr):

BAE 433	Bioremediation (3 cr)
BAE 452	Environmental Water Quality (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Chem 418	Environmental Chemistry (3 cr)
Geog 401	Climatology (3 cr)
Geol 410	Techniques of Ground Water Study (3 cr)
Geol 464	The Geochemistry of Natural Waters (3 cr)
Soil 205, Soil 206	The Soil Ecosystem and Lab (4 cr)

One of the following (4cr):

Chem 275, Chem 276	Carbon Compounds and Lab (4 cr)
Chem 277, Chem 278	Organic Chem I and Lab (4 cr)

Courses to total 120 credits for this degree

E. Geological Education Option

Biol 115	Cells and the Evolution of Life (4 cr)
Geog 100, Geog 100L	Physical Geography and Lab (4 cr)
Geog 401	Climatology (3 cr)
Geol 212	Principles of Paleontology (4 cr)
Geol 335	Geomorphology (3 cr)
Phys 103, Phys 104	General Astronomy and Lab (4 cr)
PlSc 205	General Botany (4 cr)

One of the following (4cr):
Math 160 Survey of Calculus (4 cr)
Math 170 Analytic Geom and Calculus I (4 cr)

One of the following (3-4cr):
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 330 Linear Algebra (3 cr)
Stat 251 Statistical Methods (3 cr)

Courses to total 120 credits for this degree

F. Structural Geology and Tectonics Option
Geol 335 Geomorphology (3 cr)
Geol 344 Earthquakes and Seismic Hazards (3 cr)
Geol 432 Geologic Development of North America (3 cr)
Geol 498 Senior Thesis (4 cr)
Math 170 Analytic Geometry and Calculus I (4 cr)

One of the following (3-4cr):
Math 175 Analytic Geometry and Calculus II (4 cr)
Math 330 Linear Algebra (3 cr)

Courses to total 120 credits for this degree

Geological Sciences Academic Minor Requirements

Geology Minor

Geol 101, Geol 101L Physical Geology and Lab **or**
Geol 111, Geol 111L Physical Geology for Science Majors and Lab (4 cr)
Geol 102, Geol 102L Historical Geology and Lab (4 cr)
Electives in geology (12 cr)

Courses to total 20 credits for this minor

Geological Sciences Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Geological Sciences. See the College of Graduate Studies section for the general requirements applicable to each degree. All graduate students in this department are expected to attend the appropriate departmental seminar each semester.

Master of Science. General M.S. requirements apply. Majors offered under the M.S. degree are geology and hydrology. Prerequisites are the equivalent of an undergraduate major in the area of specialization. A written thesis is required for which ten credits (of the minimum of 30 credits for the degree) are permitted. A non-thesis option is available under special conditions in hydrology.

Doctor of Philosophy. General Ph.D. requirements apply. Admission to the doctoral program is based on the compatibility of the student's research interests with those of the major professor, upon the availability of research support, and the student's academic record and potential. Applicants are expected to have the prerequisites as specified for the M.S. degree with a major in geology. Each research program is developed by the student and the major professor with the advisory committee's approval. Up to 45 credits are permitted in research and dissertation.

Department of History

Sean M. Quinlan, Dept. Chair (315 Admin. Bldg. 83844-3175; phone 208/885-6253). Faculty: Katherine G. Aiken, Ian D. Chambers, Rebecca Jager, Dale T. Graden, Ellen E. Kittell, Sean M. Quinlan, Adam Sowards, Richard B. Spence, Pingchao Zhu. Affiliate Faculty: William L. Smith.

History is not the memorization of names and dates; it is the study of human experience in all aspects. An understanding of the past is essential to interpreting the present and envisioning the future. History is by nature interdisciplinary and multi-cultural. Each course trains the student to think, to evaluate problems, and to reach logical conclusions. Special attention is given to the development of analytical and writing skills through essay examinations and research projects.

A degree in history provides excellent preparation for careers in international business, government/military service, law, education, library science, communications/media, and tourism/recreation.

The Department of History offers courses of study leading to the B.A. or the B.S. degree and has a staff of eight full-time professors who hold the Ph.D. degree. Currently there are 150 undergraduate history majors. Double majors can be arranged easily.

History faculty members also advise and participate in courses for majors in American studies, environmental science, international studies, interdisciplinary studies, and Latin American studies and for minors in religious studies, women's studies and American Indian studies.

Graduate study is offered in American, English, European (medieval through modern), and Latin American history. The degree programs include Master of Arts and Doctor of Philosophy, for which dissertation topics are limited to the fields of the North American West, U.S. since 1877, historical archaeology, and Europe since 1750.

Students applying for admission to graduate study in history must be approved by the majority of the history faculty. Students seeking graduate degrees in history must present recent GRE scores, an undergraduate transcript with at least a 3.00 average in all history courses and a 2.80 overall average that shows at least 12 credits earned in a foreign language. The language requirement is waived for those seeking the M.A.T.

Courses

See the course description section for courses in History (Hist).

History Undergraduate Curricular Requirements

History (B.A.)

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, and:

Hist 290 The Historian's Craft (3 cr)

Lower-division courses selected from the following (9 cr):
Hist 101 History of Civilization (3 cr)
Hist 102 History of Civilization (3 cr)
Hist 111 Introduction to U.S. History (3 cr)
Hist 112 Introduction to U.S. History (3 cr)
Hist 180 Introduction to East Asian History (3 cr)

Upper-division history courses, including a seminar in senior year (27 cr)
Related fields (20 cr)

Courses to total 120 credits for this degree

History (B.S.)

Note: Students expecting to study for an M.A. or Ph.D. degree in history should take the B.A. rather than the B.S. degree.

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.S. degree, and:

Hist 290 The Historian's Craft (3 cr)

Lower-division courses selected from the following (9 cr):
Hist 101 History of Civilization (3 cr)
Hist 102 History of Civilization (3 cr)
Hist 111 Introduction to U.S. History (3 cr)
Hist 112 Introduction to U.S. History (3 cr)
Hist 180 Introduction to East Asian History (3 cr)

Upper-division history courses, including a seminar in senior year (27 cr)
Related fields (20 cr)

Any combination of the following (12 cr):
Any foreign language (high-school foreign language may be substituted at the rate of 4 cr per year)
Engl 257 Literature of Western Civilization (3 cr)
Engl 258 Literature of Western Civilization (3 cr)
FLEN 313 Modern French Literature in Translation (3 cr)
FLEN 324 German Literature in Translation (3 cr)
FLEN 391 Hispanic Film (3 cr)
FLEN 393 Spanish Literature in Translation (3 cr)
FLEN 394 Latin American Literature in Translation (3 cr)

Courses to total 120 credits for this degree

History Academic Minor Requirements

History Minor

History courses chosen from the following* (9 cr):
Hist 101 History of Civilization (3 cr)
Hist 102 History of Civilization (3 cr)
Hist 111 Introduction to U.S. History (3 cr)
Hist 112 Introduction to U.S. History (3 cr)
Hist 180 Introduction to East Asian History (3 cr)

History courses at the 300- or 400-level (at least 3 cr in U.S., Latin Amer-

ican, or African history and at least 3 cr in Ancient, European, or Asian history) (9 cr)
History elective (3 cr)
Courses to total 20 credits for this minor

**For demonstrable cause, department chair or minor advisor may allow substitution of courses numbered above 100-level.*

History Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of History. See the College of Graduate Studies section for the general requirements applicable to each degree. Detailed information about requirements and procedures related to these programs is available in printed form from the head of the department.

Master of Arts. General M.A. requirements apply. This thesis and non-thesis degree is offered in all fields of history for which faculty is currently available. The work toward an M.A. degree stresses preparation for research as well as a balanced course program.

Doctor of Philosophy. The Ph.D. program is primarily oriented to research and writing to prepare the candidate for entry in a career in higher education. Among the requirements for the degree are the successful passage of comprehensive examinations, the demonstration of a reading knowledge of one foreign language, and the completion of a dissertation showing original research. Dissertation topics are limited to the field of Historical Archaeology and are undertaken with the collaboration of anthropology faculty specializing in this field.

Program in Interdisciplinary Studies

Vacant, Undergraduate Program Coordinator (112 Admin. Bldg. 83844-3154; phone 208/885-4561); Jie Chen, Graduate Program Coordinator (104 Morrill Hall 83844-3017; phone 208/885-6243).

Courses

See the course description section for courses in Interdisciplinary Studies (Intr).

Interdisciplinary Studies Undergraduate Curricular Requirements

Interdisciplinary Studies (B.A. or B.S.)

A student may present a curriculum not included among the ones listed elsewhere in this catalog provided the program is focused toward meeting the student's particular educational goal by combining the offerings of two or more major departments. The program normally is developed and presented before the end of the second semester of the junior year or at the time when at least 30 credits of the proposed program remain to be taken. Exceptions allowing (a) presentation later in the student's academic career or (b) with fewer than 30 credits yet to be taken may be granted permission of the Dean or Associate Dean of CLASS. The program must be approved by: (a) at least one faculty member from each of the participating departments, one of which must be in CLASS, (b) the chair of one of the CLASS departments involved, and (c) the Dean or Associate Dean of CLASS. University requirements (see regulation J-3) and CLASS requirements for either the B.A. or B.S. degree apply. This program requires a minimum of 120 credits, of which at least 50 credits must be in courses numbered 200 or above, including a minimum of 36 credits in courses numbered 300 or above. It is recommended, however, that majors in interdisciplinary studies complete at least 50 credits in upper-division courses. In some cases, the Dean or Associate Dean of CLASS may approve participation by departments from other colleges and universities. Participation of such departments may permitted as long as one of the participating departments in the program is a CLASS department, and other University of Idaho and CLASS requirements are met.

Interested students should consult the CLASS dean's office in Moscow or Coeur d'Alene for further information about this program.

Interdisciplinary Academic Minors

A student may present a minor curriculum not included among the ones listed elsewhere in this catalog. The program must include at least 24 credits and be approved by: (a) at least one faculty member from each of the participating departments, (b) the chair of one of the departments involved, and (c) in the case of minors that involve a department in the College of Letters, Arts, and Social Sciences, the Dean or Associate Dean of CLASS. In some cases, the Dean or Associate Dean of CLASS may approve participation by departments from other colleges and universities. Participation of such departments may permitted as long as one of the participating departments in the program is a CLASS department, and other University of Idaho and CLASS requirements are met.

Interdisciplinary Studies Graduate Degree Program

An undergraduate cumulative grade-point average of 3.00 is required. Prospective students should refer to the general admission requirements under the section "Graduate Admission to the University" for other admission requirements.

The objective of the interdisciplinary studies degree is to provide students with the opportunity to design specific programs of study of an interdisciplinary nature when the student's needs or desires do not fall within a currently prescribed graduate program. Individual study plans draw from courses offered in two or more graduate programs.

The interdisciplinary program has both a thesis option and a non-thesis option. A student choosing the thesis option may use up to six credits of Intr 500 toward the degree.

There is no typical study plan for an interdisciplinary studies degree program. Each student seeking such a degree must, with the counsel of a major professor, develop a study plan and identify a program committee, subject to the following constraints: the program committee must have at least four members; the program committee must have at least one member from each of the principal departments or disciplines involved in the student's program and one member appointed by the dean of the College of Graduate Studies; at least one-half of the program committee must be members of the Graduate Faculty.

The proposed study plan must be unanimously approved by the student's program committee and the dean of graduate studies.

The program is administered by the department of which the student's major professor is a member. For both the thesis and non-thesis options, there must be a comprehensive examination that evaluates the student's ability to integrate all disciplines included in the program and to respond logically to related questions of a general nature. The general university credit requirements for the M.A. and M.S. degrees apply to the interdisciplinary studies degree as well; see the College of Graduate Studies section for the requirements applicable to all M.A. and M.S. degrees.

Procedural details for developing, receiving approval for, and carrying out an interdisciplinary degree program are available from the Graduate College.

School of Journalism and Mass Media

R. Kenton Bird, Director (347 Admin. Bldg 83844-3178; phone 208/885-6458). Faculty: Justin Barnes, Denise Bennett, R. Kenton Bird, H. Patricia Hart, Susan Hinz, Bill Loftus, Russell Meeuf, Glenn Mosley, Shawn O'Neal, Michael Park, Vicki Rishling, Julie Scott, Steven A. Smith, Mark Secrist, Rebecca Tallent.

The University of Idaho School of Journalism and Mass Media combines hands-on professional programs with a liberal arts approach to the study of the mass media. It offers bachelor's degrees in four areas: journalism; broadcasting and digital media; advertising; and public relations. The curriculum is based on a premise that journalists, broadcasters, public relations professionals and advertising executives should be broadly educated. Accordingly, students must take at least 75 of the 120 credits needed for graduation outside the School.

Students with degrees from the School of Journalism and Mass Media pursue careers with advertising agencies, radio and television stations and networks, film and video production companies, cable and satellite operations, newspapers and other print and online media, public relations firms, and as media specialists in non-profit agencies, private corporations and within the government. Graduates also pursue advanced degrees.

The School of Journalism and Mass Media provides theoretical and professional preparation in mass media fields and functions as an academic unit of the College of Letters, Arts, and Social Sciences to provide media courses to students in other fields of study and university general education core courses.

The school offers B.A. and B.S. degrees in Advertising; Broadcasting and Digital Media; Journalism; and Public Relations. All of the programs provide students with preparation for careers and graduate study.

Students seeking the B.A. degree are required to have a demonstrable proficiency in a foreign language and those seeking the B.S. degree must complete an 18 credit minor or area of emphasis in a subject area outside those taught by the School of Journalism and Mass Media.

Students in the School of Journalism and Mass Media are strongly encouraged to enhance their academic experience by working at the independent student media groups on campus, including the *Argonaut* newspaper, the *Blot* magazine, and KUOI-FM. Students are also strongly encouraged to pursue internships at professional media organizations throughout the region.

The School of Journalism and Mass Media also helps to provide information and culture to Idaho and the region through its affiliation with Northwest Public Radio and Idaho Public Television, which have operations located at the Radio-TV Center.

Courses

See the course description section for courses in Journalism and Mass Media (JAMM).

Journalism and Mass Media Undergraduate Curricular Requirements

A minimum cumulative university grade-point average of 2.50 is required of students in order to graduate with a degree from the School of Journalism and Mass Media.

A student who graduates with a major in the School of Journalism and Mass Media must complete a minimum of 120 credits of which a maximum of 12 credits can come from experiential courses (Practicum in Tutoring – JAMM 497, Internship – JAMM 498, Directed Study – JAMM 499). Students can receive no more than 6 credit hours for internship (JAMM 498) experience; students can repeat JAMM 498 one time. Students must obtain approval from the School of Journalism and Mass Media to apply internship credit toward a degree from the school.

Majors cannot apply more than 45 hours of courses in Journalism and Mass Media toward the 120-credit degree requirement and are required to take no fewer than 60 hours in the liberal arts and sciences. Majors may count no more than 8 hours of courses in Physical Education activity courses (PEB 106, PEB 107 and PEB 108) toward the 120 credits required for the degree.

Candidates for the B.S. degree are required to complete a second major, an academic minor or area of emphasis of at least 18 credits outside the School of Journalism and Mass Media. The emphasis area must be approved by the student's academic advisor.

JAMM 100 and JAMM 121 must be completed with a grade of C or better before a major may enroll in any other Journalism and Mass Media courses. All students must complete a minimum of 58 credits before enrolling in any upper-division course (numbered 300 or above) offered by the school.

No more than 18 credits of journalism and mass media courses from other institutions may be applied to a degree from the School of Journalism and Mass Media.

A student may not double major in the School of Journalism and Mass Media.

Courses required in all majors in the School of Journalism and Mass Media:

Comm 101	Fundamentals of Public Speaking (2 cr)
JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 341	Mass Media Ethics (3 cr)
JAMM 448	Law of Mass Media (3 cr)

Two of the following courses:

JAMM 339	Crime and the Media (3 cr)
JAMM 340	Cultural Diversity and the Media (3 cr)
JAMM 378	American Television Genres (3 cr)
JAMM 379	Hollywood Portrayals of Journalists (3 cr)
JAMM 440	Critical Issues in Mass Media (3 cr)
JAMM 443	Media Management and Economics (3 cr)
JAMM 444	Mass Media and Public Opinion (3 cr)
JAMM 445	History of Mass Media (3 cr)
JAMM 465	Political Advertising (3 cr)
JAMM 477	Documentary Film (3 cr)
JAMM 490	Global Media (3 cr)

Six credits of electives in Journalism and Mass Media (three of which must be upper division credits)

Students in the School are required to complete 15 credit hours within one of the four majors: Advertising; Broadcasting and Digital Media; Journalism; and Public Relations:

Advertising (B.A. OR B.S. *)

Required course work includes the university requirements (see regulation J-3), the School of Journalism and Mass Media core, and the following:

JAMM 265	Principles of Advertising (3 cr)
JAMM 361	Advertising Creativity (3 cr)
JAMM 364	Advertising Media Planning (3 cr)
JAMM 466	Advertising Campaign Strategy (3 cr)
JAMM 468	The Advertising Agency (3 cr)

(Advertising majors are encouraged to apply for the Advertising Competition Team, JAMM 469.)

Courses to total 120 credits for this degree

Broadcasting and Digital Media (B.A. OR B.S. *)

Required course work includes the university requirements (see regulation J-3), the School of Journalism and Mass Media core, and the following:

JAMM 275	Introduction to Broadcasting and Digital Media Production (4 cr)

Courses selected from the following (12 cr):

JAMM 322	Broadcast News (3 cr)
JAMM 323	Broadcast Sports Reporting (3 cr, max 6)
JAMM 370	Digital Audio Production (3 cr)
JAMM 374	Digital Media Field Production (3 cr)
JAMM 375	Broadcast Television and Studio Program Production (3 cr)
JAMM 378	American Television Genres (3 cr)
JAMM 420	Public Radio Journalism (3 cr)
JAMM 422	Advanced Broadcast News (3 cr)
JAMM 475	Advanced Digital Media Production (3 cr)
JAMM 477	Documentary Film (3 cr)
JAMM 478	Broadcast/Cable/Web Programming (3 cr)

Courses to total 120 credits for this degree

Journalism (B.A. OR B.S. *)

Required course work includes the university requirements (see regulation J-3), the School of Journalism and Mass Media core, and the following:

JAMM 225	Reporting I (3 cr)

One of the following (3 cr):

JAMM 322	Broadcast News (3 cr)
JAMM 327	Reporting II (3 cr)

Nine credits from this list:

JAMM 322	Broadcast News (3 cr)
JAMM 324	News Editing and Production (3 cr)
JAMM 325	Publications Editing (3 cr)
JAMM 420	Public Radio Journalism (3 cr)
JAMM 422	Advanced Broadcast News (3 cr)
JAMM 425	Feature Article Writing (3 cr)
JAMM 426	Narrative Journalism (3 cr)
JAMM 428	Environmental Journalism (3 cr)

Courses to total 120 credits for this degree

(Journalism majors are encouraged to pursue their studies across media, including print, broadcast and online journalism.)

Public Relations (B.A. OR B.S. *)

Required course work includes the university requirements (see regulation J-3), the School of Journalism and Mass Media core, and the following:

JAMM 225	Reporting I (3 cr)
JAMM 252	Introduction to Public Relations (3 cr)
JAMM 350	Public Relations Writing and Production (3 cr)
JAMM 452	Public Relations Campaign Design (3 cr)
JAMM 458	Public Relations Case Studies and Issues Management (3 cr)

Courses to total 120 credits for this degree

Journalism and Mass Media Academic Minor Requirements

Advertising Minor

JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 265	Principles of Advertising (3 cr)
JAMM 361	Advertising Creativity (3 cr)

At least two of the following (6 cr):

JAMM 341	Mass Media Ethics (3 cr)
JAMM 364	Advertising Media Planning (3 cr)
JAMM 444	Mass Media and Public Opinion (3 cr)
JAMM 448	Law of Mass Media (3 cr)
JAMM 465	Political Advertising (3 cr)
JAMM 468	The Advertising Agency (3 cr)

Courses to total 18 credits for this minor

Broadcasting and Digital Media Minor

JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 275	Introduction to Broadcasting and Digital Media Production (4 cr)

Three broadcasting or digital media courses to meet specific career goals (8-9 cr)

Courses to total 18 credits for this minor

Journalism Minor

JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 225	Reporting I (3 cr)
JAMM 341	Mass Media Ethics (3 cr)
JAMM 448	Law of Mass Media (3 cr)

One journalism-related courses to meet specific career goals (3 cr)

Courses to total 18 credits for this minor

Public Relations Minor

JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 252	Introduction to Public Relations (3 cr)
JAMM 341	Mass Media Ethics (3 cr)

Two public relations-related courses to meet specific career goals (6 cr)

Courses to total 18 credits for this minor

Program in Latin American Studies

Irina Kappler-Crookston, Coordinator (314 Admin. Bldg. 83844-3174; phone 208/885-8995; irinac@uidaho.edu). Faculty: Ana Alcocer, Justin Barnes, Marta Boris, Lori Celaya, Dale T. Graden, Pat Hart, Sam H. Ham, Peter E. Isaacson, William J. McLaughlin, Shannon McGowan, Laura Putsche, William L. Smith, Amanda Soto.

The program in Latin American studies is a multidisciplinary major leading to the B.A. degree. The appeal of this field of study has greatly increased over the last decade, due to the region's growing economic and political importance. A degree in the major is appropriate for employment in many fields, among which are the diplomatic service and overseas business as well as graduate study in various disciplines. Students electing the major will also broaden their awareness of non-Western cultures and history.

Courses

See the course description section for courses in Latin-American Studies (LAS).

Latin American Studies Undergraduate Curricular Requirements

Latin-American Studies (B.A.)

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, including Spanish for the foreign language requirement, and:

LAS 435	Latin America: The Colonial Era (3 cr)
Span 306	Culture and Institutions of Latin America (3 cr)
Span 401	Readings: Spanish Literature (3 cr)
Span 402	Spanish American Literature (3 cr)

One of the following (3 cr):

Hist 438	Modern Mexico (3 cr)
Hist 439	Modern Latin America (3 cr)

And at least seven of the following courses (or the optional courses listed above) (21 cr):

Anth 220	Peoples of the World (3 cr)
Anth 462	Human Issues in International Development (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
Econ 447*	International Development Economics (3 cr)
FLEN 391	Hispanic Film (3 cr)
FLEN 394	Latin American Literature in Translation (3 cr)
Hist 315	Comparative African-American Cultures (3 cr)
Hist 440	Social Revolution in Latin America (3 cr)
Hist 441	Slavery and Freedom in the Americas (3 cr)
Span 402	Readings: Spanish American Literature (3 cr)
Span 404	Special Topics (with prior approval of program coordinator)

Courses to total 120 credits for this degree

**Students are strongly urged to elect those courses marked with an asterisk and to take Hist 101-Hist 102 (History of Civilization) in their freshman year.*

Department of Leadership and Counseling

Jeffrey S. Brooks, Dept. Chair (208/667-2588; jsbrooks@uidaho.edu). Counseling and Rehabilitation Counseling (CRC) Faculty Moscow campus: Linda Taylor;; Coeur d' Alene CRC campus: Steven Duvall, Sachin Jain. Educational Leadership Faculty Boise campus: Mary E. Gardiner, Michael J. Johnson, Carolyn Keeler, Roger L. Reynoldson. Coeur d' Alene Educational Leadership Faculty campus: Kathy Canfield-Davis (Coordinator, 208/667-2588; canfield@uidaho.edu), Donald Wattam (Coordinator, 208/667-2588; dwattam@uidaho.edu. Adult/Organizational Learning and Leadership Faculty: James A. Gregson, Laura B. Holyoke, Michael Kroth, Jerry R. McMurtry.

Counseling and School Psychology. The counseling program offers course work at the master's level for individuals seeking preparation as counselors who want to work in school, and rehabilitation settings. Specialist-level programs meet Idaho certification requirements in school psychology and advanced school counseling. All programs are designed to assist the student toward meeting the requirements for counselor licensure.

The school counseling and school psychology programs are accredited by the National Council for the Accreditation of Teacher Education (NCATE) and approved by the State Board of Education). The school psychology program is also accredited by the National Association for School Psychology (NASP). The rehabilitation counseling graduate program is accredited by the Council on Rehabilitation Education (CORE). All programs afford the graduate the opportunity to take the National Board for Certified Counselor Examination (NBCC) and its subtests.

Counseling and school psychology are fields that prepare professionals to work with children, adolescents, and adults to enhance academic, social, emotional, vocational, and personal growth. Students are provided with theoretical knowledge bases as well as practical application of skills in carefully selected field placements.

School Counseling. The graduate program in school counseling (M.Ed.) may be used to meet state certification for school counseling (school and vocational). Graduates usually seek positions in K-12 schools, postsecondary institutions, vocational counseling programs (either school or agency), employment agencies, and career centers.

School Psychology. The school psychology program offers the education specialist degree (Ed.S.Sch.Psych.) for those preparing to be school psychologists. Curricular requirements in the program include: course work in psychological foundations, educational foundations, interventions/problem solving, statistics/research methodologies, professional school psychology, practica, and internship.

Rehabilitation Counseling. The combination online and traditional instruction vocational rehabilitation counseling program has graduate degrees available at the master's level (M.Ed.). Curricular requirements in the major include: Principles of Rehabilitation, Community, and School Counseling; Psycho-social Aspects of Disability; Medical/Physical Aspects of Rehabilitation; Rehabilitation and Community Case Management;; Vocational Placement and Assistive Technology; Professional Issues, Ethics, and Law in Counseling and School Psychology; Practicum; and Internship. The program will afford the graduate the opportunity to take

the Certified Rehabilitation Counselor (CRC) Examination. Graduates assume careers with vocational rehabilitation agencies, hospital rehabilitation centers, community rehabilitation programs, and as private rehabilitation practitioners.

Educational Leadership. The Educational Leadership program offers degrees at the M.Ed., Ed.S., Ed.D., and Ph.D. level (doctoral programs in this field are offered through the College of Education. The program offers most of its course of study online, and at University of Idaho campuses. The program also offers curriculum for higher education administration. The program is approved the Idaho State Board of Education and accredited by the National Council for the Accreditation of Teacher Education (NCATE). All course work meets certification standards required by the Idaho Department of Education.

Courses

See the course description section for courses in Adult/Organizational Learning and Leadership (AOLL), Counseling and Rehabilitation Counseling (CRC) and Educational Administration (EDAD).

Leadership and Counseling Graduate Academic Certificates Requirements

Adult Basic Education/GED Instructor Graduate Academic Certificate

AOLL 501	Seminar: Foundations of Adult Basic Education (3 cr)
AOLL 528	Program Planning, Development, and Evaluation (3 cr)
AOLL 573	Adult Learners: Foundations and Characteristics (3 cr)
AOLL 575	Strategies for Facilitating Adult Learning (3 cr)
AOLL 576	Communication Skills for Adults in a Diverse World (3 cr)

Courses to total 15 credits for this certificate

Human Resource Development Graduate Academic Certificate

AOLL 510	Foundations of Human Resource Development (3 cr)

Four of the following (12 cr):

AOLL 526	Instructional Design and Curriculum (3 cr)
AOLL 528	Program Planning, Development, and Evaluation (3 cr)
AOLL 560	Career Development in Organizations (3 cr)
AOLL 577	Organization Development (3 cr)
AOLL 581	Theory Practices & Challenges of Leadership (3 cr)
AOLL 583	Organizational Leadership (3 cr)

Courses to total 15 credits for this certificate

Rehabilitation Counseling Category R Graduate Academic Certificate

CRC 508	Adult Assessment (3 cr)
CRC 512	Theories and Applications of Counseling I (3 cr)
CRC 530	Legislative and Philosophical Foundations in Working with People with Disabilities (2 cr)
CRC 531	Psycho-social Aspects of Disability (3 cr)
CRC 534	Rehabilitation and Community Case Management (2 cr)
CRC 535	Vocational Placement and Assistive Technology (3 cr)
CRC 536	Professional Issues, Ethics, and Law in Counseling and School Psychology (2 cr)

Courses to total 18 credits for this certificate

Leadership and Counseling Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Leadership and Counseling. See the College of Graduate Studies section for the general requirements applicable to each degree. Applicants for M.Ed. degree are expected to meet the requirements for the teaching certificate and one year of teaching experience.

Master of Education/Education Specialist in Educational Leadership, Educational Leadership major. Educational leadership provides programs for the preparation of school administrators and for persons interested in teaching or administration in institutions of higher learning. Master of Education and Education Specialist degrees with an emphasis in educational leadership and options for a certificate as a principal and/or superintendent may be earned in the department. Ph.D. and Ed.D. with an emphasis in educational leadership and options for a certificate as a principal and/or superintendent may be earned through the college of Education.

Master of Science/Education Specialist in Adult/Organizational Learning and Leadership, Adult/Organizational Learning and Leadership major.

Master of Education, Rehabilitation Counseling and Human Services major.

Master of Science, Rehabilitation Counseling and Human Services major.

Martin School of International Studies

Brian Ellison, Director (338 Admin Bldg. 83844-3177; phone 208/885-6527). Faculty: This is an interdisciplinary program, faculty are provided by supporting departments from across campus.

Courses

See the course description section for courses in International Studies (IS) and in the Martin Institute (Mrtn).

International Studies Undergraduate Curricular Requirements

International Studies (B.A.)

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, and:

IS 495	International Studies Senior Seminar (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following groups of courses (4-6 cr):

Group A:

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)

or

Econ 272	Foundations of Economic Analysis (4 cr)

One of the following (3 cr):

IS 310	The United Nations (3 cr)
PolS 235	Political Research Methods and Approaches (3 cr)

One of the following (3 cr):

PolS 205	Introduction to Comparative Politics (3 cr)
PolS 237	International Politics (3 cr)

Six credits chosen from:

Anth 220	Peoples of the World (3 cr)
Engl 485	Global Literatures in English (3 cr)
EnvS 225	International Environmental Issues Seminar (3 cr)
Geog 200	World Regional Geography (3 cr)
IS 195	International Studies Freshman Seminar (3 cr)
JAMM 490	Global Media (3 cr)
Soc 350	Food, Culture, and Society (3 cr)

At least 12 cr from one of the following issue emphases: international relations, international economics and business, global resources and development (see courses below)

At least 12 cr from one of the following regional emphases: Latin America, Europe, Asia (see courses below)

Demonstrated proficiency in a modern foreign language correlating with the region of emphasis and equivalent to that gained from six semesters of university study. Exceptions include any class taught in English. (0-22 cr)

In addition, international experience in the student's region of emphasis is required for all students in this major. The experience must extend consecutively for at least 10-12 weeks, be qualified for at least 12 credits, and include an academic project or assignment and immersion in the culture of the country. All costs associated with the international experience are the responsibility of the student.

The requirement of international experience will normally be fulfilled by completing a registered credit program such as study abroad, student exchange, student teaching, or internship. In general, credits are registered on the UI campus; course work and field experience are taken abroad.

In some cases, permission may be granted to complete noncredit work experience that places the student abroad for a contracted length of time. Normally this work assignment will be completed during the degree program. In some instances, prior work experience may be accepted based on the following criteria: verification, length, nature, recentness, and relevancy of experience.

Issue Emphases in International Studies

Recommended courses for completion of requirement (special topic courses may be used when approved by the director).

A. International Relations

Geog 365	Political Geography (3 cr)
Hist 430	U.S. Diplomatic History (3 cr)
Hist 458	Military History (3 cr)
IS 320	Model United Nations (2 cr)
IS 321	UN and Related Agencies (1 cr)
IS 350	Sport and International Affairs (3 cr)
PolS 338	American Foreign Policy (3 cr)
PolS 440	International Organizations and International Law (3 cr)
PolS 449	World Politics and War (3 cr)
PolS 487	Political Violence and Revolution (3 cr)
Soc 335	Terrorism, Society and Justice (3 cr)

B. International Economics and Business

AgEc 481	Agricultural Markets in a Global Economy (3 cr)
Bus 381	International Finance (3 cr)
Bus 482	International Marketing (3 cr)
Econ 446	International Economics (3 cr)
Econ 447	International Development Economics (3 cr)
IS 323	International Monetary and Trade Organizations (3 cr)

C. Global Resources and Development

AgEc 481	Agricultural Markets in a Global Economy (3 cr)
Anth 462	Human Issues in International Development (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
FCS 411	Global Nutrition (3 cr)
FS 436	Principles of Sustainability (3 cr)
Geog 350	Geography of Development (3 cr)
Geog 360	Population Dynamics and Distribution (3 cr)
Geog 409	Rural Development (3 cr)
IS 322	International Environmental Organizations (3 cr)
IS 410	NGOs in the International Systems (3 cr)
PolS 480	Politics of Development (3 cr)
Soc 323	Political Economy (3 cr)
Soc 340	Social Change & Globalization (3 cr)
Soc 440	Post-Colonialism (3 cr)

Regional Emphases in International Studies

A. Latin America

FLEN 394	Latin American Literature in Translation (3 cr)
Hist 438	Modern Mexico (3 cr)
Hist 439	Modern Latin America (3 cr)
Hist 440	Social Revolution in Latin America (3 cr)
Span 306	Culture and Institutions of Latin America (3 cr)
Span 402	Readings: Spanish American Literature (3 cr)
Span 413	Spanish American Short Fiction (3 cr)

B. Europe

Engl 342	Survey of British Literature (3 cr)
FLEN 307	The European Union (3 cr)
FLEN 308	European Immigration and Integration (3 cr)
FLEN 313	Modern French Literature in Translation (3 cr)
FLEN 324	German Literature in Translation (3 cr)
FLEN 393	Spanish Literature in Translation (3 cr)
Fren 304	Connecting French Language and Culture (4 cr)
Fren 407	French & Francophone Literatures (3 cr)
Fren 408	French and Francophone Culture and Institutions (3 cr)
Germ 306	Introduction to German Literature (3 cr)
Germ 420	Topics in German Culture and Literature - Themes (3 cr)
Hist 350	The Age of Enlightenment: European Culture & Ideas, 1680-1800 (3 cr)
Hist 366	Modern European Cultural and Intellectual History, 1880-1980 (3 cr)
Hist 447	The Renaissance (3 cr)
Hist 452	Europe in the Age of the Revolution, 1770-1880 (3 cr)
Hist 455	Modern Europe (3 cr)
Hist 466	Eastern Europe Since 1774 (3 cr)
Hist 467	Russia to 1894 (3 cr)
Hist 468	Russia and Soviet Union Since 1894 (3 cr)
PolS 381	European Politics (3 cr)
Span 305	Culture and Institutions of Spain (3 cr)
Span 401	Readings: Spanish Literature (3 cr)

C. Asia/Africa

FLEN 331	Japanese Anime (3 cr)
Hist 331	The Age of African Empires (3 cr)
Hist 457	History of the Middle East (3 cr)
Hist 481	America's Wars in Asia (3 cr)
Hist 482	Japan, 1600 to Present (3 cr)
Hist 484	Modern China, 1840s to Present (3 cr)
Hist 485	Chinese Social and Cultural History (3 cr)
IS 325	The Contemporary Muslim World (3 cr)
IS 326	Africa Today (3 cr)
Phil 307	Buddhism (3 cr)
PolS 420	Introduction to Asian Politics (3 cr)

Courses to total 120 credits for this degree

Other courses with an international component may be used as electives with permission of the school director.

International Studies Academic Minor Requirements

International Studies Minor

In consultation with the school director, students electing this academic minor submit an individual study plan emphasizing (a) international relations, (b) international economics and business, or (c) global resources and development.

1. **Basic Credit Requirements.** At least 21 credits selected from the list of courses approved by the Martin School of International Studies, consisting of the following:
   - a minimum of 6 credits chosen from Anth 220, EnvS 225, Engl 485, Geog 200, IS 195, IS 310,JAMM 490, PolS 205*, PolS 237*, or Soc 350
   - a minimum of 6 credits from one of the following issue emphases: international relations, international economics and business, global resources and development (see courses above)
   - a minimum of 6 credits from one of the following regional emphases: Latin America, Europe, Asia (see courses above)
2. **Limitations.** No course to be counted toward the minor may be taken by directed study without prior approval by the ISC.

Courses to total 21 credits for this minor

**Note: Student may take PolS 205 or PolS 237, but not both, to satisfy the requirements of this minor*

Department of Mathematics

Monte Boisen, Dept. Chair (300 Carol Ryrie Brink Hall 83844-1103; phone 208/885-6742; math@uidaho.edu; www.uidaho.edu/Math). Faculty: Hirotachi Abo, Lyudmyla Barannyk, Monte Boisen, Somantika Datta, Rob Ely, Frank Gao, Jennifer Johnson-Leung, Paul Joyce, Stephen M. Krone, Linh Nguyen, Mark J. Nielsen, Craig Miller, Cynthia M. Piez, Brooks Roberts, Stefan Tohaneanu, Kirk C. Trigsted, Hong Wang, David Yopp.

The Department of Mathematics offers a wide variety of majors and minors. In addition to the degree programs described below, many students pursue joint majors in mathematics and other disciplines that utilize mathematics. The most popular of these are mathematics/computer science and mathematics/physics. A joint major is obtained by completing the degree requirements for both majors. Minor programs are described below under "Undergraduate Curricular Requirements."

At the graduate level, the department offers the M.S., M.A.T., and Ph.D. degrees in mathematics. Graduate training in mathematics prepares students for careers in teaching or research and development. Employment opportunities include universities, colleges, industries, and government agencies. The Ph.D. is generally required for teaching and research at the university level. The M.S. qualifies students to teach at junior colleges, some four-year colleges, and for many positions in industry. The M.A.T. prepares students for secondary teaching and for some junior college positions. A baccalaureate degree in mathematics is generally required for admission to the graduate program; however, many students of science and technology can be admitted to the program with few undergraduate deficiencies.

The need for persons with quantitative skills is increasing dramatically as the world grows more complex. Mathematicians and statisticians have employment opportunities in business, industry, government, and teaching. Training in mathematics, with its emphasis on problem solving, analysis, and critical thinking, is excellent preparation for graduate programs

in engineering, science, business, or law. In fact, persons planning careers in almost any field will find their opportunities enhanced by the study of mathematics and statistics. The programs are intended to provide students just such enhancement. It is generally the case that the person who develops his or her quantitative skills has increased ability to attack many of the complex problems of society. Advances in science, technology, the social sciences, business, industry, and government become more and more dependent on precise analysis and the extraction of information from large quantities of data. Environmental problems, for example, require careful analysis by persons (or teams of persons) with skills in mathematics, statistics, and computer science as well as in biology, geology, physics, and many other fields.

The demand for teachers of mathematics is greater now than ever before. Nearly every school district in the nation has a shortage of teachers trained in mathematics. UI offers a broadly based program leading to teacher certification, through enrollment either in the Department of Mathematics or in the College of Education and completion of a major or minor in mathematics.

Mathematics. The body of mathematical knowledge that has grown over the past 2,000 years is a magnificent human achievement, and it is growing more rapidly than ever before. The habits of systematic and creative thought developed in the study of mathematics are recognized as invaluable in most areas of human endeavor. University of Idaho's B.S. options in mathematics are designed to introduce the student to the excitement of mathematical ideas; they allow the maximum possible freedom to explore those areas of mathematics that the student finds most interesting.

The department has a sound program in mathematics with a proven record of preparing students for successful graduate study at the very best universities in the nation. There are sequences of courses in calculus, advanced calculus, linear algebra, differential equations, number theory, abstract algebra, topology, geometry, statistics, complex analysis, combinatorics and mathematical analysis. Students of mathematics who do not go to graduate school are well prepared for industrial, governmental, or teaching jobs if they have some additional exposure to computer science, education, or one of the natural, social, or applied sciences.

Applied Mathematics. Many of the greatest achievements in mathematics were inspired by problems in the natural sciences; today mathematics has wide application in both the natural and social sciences. Applied mathematics provides a broad arena for intellectual and creative impulses of people. The applied options in the mathematics B.S. degree allows a choice of the actuarial science and finance, computation, operations research, scientific modeling, or statistics options. Each of these is discussed briefly below. Many students interested in applications of mathematics pursue a joint major in some other department.

Applied–Actuarial Science and Finance Option. An actuary applies mathematics and statistics to forecasting problems. Actuaries are employed by financial institutions, government, insurance companies, and international corporations. They address problems as diverse as economic fluctuations, population demographics, resource consumption, medical insurance rates, and retirement needs. Actuaries are in great demand and have many interesting career opportunities leading often to high management positions. Admission to the actuarial profession is governed by a series of examinations administered by the actuarial societies. The first two examinations can be taken by undergraduates, and the rest are usually taken while working in the industry. The first two examinations are given locally. Our actuarial science and finance option, review seminars, and summer internship program with actuarial companies prepare students for these tests.

Applied–Computation Option. The advent of computers has changed nearly every aspect of society. As computation has become both more important and more feasible, it has inspired the development of several fields of study within mathematics. The computation option of the applied mathematics degree provides training in the mathematics applicable to computer science and technology. Many students pursue this option jointly with a computer science major.

Applied–Mathematical Biology Option. Biology is undergoing an information revolution. Recent technological advances have created an avalanche of biological data and a quantification of biology that has transformed the subject. The manipulation, analysis and interpretation of large, complex datasets is now central to much of biology. Moreover, mathematical models of the dynamics of biological systems can now be put in contact with empirical work in a way that allows a true synthesis of theory and data. This option will provide the needed cross training required for success in careers in mathematical biology.

Applied–Operations Research Option. This option is designed to prepare students for careers in business planning and management. The emphasis of study is on the mathematics used in modeling and analysis of real-world problems. This program is an excellent preparation for students planning to pursue an MBA degree.

Applied–Scientific Modeling Option. The role of modeling is essential in modern interdisciplinary research involving mathematics and the sciences. This option gives students an opportunity to learn about mathematical modeling with particular emphasis on the life sciences and the physical sciences. It provides an opportunity for students to create a very strong double major program and provides ideal preparation for future graduate training in the sciences.

Applied–Statistics Option. Statistics encompasses course work in designing and analyzing experiments, planning and interpreting surveys, and exploring relationships among variables observed on social, physical, and biological phenomena. The applied nature of the program allows the student to develop data analysis tools for such diverse areas as business and economics, crop and animal production, biological sciences, human behavior, education, engineering, and natural resource management.

Faculty members in the Department of Mathematics will be happy to answer questions about specific programs and courses. Such questions can also be addressed to the department chair (Brink 300; phone 208/885-6742).

Courses

See the course description section for courses in Mathematics (Math).

Mathematics Undergraduate Curricular Requirements

Mathematics (B.S.)

Required course work includes the university requirements (see regulation J-3) and:

Basic Courses:

Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)

One of the following (3 cr):

Math 330	Linear Algebra (3 cr)
Math 430	Advanced Linear Algebra (3cr)

And one of the following options:

A. General Option

This is the traditional curriculum in Mathematics. It is more mathematically rigorous than the other options. It is especially good for secondary education majors and students intending to go to graduate school in Mathematics or other sciences.

Math Courses:

Math 215	Introduction to Higher Mathematics (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Math 461	Abstract Algebra I (3 cr)
Math 471	Introduction to Analysis I (3 cr)

One of the following (3 cr):

Math 462	Abstract Algebra II (3 cr)
Math 472	Introduction to Analysis II (3 cr)

One of the following (9-10):

Three credits in Math electives numbered above 310 and six additional credits chosen from Math 385, ECE 455, Stat 431, or any Math course numbered above 400.

or

EDCI 401 plus an additional nine credits chosen from ECE 455, Stat 301, Stat 431, or any Math elective numbered above 310.

Supporting Courses:

Phys 211	Engineering Physics I (3 cr)
Phys 212	Engineering Physics II (3 cr)

One of the following (3 cr):

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Statistics (3 cr)

Courses to total 120 credits for this degree

B. Applied - Statistics Option

The emphasis is on the design and analysis of experiments. With a major or minor in another department this is an excellent preparation for work in industry or for graduate school in Statistics.

Math Courses:
Math 451 Probability Theory (3 cr)
Math 452 Mathematical Statistics (3 cr)

At least two courses from the following (6 cr):
Math 395 Analysis of Algorithms (3 cr)
Math 426 Discrete Optimization (3 cr)
Math 428 Numerical Methods (3 cr)
Math 432 Numerical Linear Algebra (3 cr)
Math 471 Introduction to Analysis I (3 cr)
Math 472 Introduction to Analysis II (3 cr)

Supporting Courses:
Stat 426 SAS Programming (3 cr)
Stat 431 Statistical Analysis (3 cr)

One course selected from the following (3 cr):
CS 112 Introduction to Problem Solving and Programming (3 cr)
CS 120 Computer Science I (4 cr)

One course selected from the following (3 cr):
Stat 251 Statistical Methods (3 cr)
Stat 301 Probability and Statistics (recommended) (3 cr)

At least two courses from the following (6 cr):
Econ 453 Econometrics (3 cr)
Math 453 Stochastic Models (3 cr)
Stat 422 Sample Survey Methods (3 cr)
Stat 507 Experimental Design (3 cr)
Stat 550 Regression (3 cr)
Stat 514 Nonparametric Statistics (3 cr)
Stat 519 Multivariate Analysis (3 cr)
Stat 555 Statistical Ecology (3 cr)

Approved electives in fields where statistics is applied (not to be in Statistics (Stat) courses) (6 cr)

Courses to total 120 credits for this degree

C. Applied - Computation Option

The emphasis is on the mathematics related to computer science and technology. With a major or minor in computer sciences this is a good preparation for work in the computer industry.

Math courses:
Math 176 Discrete Mathematics (3 cr)
Math 310 Ordinary Differential Equations (3 cr)
Math 385 Theory of Computation (3 cr)
Math 395 Analysis of Algorithms (3 cr)

One of the following (3 cr):
Math 428 Numerical Methods (3 cr)
Math 432 Numerical Linear Algebra (3 cr)

One of the following (3 cr):
ECE 455 Information and Coding Theory (3 cr)
Math 326 Linear Optimization (3 cr)
Math 376 Discrete Mathematics II (3 cr)
Stat 301 Probability and Statistics (3 cr)
Stat 431 Statistical Analysis (3 cr)
Any 400-level Math course

Three additional courses from the following (9 cr):
Math 415 Cryptography (3 cr)
Math 426 Discrete Optimization (3 cr)
Math 428 Numerical Methods (3 cr)
Math 430 Advanced Linear Algebra (3 cr)
Math 432 Numerical Linear Algebra (3 cr)
Math 451 Probability Theory (3 cr)
Math 461 Abstract Algebra I (3 cr)
Math 462 Abstract Algebra II (3 cr)
Math 476 Combinatorics (3 cr)
Math 480 Partial Differential Equations (3 cr)

Supporting courses:
CS 120 Computer Science I (4 cr)
CS 121 Computer Science II (4 cr)

Courses to total 120 credits for this degree

D. Applied – Scientific Modeling Option

The emphasis is on the mathematics used to model phenomena in the sciences. With a second major in a science this provides ideal preparation for graduate school.

Math courses:
Math 310 Ordinary Differential Equations (3 cr)
Math 451 Probability Theory (3 cr)

One of the following (3 cr):
ECE 455 Information and Coding Theory (3 cr)
Math 437 Mathematical Biology (3 cr)
WLF 552 Ecological Modeling (3 cr)

Five additional courses from the following (15 cr):
ECE 350 Signals and Systems I (3 cr)
ECE 450 Signals and Systems II (3 cr)
ECE 455 Information and Coding Theory (3 cr)
Math 326 Linear Optimization (3 cr)
Math 371 Mathematical Physics (3 cr)
Math 376 Discrete Mathematics II (3 cr)
Math 415 Cryptography (3 cr)
Math 420 Complex Variables (3 cr)
Math 426 Discrete Optimization (3 cr)
Math 428 Numerical Methods (3 cr)
Math 432 Numerical Linear Algebra (3 cr)
Math 437 Mathematical Biology (3 cr)
Math 452 Mathematical Statistics (3 cr)
Math 453 Stochastic Models (3 cr)
Math 471 Introduction to Analysis I (3 cr)
Math 472 Introduction to Analysis II (3 cr)
Math 476 Combinatorics (3 cr)
Math 480 Partial Differential Equations (3 cr)
Stat 301 Probability and Statistics (3 cr)
WLF 552 Ecological Modeling (3 cr)

Supporting courses:
Two courses at the 300 level or above in one area of science, engineering, or other quantitative area.

One of the following (3-4 cr):
CS 112 Introduction to Problem Solving and Programming (3 cr)
CS 120 Computer Science I (4 cr)

One of the following (3 cr):
Stat 301 Probability and Statistics (3 cr)
Math 452 Mathematical Statistics (3 cr)

Courses to total 120 credits for this degree

E. Applied - Actuarial Science and Finance Option

This curriculum provides the background to become an actuary and work in the insurance industry, or to work in finance.

Math courses:
Math 310 Ordinary Differential Equations (3 cr)
Math 451 Probability Theory (3 cr)
Math 452 Mathematical Statistics (3 cr)
Three additional courses chosen from Math courses numbered above 400 or Stat 422 (9 cr)

Supporting courses:
Acct 201 Introduction to Financial Accounting (3 cr)
Acct 202 Introduction to Managerial Accounting (3 cr)
Bus 301 Financial Management (3 cr)
Stat 431 Statistical Analysis (3 cr)

One of the following choices (4-6 cr):
Econ 201 Principles of Macroeconomics (3 cr)
Econ 202 Principles of Microeconomics (3 cr)

OR

Econ 272 Foundations of Economic Analysis (4 cr)

One of the following (3-4 cr):
CS 112 Introduction to Problem Solving and Programming (3 cr)
CS 120 Computer Science I (4 cr)

One of the following (3 cr):
Stat 251 Statistical Methods (3 cr)
Stat 301 Probability and Statistics (preferred) (3 cr)

One of the following (1-3 cr):
Bus 339 Spreadsheet Modeling (1 cr)
Stat 426 SAS Programming (3 cr)

At least three courses selected from the following (7-9 cr):
Bus 302 Intermediate Financial Management (3 cr)
Bus 381 International Finance (3 cr)
Bus 408 Security Analysis (3 cr)
Bus 463 Portfolio Management (3 cr)
Bus 464 Derivatives and Risk Management (3 cr)
Bus 465 Introduction to Market Trading (3 cr)
Bus 469 Risk and Insurance (3 cr)
Econ 351 Intermediate Macroeconomic Analysis (3 cr)
Econ 352 Intermediate Microeconomic Analysis (3 cr)
Math 455 Applied Actuarial Science (1 cr)

One of the following (3 cr):
Stat 433 Econometrics (3 cr)
Stat 550 Regression (3 cr)
Courses to total 120 credits for this degree

F. Applied - Operations Research Option

The emphasis is on the mathematics used in the modeling and analysis of problems from business and industry.

Math courses:
Math 326 Linear Optimization (3 cr)
Math 426 Discrete Optimization (3 cr)
Math 451 Probability Theory (3 cr)
Math 453 Stochastic Models (3 cr)
Math 476 Combinatorics (3 cr)

At least one course from the following (3 cr):
Math 310 Ordinary Differential Equations (3 cr)
Math 376 Discrete Mathematics II (3 cr)
Math 452 Mathematical Statistics (3 cr)
Stat 431 Statistical Analysis (3 cr)
Any other 400-level math course

Supporting courses:
Acct 201 Introduction to Financial Accounting (3 cr)
Acct 202 Introduction to Managerial Accounting (3 cr)
Bus 370 Introduction to Operations Management (3 cr)

One of the following (3-4 cr):
CS 112 Introduction to Problem Solving and Programming (3 cr)
CS 120 Computer Science I (3-4 cr)

One of the following (3 cr):
Stat 251 Statistical Methods (3 cr)
Stat 301 Probability and Statistics (preferred) (3 cr)

Four of the following courses (two must be above 400) (12 cr):
Bus 350 Management Information Systems (3 cr)
Bus 355 Systems Analysis & Administration (3 cr)
Bus 378 Project Management (3 cr)
Bus 439 Systems and Simulation (3 cr)
Bus 456 Quality Management (3 cr)
Bus 472 Operations Planning and Scheduling (3 cr)
Econ 453 or Stat 433 Econometrics (3 cr)
Courses to total 120 credits for this degree

G. Applied - Mathematical Biology Option

This option offers training across Mathematics and Biology and provides the background to pursue a career in technical industries and to obtain graduate degrees in Biomathematics, Biostatistics, and Bioinformatics

Math and Statistics courses:
Math 437 Mathematical Biology (3 cr)
Math 451 or Stat 451 Probability Theory (3 cr)
Math 452 or Stat 452 Mathematical Statistics (3 cr)

One course from the following (3 cr):
Stat 251 Statistical Methods (3 cr)
Stat 301 Probability and Statistics (3 cr)

Two courses from the following (6 cr):
Math 310 Ordinary Differential Equations (3 cr)
Math 453 Stochastic Models (3 cr)
Stat 431 Statistical Analysis (3 cr)

Two courses from the following (6 cr):
Math 428 Numerical Methods (3 cr)
Math 430 Advanced Linear Algebra (3 cr)
Math 480 Partial Differential Equations (3 cr)

Biology courses:
Biol 115 Cells and the Evolution of Life (4 cr)
Biol 116 Organisms and Environments (4 cr)
Biol 310 Genetics (3 cr)
Biol 456 Computer Skills for Biologists (3 cr)

12 credits of Biology courses at the 300-level or above (12 cr)

Supporting courses:
Chem 111 Principles of Chemistry I (4 cr)
Courses to total 120 credits for this degree

Mathematics Academic Minor Requirements

Mathematics Minor

Math 170 Analytic Geometry and Calculus I (4 cr)
Math 175 Analytic Geometry and Calculus II (4 cr)
Six math courses chosen from Math 275, Stat 301, and math courses numbered 303-499 (18 cr)
Courses to total 20 credits for this minor

Mathematics Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Mathematics. See the College of Graduate Studies section for the general university requirements applicable to each degree.

Master of Science in Mathematics. General M.S. requirements apply. An undergraduate major in mathematics or its equivalent is a prerequisite. Of the minimum of 30 credits required for this degree, at least 18 credits must be in mathematics at the 500 level (excluding Math 500, Math 510-Math 519, Math 599,seminars, and directed study); the remaining 12 credits may include 400 and 500 level courses in mathematics, and 300 or 400 level courses in supporting areas. A thesis is not required, but a three-hour comprehensive written examination covering 6 mathematics courses chosen by the student (with at least 5 at the 500 level) is required.

Master of Arts in Teaching. General M.A.T. requirements apply. Under advisement of the major professor and committee, a broadly based study plan is designed taking into consideration the candidate's interests and teaching needs. The plan should include mathematics courses from several pure mathematics areas, for example, algebra, topology, analysis, geometry, and number theory. A three-hour written examination is given over the courses in the study plan. Students entering the M.A.T. program will be considered deficient if they have not completed a standard sequence in calculus (equivalent to Math 170-Math 175-Math 275).

The M.A.T. degree in mathematics may also be obtained via distance learning. This distance learning program is designed to meet the needs of in-service teachers. The requirements outlined above apply, but here the study plan is designed using courses that are available by video or in summer programs on-campus or at off-campus sites.

Doctor of Philosophy. In addition to the general university requirements for the Ph.D., the department requires that 36 credits of graduate-level mathematics (excluding Math 500, Math 510-Math 519, Math 599, Math 600, seminars, and directed study) be completed or transferred (with at least 18 credits completed at UI).

The preliminary examination must be passed no later than the end of the student's fourth year of graduate study and before the dissertation is started. The preliminary examination is composed of three parts covering the areas algebra, analysis, and one of topology, combinatorics, or differential equations. These are given all in a one-week period and are graded by a departmental committee that may recommend additional testing in one or more of the specific areas if satisfactory results are not obtained. The committee may also recommend an oral examination in certain areas by the supervisory committee.

The dissertation must be of an original research nature and be in an area spanned by the research interests of the major professor. A final examination that amounts to a defense of the dissertation is required. Acceptability of the dissertation is to be determined by the student's major professor and graduate committee.

Department of Mechanical Engineering

John C. Crepeau, Dept. Chair (324I Engineering/Physics Bldg. 83844-0902; phone 208/885-4279; www.uidaho.edu/engr/ME). Faculty: David Alexander, Michael J. Anderson, Fatih Aydogan, Steven W. Beyerlein, Ralph S. Budwig, Dan Cordon, John C. Crepeau, Karen R. Den Braven, Donald F. Elger, Edwin M. Odom, Steven G. Penoncello, Gabriel Potir-

niche, Karl K. Rink, Judith A. Steciak, Robert R. Stephens, Akira Tokuhiro, Eric Wolbrecht.

Mechanical engineering applies the principles of science and technology to create products and systems which benefit mankind in several areas, including: (1) the conversion of energy from natural sources to provide power, light, heating and cooling, and transportation; (2) the design and production of machines to improve and lighten the burden of human work; (3) the creative planning, design, development, and operation of systems for utilizing energy, machines, and other resources; (4) the production of manufactured goods; and (5) the interface between technology and society.

Mechanical engineering is broad in scope and provides a wide range of careers for trained professionals in industry, business, government, and universities. Positions are available in design, testing, manufacturing, research, development, operations, system analysis, marketing, and administration. Mechanical engineers are often involved as professional team members in economic and social-humanistic matters and are responsible for the interaction of technical advances with social and environmental concerns.

Mission Statement

Our mission is to prepare students for entry into professional engineering practice and advanced study through our regionally-recognized program of high-quality instruction, integrated design and laboratory experience, and scholarship.

Program Educational Objectives

1. Learn and integrate. Graduates of the program will be proficient engineering problem solvers capable of identifying, formulating, and solving engineering problems by applying their knowledge of mathematics, science, and engineering.
2. Think and create. Graduates of the program will be effective mechanical engineering designers capable of modeling, designing, and experimentally verifying a thermal system, a mechanical system, a component, or a process to meet specified engineering requirements while considering real-world constraints and the impact their solution may have on society.
3. Communicate. Graduates of the program will be effective verbal and written communicators, and be team members capable of clearly developing and explaining their engineering solutions to diverse groups using appropriate tools and technology.
4. Clarify purpose and perspective. Graduates of the program will display a keen awareness of their professional and ethical responsibility, and practice lifelong learning.
5. Practice citizenship. Graduates of the program will practice environmental stewardship as they consider the impact that their designs have in a global context. Graduates will also add value to organizations, communities and society at large through involvement in professional societies, public presentations, civic engagement and outreach to the next generation.

(Changes subsequent to this may be viewed at www.uidaho.edu/engr/ME/)

Undergraduate Program. Successful completion of the approved curriculum results in the award of the Bachelor of Science in Mechanical Engineering (B.S.M.E.) degree. Our program educational objectives are based on the needs of our constituencies. We focus on the professional and personal development of our students and continuously assess and improve our undergraduate curriculum. Our department is a college and university leader in the use of innovative teaching methods, in vertical curriculum integration, and in the use of applied design projects. Students interact frequently and personally with the faculty and are mentored and advised by them. The strengths of our program are a solid engineering science foundation as demonstrated by the outstanding performance of our graduates on the nationwide Fundamentals of Engineering Exam, a required precursor to becoming a licensed Professional Engineer; a strong design experience featuring the design and construction of several projects; a strong laboratory experience featuring hands-on skills, state-of-the-art instrumentation, broad exposure to instrumentation and principles, and a senior project; multiple teamwork experiences, including the opportunity to lead and to serve in team roles; substantial use of appropriate engineering tools, including the best available software; and multiple communication experiences including written and oral presentations.

The Mechanical Engineering undergraduate program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

General questions regarding the undergraduate program should be addressed to the advising coordinator at (208)885-5024, or by email, medept@uidaho.edu. Faculty members are available to discuss details of their specialty areas with interested students.

An academic minor in mechanical engineering is available. Contact the department for more information.

Graduate Program. The following graduate degrees are available in mechanical engineering: Master of Science (thesis), Master of Engineering (non-thesis) and the Ph.D. The department also offers a program in nuclear engineering. Please see the appropriate section in this catalog. Minimum preparation for graduate study in mechanical engineering is a B.S. degree in a mechanical engineering program that is accredited by ABET, Inc. Students entering the program with an engineering or physical science baccalaureate degree in a major other than mechanical engineering must demonstrate proficiency in the subjects required in the B.S.M.E. program. Individual student qualifications are assessed by the departmental graduate committee, which also determines undergraduate deficiencies.

The programs of study are designed to extend the student's understanding of the fundamental engineering sciences and their application to engineering systems design and analysis. Research programs are offered with specialization in many general topics; please see the departmental website for faculty research areas. We maintain and continuously improve a graduate curriculum. Graduate students receive quality mentoring and advising.

Graduate students will develop a plan of study in consultation with their academic advisor that provides for a reasonable concentration in a particular field of interest and a selection of related courses, some of which may be taught outside of the department. For M.S.M.E. and Ph.D. students, the thesis topic will generally be selected from research topics being pursued by members of the departmental faculty. Candidates for the M.E.M.E. degree have the option of an oral exam or presentation of a final project, which is normally given in the final semester of study.

We support education throughout the state of Idaho and beyond by providing quality distance education through the University of Idaho's Engineering Outreach program, and supporting, collaborating and including our faculty at the Boise and Idaho Falls campuses of the University.

Service. We provide engineering services (teaching, consulting, outreach, testing and research) to support industry and national laboratories. In addition, we provide service to professional societies, the college and university, and the region. We encourage our graduates to support the improvement of our program in formal and informal ways. These include student referrals, periodic evaluation, and donations of time, equipment and money.

Courses

See the course description section for courses in Mechanical Engineering (ME).

Mechanical Engineering Undergraduate Curricular Requirements

Mechanical Engineering (B.S.M.E.)

This program is accredited by the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012—telephone: (410) 347-7700.

Note: Pre-advising is required to register in any ME course.

To advance to upper-division courses, a student majoring in mechanical engineering must earn certification: the student may accumulate no more than three grades of D or F in the mathematics, science or engineering courses used to satisfy certification requirements. Included in this number are multiple repeats of a single course or single repeats in multiple courses and courses transferred from other institutions.

In addition, students must also earn at least five grades of 'B' or better in these mathematics, science or engineering courses: Chem 111, Engr 210, Engr 220, Engr 240, Math 170, Math 175, Math 275, Math 310, Math 330, ME 123, ME 223, ME 301, MSE 201, Phys 211, and Phys 212. A grade of P (pass) in any of these courses is considered as a C grade in satisfying this certification requirement.

To graduate in this program, a student cannot accumulate no more than five grades of D or F in the mathematics, science, or engineering courses used to satisfy graduation requirements. Included in this number are multiple repeats of a single course or single repeats in multiple courses and courses transferred from other institutions.

Required course work includes the university requirements (see regulation J-3), completion of the Fundamentals of Engineering (FE) examination and:

CE 411	Engineering Fundamentals (1 cr)
Chem 111	Principles of Chemistry I (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 317	Technical Writing (3 cr)
Engr 210	Engineering Statics (3 cr)
Engr 220	Engineering Dynamics (3 cr)
Engr 240	Introduction to Electrical Circuits (3 cr)
Engr 335	Engineering Fluid Mechanics (3 cr)
Engr 350	Engineering Mechanics of Materials (3 cr)
MSE 201	Elements of Materials Science (3 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Math 310	Ordinary Differential Equations (3 cr)
Math 330	Linear Algebra (3 cr)
ME 123	Introduction to Mechanical Design (3 cr)
ME 223	Mechanical Design Analysis (3 cr)
ME 301	Computer Aided Design Methods (3 cr)
ME 313	Dynamic Modeling of Engineering Systems (3 cr)
ME 322	Mechanical Engineering Thermodynamics (3 cr)
ME 325	Machine Component Design I (3 cr)
ME 330	Experimental Methods for Engineers (3 cr)
ME 341	Intermediate Mechanics of Materials (3 cr)
ME 345	Heat Transfer (3 cr)
ME 424	Mechanical Systems Design I (3 cr)
ME 426	Mechanical Systems Design II (3 cr)
ME 430	Senior Laboratory (3 cr)
ME 435	Thermal Energy Systems Design (3 cr)
Phil 103	Ethics (3 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)

One from the following (3-4 cr):

Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
Econ 272	Foundations of Economics (4 cr)

Technical Elective requirements for Mechanical Engineering: Fifteen credits of technical electives are required from the list below. The breakdown of credits will be as follows: nine credits must be an ME upper division course, three credits must be an upper division Math, Statistics or Physics course, the remaining three credits may be any course listed in below:

Bus 414	Entrepreneurship (3 cr)
Bus 456	Quality Management (3 cr)
Bus 531	Managing the Design Process (3 cr)
Engr 360	Engineering Economy (2 cr)
Engr 573	Fuzzy Logic Control Systems (3 cr)
Math 371 or Phys 371	Mathematical Physics (3 cr)
Math 420	Complex Variables (3 cr)
Math 428	Numerical Methods (3 cr)
Math 432	Numerical Linear Algebra (3 cr)
Math 437	Mathematical Biology (3 cr)
Math 451	Probability Theory (3 cr)
Math 452	Mathematical Statistics (3 cr)
Math 453	Stochastic Models (3 cr)
Math 471	Introduction to Analysis I (3 cr)
Math 472	Introduction to Analysis II (3 cr)
Math 480	Partial Differential Equations (3 cr)
ME 401	Engineering Team Projects (2-3 cr)
ME 404	Special Topics (cr arr)
ME 410	Principles of Lean Manufacturing (3 cr)
ME 412	Gas Dynamics (3 cr)
ME 413 or ME 513	Engineering Acoustics (3 cr)
ME 414 or ME 514	HVAC Systems (3 cr)
ME 417 or ME 517	Turbomachinery (3 cr)
ME 420 or ME 520	Fluid Dynamics (3 cr)
ME 421	Advanced Computer Aided Design (3 cr)
ME 422	Applied Thermodynamics (3 cr)
ME 425	Machine Component Design II (3 cr)
ME 433	Combustion Engine Systems (3 cr)
ME 443 or ME 543	Analysis of Thermal Energy Systems (3 cr)
ME 444	Air Conditioning Engineering (3 cr)
ME 452 or ME 552	TechVentures: High Technology Entrepreneurship (3 cr)
ME 461	Fatigue and Fracture Mechanics (3 cr)
ME 464 or ME 564	Robotics: Kinematics, Dynamics, and Control (3 cr)
ME 472	Mechanical Vibrations (3 cr)
ME 481	Control Systems (3 cr)
ME 527	Thermodynamics (3 cr)
ME 529	Combustion and Air Pollution (3 cr)
ME 539	Advanced Mechanics of Materials (3 cr)
ME 540	Continuum Mechanics (3 cr)
ME 541	Mechanical Engineering Analysis (3 cr)
ME 542	Optimal Control of Dynamic Systems (3 cr)
ME 544	Conduction Heat Transfer (3 cr)
ME 546	Convective Heat Transfer (3 cr)
ME 547	Thermal Radiation Processes (3 cr)
ME 548	Elasticity (3 cr)
ME 549	Finite Element Analysis (3 cr)
ME 578	Neural Network Design (3 cr)
ME 580	Linear System Theory (3 cr)
ME 583	Reliability of Engineering Systems (3 cr)
Phys 351	Introductory Quantum Mechanics I (3 cr)
Phys 305	Modern Physics (3 cr)
Phys 411	Physical Instrumentation I (3 cr)
Phys 425 or Phys 525	Relativity (3 cr)
Phys 428 or Phys 528	Numerical Methods (3 cr)
Phys 443 or Phys 543	Optics (3 cr)
Phys 444 or Phys 544	Quantum Optics (3 cr)
Phys 464	Materials Physics and Engineering (3 cr)
Phys 465 or Phys 565	Particle and Nuclear Physics (3 cr)
Phys 484 or Phys 584	Astrophysics (3 cr)
Stat 301	Probability and Statistics (3 cr)
Stat 431	Statistical Analysis (3 cr)
Stat 446	Six Sigma Innovation (3 cr)

Any approved 400/500 level course in another engineering discipline

A maximum of 3 credits of the following may be used:

ME 307	Group Mentoring I (1 cr)
ME 308	Group Mentoring II (1 cr)
ME 401	Engineering Team Projects (2-3 cr)
ME 407	Group Mentoring III (1 cr)

Courses to total 128 credits for this degree, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies.

Mechanical Engineering Academic Minor Requirements

Manufacturing Engineering Minor

This minor is not accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Bus 370	Introduction to Operations Management (3 cr)
CTE 352	Manufacturing: Metallic Materials and Processes (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
ME 481	Control Systems (3 cr)
ME 410	Principles of Lean Manufacturing (3 cr)

One of the following (3 cr):

Bus 439	Systems and Simulation (3 cr)
Bus 456	Quality Management (3 cr)

Courses to total 20 credits for this minor

Note: Only two ME classes listed above may be used to fulfill requirements for a manufacturing engineering minor AND mechanical engineering technical electives.

Mechanical Engineering Minor

Engr 105	Engineering Graphics (2 cr)
Engr 210	Engineering Statics (3 cr)

Engr 220	Engineering Dynamics (3 cr)
ME 123	Introduction to Mechanical Design (3 cr)
ME 223	Mechanical Design Analysis (3 cr)

Courses selected from the following (including at least 6 cr from ME courses) (9 cr):

Engr 320	Engineering Thermodynamics and Heat Transfer (3 cr)
Engr 335	Engineering Fluid Mechanics (3 cr)
Engr 350	Engineering Mechanics of Materials (3 cr)
ME 313	Dynamic Modeling of Engineering Systems (3 cr)
ME 325	Machine Component Design I (3 cr)
ME 345	Heat Transfer (3 cr)

Courses to total 20 credits for this minor

Mechanical Engineering Graduate Academic Certificates Requirements

Heating, Ventilation and Air Conditioning (HVAC) Graduate Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

ME 422	Applied Thermodynamics (3 cr)
ME 444	Air Conditioning Engineering (3 cr)
ME 502	(s) Directed Study (1 cr)

Electives (6 cr):

Arch 463	Environmental Control Systems I (3 cr)
Arch 463L	Environmental Control Systems I Lab (1 cr)
Arch 464	Environmental Control Systems II (3 cr)
Arch 464L	Environmental Control Systems II Lab (1 cr)
ME 414	HVAC Systems (3 cr)
ME 443	Analysis of Thermal Energy Systems
ME 481	Control Systems (3 cr)
ME 514	HVAC Systems (3 cr)
ME 543	Analysis of Thermal Energy Systems

Courses to total 15 credits for this certificate

Mechanical Engineering Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Mechanical Engineering. Applicants for admission generally will have a B.S. degree in mechanical engineering. Those students admitted with degrees in other engineering fields will be expected to complete any undergraduate deficiencies. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. General M.S. requirements apply, along with departmental requirements as listed in the departmental graduate handbook.

Master of Engineering. General M.Engr. requirements apply, along with departmental requirements as listed in the departmental graduate handbook.

Doctor of Philosophy. General Ph.D. requirements apply, along with departmental requirements as listed in the departmental graduate handbook. Preliminary screening of candidates and program planning for those admitted are essential features of the Ph.D. program. Early in the program, the student must complete a qualifying examination that will be oral and possibly written. The preliminary examination is taken after most of the course work is completed. This examination also includes a presentation of the dissertation progress or proposal. No foreign language is required; however, the department does require a satisfactory level of achievement in mathematics and numerical analyses and in computer programming.

Academic Certificate. In addition to the above degree programs, the department now offers an academic certificate in advanced materials design and in heating, ventilation, and air conditioning (HVAC) systems. A total of 13 credits are required to obtain each certificate. Students are not required to be actively pursuing a graduate degree in order to participate in a certification program. General graduate admission requirements apply, along with departmental requirements as listed in the departmental graduate handbook.

Department of Military Science

LTC Braum Barton, Dept. Head (West End, Mem. Gym. 83844-2424; phone 208/885-6528; armyrotc@uidaho.edu). Faculty: SFC Thomas VanOvermeer, SFC Joseph Petzinger, CPT Timothy Tate.

Military Science (Army ROTC) lecture classes are open to all students, including those not interested in pursuing a commission as an Army officer. Students who are interested in exploring a potential commission are strongly encouraged to also seek Department permission to register for labs. Lab permission normally will be granted to any student determined by Department staff as having a genuine potential interest in commissioning, and who would be qualified to do so.

The primary objective of the program is to develop leadership and management skills in students. Supplementary objectives include enhancement of the student's abilities in speaking and writing, situational assessment, goal setting, and problem solving. The Department cultivates within its students a strong sense of personal integrity, self discipline, and responsibility.

For those interested in or actually pursuing an Army commission, all levels of course work combine classroom instruction with practical exercises. The two-year basic course (100 and 200 level classes) consists of a one-credit lecture course each freshman semester and a two-credit lecture course each sophomore semester. For most students, these classes are taken simultaneously with one-credit lab courses. The curriculum covers confidence building exercises, map reading, leadership, management principles, first aid, and other life skills with broad applications beyond the military. Students in labs participate in several adventure activities, including rappelling, rifle marksmanship, and paintball exercises. White water rafting and downhill skiing trips are organized as optional additional activities.

Other than scholarship students, no military commitment is required of students in the first two years of the program. These students survey Army opportunities and decide whether to continue in the program as advanced course students who will commission as Army officers. Students who have made a contractual commitment to seek a commission receive monthly stipends. Scholarships from two to four years are available to some students.

The advanced course consists of three-credit lecture and one-credit lab courses normally taken each semester during the last two years of university study. The program also includes a four-week advanced camp at Fort Lewis, Washington (normally after the junior year). Study centers on leadership styles and techniques with special emphasis placed on small unit leadership.

Army ROTC is the major source of commissioned officers for the U.S. Army. After successfully completing the program and baccalaureate degree requirements in almost any field, the student receives a commission as a second lieutenant. Active duty is not a requirement but is something for which students compete. Graduates also choose from among 26 different Army branches or specialties. Those not choosing active duty serve with the Army Reserves or Army National Guard on a part-time basis.

Prior to commissioning, all cadets must demonstrate proficiency in communications and military history. This may be achieved through taking UI course offerings in those subject areas. See your Army ROTC class advisor for a list of approved courses.

Departmental members will answer questions about specific programs and courses. Contact the department by going to the west end of Memorial Gymnasium or by calling 208/885-6528 or 1-88-88-UIDAHO, or by e-mail at armyrotc@uidaho.edu. Further information is available on the web at www.armyrotc.uidaho.edu.

Courses

See the course description section for courses in Military Science (MS).

Military Science Academic Minor Requirements

Military Science Minor

MS 301	Advanced Leadership and Management (3 cr)
MS 302	Advanced Leadership and Management (3 cr)
MS 311	Leadership Lab (1 cr)
MS 312	Leadership Lab (1 cr)
MS 401	Seminar in Leadership and Management (3 cr)
MS 402	Seminar in Leadership and Management (3 cr)
MS 411	Leadership Lab (1 cr)
MS 412	Leadership Lab (1 cr)

Military History Course (3 cr) (Selected in consultation with the Professor of Military Science, this course should develop the student's awareness of the relationship of the military establishment to society, particularly in the United States, and develop their interest in the evolution of war and the progression of military professionalism.)

Courses to total 18 credits for this minor

Department of Modern Languages & Cultures

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; modlang@uidaho.edu). Faculty: Anibel Alcocer (Spanish), Marta Boris (Spanish), Lori Celaya (Spanish), Irina A. Kappler-Crookston (Spanish), Jianhong Lu (Chinese), Shannon McGowan (Spanish), Sarah M. Nelson (French), Anne Perriguey (French), Gerd Steckel (German), Ikuyo Suzuki (Japanese).

Students who take modern language literature and culture courses to complete a MLC major or minor will:

- Gain a deeper understanding of a variety of cultures, including their own;
- Become highly competitive in the international and domestic workforce;
- Increase their critical thinking and communication skills;
- Understand and make connections within the interdependent world
- And become engaged world citizens.

As a leading center for the study of languages and cultures in the state, the department exercises a statewide role in preparing students for careers using a second language and for graduate study in literary and cultural studies, languages and linguistics, international business and politics, law, education, and medicine. Likewise the department plays a statewide and regional role in the training of language teachers for the secondary schools. In addition, the Modern Language curriculum prepares its graduates to enter business, government, and public sector careers in which a second or third language is useful or required. In this regard, the department serves a growing number of double majors and academic minors who choose to combine the formal study of a language in our department with another field related to the student's other career or professional interests.

Language majors are required to spend a semester or year studying abroad with an international exchange program. Modern language faculty advisors and the staff of the UI International Programs Office will gladly assist students in planning a study abroad experience.

If a student has already studied a language in high school, he or she may be eligible to receive vertically-related course credits simply by completing a more advanced course at UI.

Courses

See the course description section for courses in Arabic (Arbc), Chinese (Chin), English (FLEN), French (Fren), German (Germ), Japanese (Japn), Latin (Latn), Nez Perce (NezP), Russian (Russ), and Spanish (Span), and General Courses (FL).

Modern Languages & Cultures Undergraduate Curricular Requirements

A maximum of 15 transfer credits and/or credits earned through study abroad may be applied toward the upper-division requirements for the B.A. degree in Foreign Language, French, and Spanish.

Students who receive a C or D in their first upper-division language class are required to pass an oral and written proficiency exam to meet minimum departmental proficiency standards before being allowed to register in other upper-division language classes.

A student must receive a C or better in an upper-division course in the appropriate target language to count towards the major.

Before going on a study abroad program, students must have the approval of their major advisor to ensure that their proposed program meets with departmental approval. Upon returning to UI, the Department of Modern Languages & Cultures will evaluate the students' oral and written proficiency and determine which classes studied abroad may count towards the major. Study abroad credits with the number 404 and University of Idaho credits with the number 449, 498, or 499 will not automatically count toward the Foreign Languages, French, or Spanish majors; they will be evaluated by a Modern Languages and Cultures advisor and may be used to complete the major only upon approval.

French (B.A.)

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, and:

An international experience and the course work listed below is required of students. This requirement will normally be fulfilled by completing a program of studies abroad which takes place after the student has finished language study through the intermediate (200) level. The specific program must receive prior approval from the student's MLC advisor and must be one that lasts a minimum of 12-15 weeks. The classes taken must earn a minimum of 12 upper-division (300/400 level) academic credits, be in subjects pertinent to the student's language option, and offered in that language. Such credits may be obtained by two consecutive summer programs.

8-9 FLEN credits, of which a minimum of 5-6 FLEN credits is outside of one's language option (8-9 cr)

FLEN 313	Modern French Literature in Translation (3 cr)
Fren 101, Fren 101L	Elementary French I and Lab (5 cr)
Fren 102, Fren 102L	Elementary French II and Lab (5 cr)
Fren 201, Fren 201L	Intermediate French I and Lab (5 cr)
Fren 202	Intermediate French II (4 cr)

One of the following (3 cr)

Fren 407	French & Francophone Literatures (3 cr)
Fren 408	French and Francophone Culture and Institutions (3 cr)
Fren 410	French and Francophone Arts (3 cr)

300-level French courses (20 cr)
Additional electives in upper division French or related fields approved by the chair (9 cr)
A second foreign language (elem & interm or equivalent), waived for students with a double major (FL plus another major) or a 30-credit pre-professional emphasis approved by the department chair (16-30 cr)
Courses to total 120 credits for this degree

Modern Language Business (B.A.)

Designed to provide the student of modern languages with a liberal arts education and a core of business courses that will open doors to a career in international business.

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, and:

In addition to the course work specified for this major, an international experience is required. This requirement will normally be fulfilled by completing a program of studies abroad which takes place after the student has finished language study through the intermediate (200) level. The specific program must receive prior approval from the student's MLC advisor and must be one that lasts a minimum of 12-15 weeks. The classes taken must earn a minimum of 12 upper-division (300/400 level) academic credits and be in subjects pertinent to the student's language option. Such credits may be obtained by two consecutive summer programs.

One modern language (Chinese, French, German, Japanese, or Spanish), elementary and intermediate (19 cr)
Approved upper-division courses in the same language (including one business course or approved alternative in the target language) (21 cr)

Acct 201	Introduction to Financial Accounting (3 cr)

One of the following (3-4 cr):

Econ 202	Principles of Microeconomics (3 cr)
Econ 272	Foundations of Econ Analysis (4 cr)

One of the following (3 cr):

FLEN 307	The European Union (3 cr)
FLEN 308	European Immigration and Integration (3 cr)

And of the following group of courses (15-18 cr):

Group A:

Bus 301	Financial Resources Management (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)

Six credits taken from Bus 101 or any other 300- or 400-level BUS prefix course

or

Group B:

Bus 290	Leading Organizations and People (3 cr)
Bus 301	Financial Resources Management (3 cr)
Bus 321	Marketing (3 cr)
Bus 350	Managing Information (3 cr)
Bus 370	Process Management (3 cr)
Bus 390	Integrated Topics in Business (3 cr, max 6)

Courses to total 120 credits for this degree

Spanish (B.A.)

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, and:

An international experience and the course work listed below is required of students. This requirement will normally be fulfilled by completing a program of studies abroad which takes place after the student has finished language study through the intermediate (200) level. The specific program must receive prior approval from the student's MLC advisor and must be one that lasts a minimum of 12-15 weeks. The classes taken must earn a minimum of 12 upper-division (300/400 level) academic credits, be in subjects pertinent to the student's language option, and offered in that language. Such credits may be obtained by two consecutive summer programs.

8-9 FLEN credits, of which a minimum of 5-6 FLEN credits is outside of one's language option (8-9 cr)

Span 101, Span 101L	Elementary Spanish I and Lab (5 cr)
Span 102, Span 102L	Elementary Spanish II and Lab (5 cr)
Span 201, Span 201L	Intermediate Spanish I and Lab (5 cr)
Span 202	Intermediate Spanish II (4 cr)
Span 301	Advanced Grammar (3 cr)
Span 302	Advanced Composition (3 cr)
Span 305	Culture & Institutions of Spain (3 cr)
Span 306	Culture & Institutions of Latin America (3 cr)

Upper-division courses in Spanish language (9 credits must be 400 level) (12 cr)

Additional electives in upper-division Spanish or related fields approved by the department chair (6 cr)

A second foreign language (elem & interm or equivalent), waived for students with a double major (FL plus another major) or a 30-credit pre-professional emphasis approved by the department chair (16-30 cr)

Courses to total 120 credits for this degree

Modern Languages & Cultures Academic Minor Requirements

Students must complete 20 credits for the Asian Studies, French, German, or Spanish minor, of which at least 9 must be upper-division. Vertical credits may be acquired per Regulation I for the 101/101L, 102/102L, 201/201L, and 202 courses as part of the 20 credits, but vertical credits may not be acquired per Regulation I for 300/400-level courses. It is not possible to challenge any upper-division courses for the minor. Study abroad credits with the number 404 and University of Idaho credits with the number 449, 498, or 499 will not automatically count toward the minor; they will be evaluated by a Modern Languages & Cultures advisor and may be used to complete the minor only upon approval.

Transfer credits may be applied toward a minor with the approval of the department offering the minor; however, the last nine credits applied to completion of the minor must be earned in 1) UI courses, 2) through UI study abroad, or 3) through student exchange programs, and may not include credits earned through correspondence study.

Students must complete at least 6 credits of the 9 credits of upper-division course work at the University of Idaho to complete the Asian Studies, French, German or Spanish minor.

A student must receive a C or better in any course to count for the Asian Studies, French, German, or Spanish minor.

Asian Studies Minor

Two semesters of Asian Language or one semester of Approved Study Abroad in Asia. Courses from the following list; no more than 9 credits in one discipline and no more than 6 credits in student's major. Nine (9) credits of upper division coursework required. Students must complete 6 of these 9 credits of upper-division coursework at the University of Idaho to complete the Asian Studies minor.

Anth 220	Peoples of the World (3 cr)
Anth 261	Language and Culture (3 cr)
Comm 335	Intercultural Communication (3 cr)
Geog 200	World Regional Geography (3 cr)
Hist 180	Introduction to East Asian History (3 cr)
Hist 481	America's Wars in Asia (3 cr)
Hist 482	Japan, 1600 to Present (3 cr)
Hist 484	Modern China, 1840s to Present (3 cr)
Hist 485	Chinese Social and Cultural History (3 cr)
IS 325	Topics in Islamic Studies (3 cr, max 6)
Phil 307	Buddhism (3 cr)
PolS 205	Introduction to Comparative Politics (3 cr)
PolS 237	International Politics (3 cr)
PolS 420	Introduction to Asian Politics (3 cr)

Courses to total 20 credits for this minor

French Minor

Fren 101, Fren 101L	Elementary French I and Lab (5 cr)
Fren 102, Fren 102L	Elementary French II and Lab (5 cr)
Fren 201, Fren 201L	Intermediate French I and Lab (5 cr)
Fren 202	Intermediate French II (4 cr)

Nine credits of upper-division French courses (not including lab-based, FLEN, or lit/film in translation courses) (9 cr) Students must complete 6 of these 9 credits of upper-division coursework at the University of Idaho to complete the French minor.

Courses to total 20 credits for this minor

German Minor

Germ 101, Germ 101L	Elementary German I and Lab (5 cr)
Germ 102, Germ 102L	Elementary German II and Lab (5 cr)
Germ 201, Germ 201L	Intermediate German I and Lab (5 cr)
Germ 202	Intermediate German II (4 cr)

Nine credits of upper-division German courses (not including lab-based, FLEN, or lit/film in translation courses) (9 cr) Students must complete 6 of these 9 credits of upper-division coursework at the University of Idaho to complete the German minor.

Courses to total 20 credits for this minor

Spanish Minor

Span 101, Span 101L	Elementary Spanish I and Lab (5 cr)
Span 102, Span 102L	Elementary Spanish II and Lab (5 cr)
Span 201, Span 201L	Intermediate Spanish I and Lab (5 cr)
Span 202	Intermediate Spanish II (4 cr)

Nine credits of upper-division Spanish courses including Span 301 and Span 302, but not including lab-based, FLEN, or lit/film in translation courses. (9 cr) Students must complete 6 of these 9 credits of upper-division coursework at the University of Idaho to complete the Spanish minor.

Courses to total 20 credits for this minor

Department of Movement Sciences

Philip W. Scruggs, Dept. Chair (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921). Faculty: Belle B. Baggs, Helen F. Brown, Damon D. Burton, (Exercise Science & Health Coordinator), Grace Goc Karp (Physical Education Coordinator), Mostafa Hegazy, Melanie J. Meenan, Alan M. Nasypany (Athletic Training Program Director), David R. Paul, Jeffrey G. Seegmiller, Julie Stafford Son (Recreation Program Coordinator), Sharon K. Stoll, Chantal Vella.

The Department of Movement Sciences is one of three departments in the College of Education. Graduate Programs include the Doctor of Athletic Training (D.A.T.) and participates in the Ph.D. in education, with tracks in healthy active lifestyles and exercise science, and in the interdisciplinary Ph.D. in Neuroscience; the department offers master's degrees in Athletic Training (M.S.A.T.), Movement & Leisure Sciences (M.S.), and Physical Education (M.Ed.), and participates in the M.S. in Neuroscience and the M.S. in Bioregional Planning and Community Design; the department also offers baccalaureate degrees in dance, exercise science

and health, physical education, and recreation; several minors and options; and basic instruction in numerous recreational fitness, dance, aquatic, and sport activity areas.

The activity portion of the program is supported by outstanding facilities, which include three gymnasia, two dance studios, two pools, eight outdoor tennis courts, six racquetball courts, indoor and outdoor tracks, weight rooms, climbing wall, and expansive field and play areas. In addition, activity classes are taught in the Student Recreation Center.

The baccalaureate degree in dance is designed to create a positive, student-focused learning environment that promotes the intellectual, social, emotional, cultural, and moral development of students to prepare for careers in dance and/or other related fields on a competitive and professional level. The Festival Dance and Performing Arts Association maintains a residency program with the department.

The baccalaureate degree in exercise science and health provides graduates with knowledge of strategies, leadership skills, and the technical abilities to plan, implement, and evaluate health and exercise programs. It also prepares students for post-baccalaureate study in numerous clinical health professions, including athletic training, physical therapy, occupational therapy, public health, nursing, pharmacy, and medicine.

The baccalaureate degree in physical education leads to K-12 teaching certification and provides a foundation for athletic coaching. The degree is designed to prepare teachers to inspire students in 1-12 schools to lead healthy, active lifestyles through a structured and engaging program of physical education.

The baccalaureate degree in recreation provides the student with an understanding of leisure and recreation and its role in society as a necessary factor for an individual to obtain a quality, healthy life and to function in our society. Further, the degree prepares a broadly educated professional to assist and lead individuals, organizations and communities in the supervision and facilitation of recreation programs and resource management. Students graduating from this program are immediately eligible to sit for the national-level examination to become a Certified Leisure Professional.

Academic and teaching minors offered by the department include: health education, dance, outdoor recreation leadership, sustainable tourism and leisure enterprises, and physical education.

Courses

See the course description section for courses in Athletic Training (AT), Dance (Dan); Health and Safety (H&S); Movement Sciences (MvSc); Physical Education (PEB & PEP); and Recreation (Rec).

Movement Sciences Undergraduate Curricular Requirements

Courses required in all majors in the Department of Movement Sciences:

MvSc 201	Physical Activity, Wellness & Behavior Change for Healthy Active Lifestyles (3 cr)
MvSc 429	Leadership, Pedagogy and Program Planning for Healthy Active Lifestyles (3 cr)
MvSc 486	Marketing, Implementation and Evaluation for Healthy, Active Lifestyles (1 cr)

Dance (B.S.Dan.)

A successful audition is required for admission to the degree program. Please contact the Department of Movement Sciences at (208) 885-7921 for audition information. Required coursework includes the university requirements (see regulation J-3), the Department of Movement Sciences core and the following course work:

Biol 120	Human Anatomy (4 cr)
Dan 101	First Year/Transfer Student Orientation (1 cr)
Dan 210	Dance Theatre (2 semesters) (4 cr)
Dan 216 or Dan 416	Technique (must include a minimum of 4 semesters each of ballet, modern, and jazz) (Students may retake the same technique class up to 8 times to meet the 16 cr requirement) (16 crs. min)
Dan 320	Labanotation (3 cr)
Dan 321	Dance Pedagogy (3 cr)
Dan 360	Children's Dance (1 cr)
Dan 384	Dance Composition I (3 cr)
Dan 385	Dance Composition II (2 cr)
Dan 410	Pre-professional Dance Theatre (2 semesters) (4 cr)
Dan 412	Dance Theatre Choreography (1 cr)
Dan 421	Dance History (3 cr)
Dan 422	Labanalysis (2-3 cr)
Dan 490	Senior Project (3 cr)
PEP 300	Applied Human Anatomy and Biomechanics (2 cr)
PEP 360	Motor Behavior (3 cr)

Two of the following courses (2 cr):

MusA 114	Studio Instruction (voice or piano) (1 cr, max arr)
MusA 145	Piano Class for Music Majors/Minors (1 cr)
MusA 146	Piano Class for Music Majors/Minors (1 cr)
MusA 147	Voice Class (1 cr)
MusA 365	Chamber Ensemble (1 cr, max arr)

One of the following courses (2-3 cr):

The 105	Basics of Performance (3 cr)
The 202	Costume Design (3 cr)
The 205	Lighting Design (3 cr)
The 320	Theatre Management (2 cr)

Courses to total 128 credits for this degree

Exercise Science and Health (B.S.E.S.H.)

Exercise Science & Health majors must maintain a UI cumulative GPA of 2.30 or better in order to enroll in 300-level or higher Movement Science sequence coursework. In addition, Exercise Science & Health majors must have a UI cumulative GPA of 2.30 or greater to graduate.

Required course work includes the university requirements (see regulation J-3), the Department of Movement Sciences core, and the following.

Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
H&S 245	Introduction to Athletic Injuries (3 cr)
H&S 451	Psychosocial Determinants of Health (3 cr)
PEP 100	Introduction to Exercise Science & Health (1 cr)
PEP 300	Applied Human Anatomy and Biomechanics (3 cr)
PEP 418	Physiology of Exercise (3 cr)
PEP 455	Design & Analysis of Research in Movement Sciences (3 cr)
PEP 493	Fitness Assessment and Prescription (3 cr)

One of the following tracks:

Fitness, Health, and Human Performance Track

H&S 288	First Aid: Emergency Response (or current Emergency Response or First Aid/CPR certification) (2 cr)
H&S 450	Critical Health Issues (3 cr)
H&S 490	Health Promotion (3 cr)
MvSc 445	Internship Preparation and Professional Development (1 cr)
PEP 495	Practicum (2 cr)
PEP 498	Internship in Exercise Science & Health (summer preferred) (9 cr)

PE activity/skill classes (see advisor for selection) (5 cr)

One of the following (3 cr):

Engl 207	Persuasive Writing (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

Pre-Physical Therapy Track

Chem 111	Principles of Chemistry I and Lab (4 cr)
Chem 112	Principles of Chemistry II and Lab (5 cr)
H&S 450	Critical Health Issues (3 cr)
PEP 495	Practicum (2 cr)
PEP 498	Internship in Exercise Science & Health (summer preferred) (9 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)
Phys 112, Phys 112L	General Physics II and Lab (4 cr)
Stat 251	Statistical Methods (3 cr)

PE activity/skill classes (see advisor for selection) (4 cr)

One of the following (3 cr):

Psyc 305	Developmental Psychology (3 cr)
Psyc 311	Abnormal Psychology (3 cr)

Pre-Athletic Training Track*

AT 506	Clinical Anatomy I (3 cr)
AT 507	Care and Prevention of Injuries and Illnesses (3 cr)

AT 508	Evaluation and Diagnosis of Injuries and Illnesses I (4 cr)
AT 509	Principles of Rehabilitation (3 cr)
AT 510	Therapeutic Modalities (2 cr)
AT 511	Ethics and Administration in Athletic Trainers (3 cr)
AT 512	Research Methods & Statistics I (3 cr)
AT 520	Clinical Education I (2 cr)
AT 521	Clinical Experience I (4 cr)
AT 587	Prevention and Health Promotion in Athletic Training (3 cr)
H&S 288	First Aid: Emergency Response (or current Emergency Response or First Aid/CPR certification) (2 cr)
PEP 171	Athletic Training Clinical Experience I - Observation (1 cr)
PEP 495	Practicum (1 cr)

Electives (14 cr):

Chem 111	Principles of Chemistry I and Lab (4 cr)
FCS 305	Nutrition Related to Fitness and Sport (2 cr)
FCS 462	Eating Disorders (2 cr)
H&S 450	Critical Health Issues (3 cr)
H&S 490	Health Promotion (3 cr)
PEP 360	Motor Behavior (3 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)

Courses to total 120 credits for this degree

**Note: Students in the Pre-Athletic Training Track who are admitted into the MSAT program after their junior year may transfer up to 30 credits from their first two terms of graduate level course work in the Master of Science in Athletic Training towards their Bachelor of Science Degree in Exercise Science with an Athletic Training Track. For more information on the MSAT see the Graduate Degree Programs section for this department.*

Physical Education (B.S.Ed.)

Required course work includes the university requirements (see regulation J-3), the Department of Movement Sciences core, the Idaho Technology Competency Certification and the following course work:

Movement Courses (All to be completed prior to pedagogy course sequence)

Dan 105	Dance (1 cr)
Dan 360	Children's Dance (1 cr)
PEB 108	Water-Based Sports and Fitness Activities (1 cr)
PEP 107	Movement Fundamentals (1 cr)

Individual Skill Courses (All to be completed prior to or concurrent with Pedagogy course sequence)

PEP 132	Skill and Analysis of Tennis, Pickleball, and Badminton (1 cr)
PEP 133	Skill and Analysis of Golf, Archery, and Field Sports (1 cr)
PEP 134	Skill and Analysis of Walking/Jogging/Track and Field (1 cr)

Team Skill Courses (All to be completed prior to or concurrent with Pedagogy course sequence)

PEP 135	Skill and Analysis of Basketball and Volleyball (1 cr)
PEP 136	Skill and Analysis of Soccer and Speedball (1 cr)

Outdoor/Recreational Skill Courses (All to be completed prior to or concurrent with Pedagogy course sequence)

PEP 243	Recreation Activities (2 cr)
Rec 125	Outdoor Leisure Pursuits (2 cr)

Foundation Courses

Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
H&S 245	Introduction to Athletic Injuries (3 cr)
H&S 288	First Aid: Emergency Response (or current Emergency Response and CPR certification at the time of graduation) (2 cr)
PEP 161	Introduction to Physical Education (1 cr)
PEP 300	Applied Human Anatomy and Biomechanics (2 cr)
PEP 360	Motor Behavior (3 cr)
PEP 380	Assessment & Research in Physical Activity Pedagogy (3 cr)
PEP 418	Physiology of Exercise (3 cr)

Pedagogy Courses

Note: Acceptance into the physical education pedagogy sequence requires completion with no grade lower than a "C" in movement and skill courses, a minimum GPA of 2.75, appropriate portfolio evidence, advisor recommendation, PEP 161, PEP 300, PEP 360, EDCI 201, EDCI 301, and at least 6 of the 14 credits of required skill courses.

PEP 412	Elementary Methods in Physical Activity Pedagogy (3 cr)
PEP 421	Secondary Methods in Physical Activity Pedagogy (3 cr)
PEP 424	Inclusive Physical Education and Recreation (3 cr)
PEP 440	Curriculum & Administration in Physical Activity Pedagogy (1 cr)

General College of Education Requirements

EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 401	Internship Seminar (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
PEP 484	Internship in Physical Education Teaching (14 cr)

One of the following (3 cr):

Psyc 101	Intro to Psychology (3 cr)
Psyc 305	Developmental Psychology (3 cr)

Advanced Composition Requirement (Select one of the following) (3 cr):

Engl 207	Persuasive Writing (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

Courses to total 128 credits for this degree

Note: For registration in upper-division courses in education, students must have been admitted to the teacher education program and maintain a cumulative GPA of 2.75. For admission criteria, refer to "Admission to the Teacher Education Program" in the College of Education section.

Recreation (B.S.Rec.)

A minimum cumulative university GPA of 2.25 is required of all recreation majors who seek to take upper-division courses. Recreation majors must also achieve a minimum cumulative university GPA of 2.25 to graduate with a B.S.Rec. degree.

Required course work includes the university requirements (see regulation J-3), an academic minor or 20 credits in an approved cognate area of study, the Department of Movement Sciences core and the following coursework:

Comm 101	Fundamentals of Public Speaking (2 cr)
Rec 104	Introduction to Recreation, Parks, and Tourism Professions (3 cr)
Rec 107	Outdoor Recreation and Tourism Pursuits (3 cr)
Rec 240	Recreation Activities, Programming and Marketing (3 cr)
Rec 260	Foundations of Leisure and Society (3 cr)
Rec 280	Recreation Practicum in Recreation, Parks and Tourism (1 cr)
Rec 370	Leisure, Health and Human Development (3 cr)
Rec 424	Inclusive Physical Education and Recreation (3 cr)
Rec 485	Trends in Recreation, Parks and Tourism (3 cr)
Rec 498	Internship in Recreation, Parks and Tourism (9 cr)

Additional courses selected from the following (6 cr):

Rec 254	Camp Leadership in Recreation and Sport (3 cr)
Rec 310	Outdoor and Adventure Leadership (3 cr)
Rec 395	Diversity in Recreation, Parks and Tourism (3 cr)
Rec 408	Experiential Education and Adventure Recreation (3 cr)
Rec 204 or Rec 404	Special Topics (cr arr)
Rec 299 or Rec 499	Directed Study (cr arr)

One of the following (2-3 cr):

H&S 288	First Aid: Emergency Response (2 cr)
Rec 290	Wilderness First Responder (or Emergency Responder Certification) (2 cr)

One of the following (2-3 cr):

CSS 310	Social Research Methods in Conservation (4 cr)
Rec 455	Design & Analysis of Research in Movement Sciences (3 cr)

One of the following (3 cr):

Engl 207	Persuasive Writing (3 cr)
Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

Four credits of the following courses (only two may be B.I.P. courses, Dan 105 or PEB 106, PEB 107, PEB 108) selected from Dan 105; PEB 106, PEB 107, PEB 108, PEP 132, PEP 133, PEP 134, PEP 135, or PEP 136,; Rec 222, Rec 223, Rec 224, Rec 225, or Rec 227

Courses to total 120 credits for this degree

Movement Sciences Academic Minor Requirements

Coaching Minor

FCS 305	Nutrition Related to Fitness and Sport (2 cr)
H&S 245	Introduction to Athletic Injuries (3 cr)
H&S 289	Drugs in Society (2 cr)
PEP 204	Special Topics: Coaching (2 cr)
PEP 305	Applied Sports Psych (3 cr)
PEP 495	Practicum (1 cr)

One of the following (2-3 cr)

PEP 300	Applied Human Anatomy and Biomechanics (2-3 cr)
PEP 418	Physiology of Exercise (3 cr)

Courses to total 20 credits for this minor

Note: PEP 300 and PEP 418 have prerequisite requirements.

Dance Minor

Dan 210	Dance Theatre (2 cr)
Dan 320	Labanotation (3 cr)
Dan 321	Dance Pedagogy (3 cr)
Dan 384	Dance Composition I (3 cr)
Dan 421	Dance History (3 cr)

Seven credits selected from Ballet, Jazz, and Modern (7 cr):

Dan 216	Techniques (cr arr)
Dan 416	Advanced Technique (cr arr)

Courses to total 20 credits for this minor

Outdoor Recreation Leadership Minor

For information on an academic minor in Outdoor Recreation Leadership, see the Department of Conservation Social Sciences section.

Sport Science Minor

Note: H&S 245 and PEP 418 have prerequisite requirements.

FCS 205	Concepts in Human Nutrition (3 cr)
FCS 305	Nutrition Related to Fitness and Sport (2 cr)
H&S 150	Wellness Lifestyles (3 cr)
H&S 350	Stress Management and Mental Health (2 cr)
PEP 418	Physiology of Exercise (3 cr)
PEP 495	Practicum (40 hrs minimum) (1 cr)

One of the following (2-3 cr):

H&S 245	Introduction to Athletic Injuries (3 cr)
H&S 288	First Aid: Emergency Response (2 cr)

Courses selected from the following (4-6 cr):

H&S 289	Drugs in Society (2 cr)
H&S 490	Health Promotion (3 cr)
PEB 106	Weight Training and Conditioning (1 cr)
PEB 108	Water-Based Sports and Fitness Activities :Aqua Fitness or Water Aerobics (1 cr)
PEP 305	Applied Sports Psychology (3 cr)
PEP 493	Fitness Assessment and Prescription (3 cr)

Courses to total 20 credits for this minor

Sustainable Tourism and Leisure Enterprises Minor

For information on an academic minor in Sustainable Tourism and Leisure Enterprises, see the Department of Conservation Social Sciences section.

Movement Sciences Graduate Degree Programs

The Graduate Record Examination is not required for admission to the master's programs. However, candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Movement Sciences. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Education, Physical Education major. This program has two tracks available. The first track is designed to provide post-baccalaureate certification in teaching K-12 physical education. The second track is designed for certified teachers who are interested in improving their teaching practice in physical education.

Master of Science in Athletic Training, Athletic Training major. The M.S.A.T. is an entry level program designed to prepare students to become a certified athletic trainer. After successful completion of this program students will be eligible for the athletic training national Board of Certification Exam.

M.S.A.T. Admission Requirements: Students are eligible to apply for admission to the MSAT program via two distinct routes.

Students who have obtained a bachelor's degree (3.0 or >3.0) and the required prerequisite coursework (4 credit hours of human anatomy or equivalent & 4 credit hours of human physiology or equivalent) are eligible for consideration of admission to the MSAT.

OR

Students who are enrolled in an academic institution with whom the University of Idaho and the MSAT have a 3+2 transitional program articulation* agreement may apply to the MSAT during their junior year of study for entrance in early summer with **Conditional Admittance**. Students must be approved for application to the 3+2 program from their specified undergraduate program director (and have met the criteria within the articulation agreement) before they apply to the MSAT***.

* Note: The University of Idaho's 3+2 program leading to the application to the MSAT is the Bachelor of Science in Physical Education with a major in Exercise Science and Health (3+2 track). Please contact the Division of Athletic Training for information regarding other Universities with approved MSAT 3+2 articulation agreements.

**Conditional Admittance- Students may be admitted to the MSAT "Conditionally", without first having had completed a Bachelor's degree. These students will apply the first two semesters of the MSAT curriculum to their undergraduate degree in order to satisfy their Bachelor's degree requirements. Students will apply for graduation during the Fall of their first year in the MSAT program and will have the "Conditional Admittance" removed upon fulfilling all requirements of their Bachelor's degree program.

*** Note: The 3+2 program will meet all other admission standards set forth by the College of Graduate Studies and the Masters of Science in Athletic Training Program.

The M.S.A.T. in Athletic Training requires the following courses:

AT 506	Clinical Anatomy I (3 cr)
AT 507	Care and Prevention of Injuries and Illnesses (3 cr)
AT 508	Evaluation and Diagnosis of Injuries and Illnesses I (4 cr)
AT 509	Principles of Rehabilitation (3 cr)
AT 510	Therapeutic Modalities (2 cr)
AT 511	Ethics and Administration in Athletic Training (3 cr)
AT 512	Research Methods & Statistics I (3 cr)
AT 513	General Medicine for Athletic Trainers (3 cr)
AT 514	Psychology of Injury and Referral (3 cr)
AT 515	Research Proposal (3 cr)
AT 520	Clinical Education I (2 cr)
AT 521	Clinical Experience I (4 cr)
AT 522	Clinical Education II (2 cr)
AT 523	Clinical Experience II (4 cr)
AT 531	Clinical Anatomy II (3 cr)
AT 532	Evaluation and Diagnosis of Injuries and Illnesses II (4 cr)
AT 533	Applied Rehabilitation Techniques (3 cr)
AT 534	Therapeutic Modalities II (2 cr)
AT 535	Seminar in Athletic Training (1 cr)
AT 536	Research Methods & Statistics II (3 cr)
AT 538	Advanced Human Biomechanics (3 cr)
AT 539	Advanced Exercise Physiology (3 cr)
AT 540	Pharmacology for Athletic Trainers (3 cr)
AT 541	Seminar in Athletic Training II (2 cr)
AT 542	Research Presentation (1 cr)
AT 547	Critical Issues in Athletic Training Clinical Practice (3 cr)
AT 550	Clinical Education III (2 cr)
AT 551	Clinical Experience III (4 cr)
AT 552	Clinical Education IV (2 cr)
AT 553	Clinical Experience IV (4 cr)
AT 587	Prevention and Health Promotion in Athletic Training (3 cr)

Master of Science, Movement and Leisure Sciences major. This program provides students the skills, tools, and philosophy necessary to be servant leaders in organizations related to physical activity, sport and recreation.

Doctor of Philosophy, Education major. The department participates in the Ph.D. program in the College of Education, with concentrations in sport pedagogy & character education or exercise science. Sport pedagogy & character education develops individuals who lead, serve, and research learning and teaching as applied to character and value laden

issues in physical education and recreation. Exercise science prepares students to teach, conduct research, and provide services related to Exercise Science disciplines in higher education (exercise physiology, sport psychology, motor control, and biomechanics) and other exercise-related institutions.

Doctor of Athletic Training, Athletic Training major. The department offers a D.A.T. program. This program is designed for certified athletic trainers who are interested in improving their clinical practice through a structured academic program with a clinical practice residency. Please contact the department for any inquires in this program. The following courses are required:

AT 606	Professional and Post-Professional Education in Athletic Training (3 cr)
AT 610	Seminar in Athletic Training I (3 cr)
AT 611	Seminar in Athletic Training II (3 cr)
AT 620	Research Methods in Athletic Training I (3 cr)
AT 621	Research Methods in Athletic Training II (3 cr)
AT 622	Advanced Action Research in Athletic Training (3 cr)
AT 623	Qualitative Methods and Research Design in Athletic Training (3 cr)
AT 624	Quantitative Methods and Statistics in Athletic Training (3 cr)
AT 625	Dissertation of Clinical Practice Improvement: Analysis and Dissemination of Action Research Project (3 cr)
AT 630	Current Issues in Clinical Practice I (3 cr)
AT 631	Current Issues in Clinical Practice II (3 cr)
AT 632	Current Issues in Clinical Practice III (3 cr)
AT 633	Current Issues in Clinical Practice IV (3 cr)
AT 640	Clinical Residency I (6 cr)
AT 641	Clinical Residency II (6 cr)
AT 642	Clinical Residency III (6 cr)
AT 643	Clinical Residency IV (6 cr)

The department also participates in the interdisciplinary M.S. and Ph.D. in Neuroscience and the M.S. in Bioregional Planning and Community Development. Persons interested in doctoral study should visit the College of Education and departmental web page for more information about admission requirements and application procedures.

Lionel Hampton School of Music

Torrey E. Lawrence, Director (205 Music Bldg. 83844-4015; phone 208/885-6231; music@uidaho.edu; www.uidaho.edu/music). Faculty: Carol Padgham Albrecht, Pamela G. Bathurst, Daniel J. Bukvich, Barry Bilderback, Ferenc P. Cseszko, Robert H. Dickow, Kristin M. Elgersma, Loraine D. Enloe, Kyle W. Ferrill, Leonard L. Garrison, Alan J. Gemberling, Torrey E. Lawrence, Roger D. McVey, James L. Murphy, Michael T. Murphy, James E. Reid, Vanessa R. Sielert, Vern A. Sielert, Amanda C. Soto, Miranda C. Wilson, Rajung Yang, Kay Zavislak. Affiliate Faculty: Susan R. Billin, Claudia Krone

The Lionel Hampton School of Music, so designated in 1987 in honor of the eminent American jazz musician, is an accredited institutional member of the National Association of Schools of Music. Established as a department in 1893, it was elevated to school status in 1969.

The courses and curricula in music seek to prepare elementary, secondary, and college teachers of music; to train professional musicians; to enrich the cultural environment for students and provide liberal-arts instruction; and to engage in research in music performance and teaching for the general benefit of the public and the discipline of music.

Students in this school learn by performing, listening, analyzing, and creating music. Emphasis is on the understanding of musical styles and techniques of all eras, including contemporary music. Musical studies balance the aesthetic and the practical, with ample opportunity for exploration and self-reliance.

The formal undergraduate curricula of the School of Music consist of degree programs in the following areas:

Bachelor of Music in Performance

Specialization in voice, piano, guitar, or any orchestral instrument.

Bachelor of Music in Composition

Bachelor of Music in Music Education

Specialization in vocal music education, instrumental music education, or a combined program in vocal and instrumental music education.

Bachelor of Music in Business

Specialization in performance or composition combined with studies in accounting, economics, statistics, management, and marketing.

Bachelor of Arts in Music

Emphasis in music theory, music history, or applied music. Applied music study can be in any of the areas of specialty listed under the Bachelor of Music in Performance.

Bachelor of Science in Music

Emphasis in music theory, music history, or applied music. Applied music study can be in any of the areas of specialty listed under the Bachelor of Music in Performance.

Bachelor of Fine Arts in Musical Theatre

Specialization in voice, theatre and dance

The B.Mus. degree is professionally oriented, and is the normal preparation for graduate study in music or for teacher education. The B.A. and B.S. degrees emphasize a broad liberal-arts education. The B.F.A. degree provides rigorous musical theatre training. Acceptance to the B.Mus., B.A., B.S., and B.F.A. degree programs requires an audition. The School of Music also offers a minor in music and participates in the university core curriculum. The ensembles and performing groups sponsored by the School of Music are open to all students, regardless of major.

The Music Building houses faculty studios, ensemble rehearsal areas, classrooms, an electronic music lab, a music education materials center, and a newly renovated recital hall. Individual practice rooms are available in nearby Ridenbaugh Hall. Recording, radio-television, language listening lab, and computer facilities of the campus are also used by music students. In addition to organ, harpsichord, harp, and piano practice instruments, the school maintains two performance pipe organs, three concert grand pianos, and a concert harpsichord.

The School of Music offers degrees at the master's level; Master of Music degrees are available in music education, performance (vocal and instrumental), composition, accompanying, and piano pedagogy and performance studies. The Master of Arts option is in music history. Acceptance into the M.Mus. degree programs require an audition, except in music education, which requires a .

The school offers prospective graduate students a wide range of individual and group instruction opportunities as preparation for professional careers in music either as performers, composers, scholars, or music educators. Study is enriched through participation in recitals in addition to participation in both small and large vocal and instrumental ensembles.

Admission to the Master of Music program varies by the area of concentration. Please see the Lionel Hampton School of Music website (uidaho.edu/class/music/graduate) for the requisite application materials listed by concentration. Admission to the M.A. or M.Mus. program in this school normally requires a baccalaureate degree in music from an accredited institution. During the first semester of enrollment, a supervisory committee and a chair of that committee will be appointed.

While the primary emphasis of graduate work is concerned with subject matter areas, the importance of performance is not neglected. Students are encouraged, and in some cases required, to participate in one organized ensemble each academic session in residence.

Courses

See the course description section for courses in Applied Performance Studies (MusA), Theory and Composition (MusC), History and Literature (MusH), Music Teaching (MusT), General (MusX).

Music Undergraduate Curricular Requirements

General Requirements for all B.A., B.F.A., B.S., and B.Mus. Degrees

Minimum Grade Requirement. A music student, either major or minor, must achieve a minimum grade of C in each music course, either resident or transfer, which is applicable to a degree program in music before the student will be eligible for graduation. BFA musical theatre majors must achieve a minimum grade of C in each music, theatre and dance course which is applicable to the musical theatre major before the student will be eligible for graduation.

Ensemble Participation. An undergraduate music major must: (1) earn a minimum of eight credits in ensemble participation to be eligible for graduation and (2) enroll in an ensemble during each semester of full-time study. Various requirements are contained in the specific curricula. For curricular purposes, "major ensemble" is defined to mean MusA 116/316 Concert Choir - Vandaleers, 117/317 University Chorus,

119/319 Marching Band, 121/321 Concert Band, 122/322 Orchestra, or 320 Wind Ensemble. Other ensembles (listed in some curricula under "Chamber Music") consist of MusA 118/318 Jazz Choir, 315 Accompanying, 323 Jazz Ensemble, 365 Chamber Ensemble, and 380 Opera/Musical Theatre Studio. For students in the B.A. or B.S. in Applied Music or the B.Mus. in Music: Business, the following minimum requirements apply depending on the primary applied area of the student:

Orchestral Instrument: six credits in instrumental major ensemble and two additional credits in any instrumental ensemble.

Voice: six credits in vocal major ensemble and two additional credits in any vocal ensemble.

Keyboard: two credits in any major ensemble, four credits in MusA 315 Accompanying, and two credits in MusA 365 Chamber Ensemble.

Guitar: four credits in any major ensemble and four credits in MusA 365-02 Chamber Ensemble: Guitar Ensemble.

Transfer students must have a minimum of four semesters of ensemble participation at UI, at least two of which must be in a major ensemble.

Convocation-Recital Attendance. Because listening experiences constitute an area of major importance in the study of music, all music majors (excluding BFA musical theatre majors) and music minors are required to register for MusX 140, Convocation; music majors must attend 10 recitals per semester for seven semesters and music minors must attend 10 recitals per semester for two semesters. Students must attend a full concert or program in order for it to be counted toward convocation-recital requirements. Recital credit will not be granted for those performances in which a student participates. In addition, music majors must attend the weekly convocation series (studio class, area recital, and convocation). Transfer students are expected to enroll in MusX 140 during their first registration, and to receive a passing grade in a specific number of semesters (to be determined when the student's program is set up). Transfer students must have a minimum of two semesters of convocation at UI.

Upper-Division Standing (UDS). For a B.Mus., B.A. and B.S. music major to enroll in MusA 324 or MusA 334, the student must have been granted upper-division standing (UDS). Students applying for UDS must:

1. have completed with a "C" or better, or be currently enrolled in, MusC 242 Music Theory IV, MusH 111 Introduction to Music Literature and the courses listed in one of the following scenarios: (A). MusA 246 Class Piano and MusC 240 Aural Skills IV; (B). MusA 146 Class Piano and MusC 240 Aural Skills IV; or (C). MusA 246 Class Piano and MusC 140 Aural Skills II
2. have passed a special jury examination demonstrating the of mastery of the fundamentals of the student's major area of performance/composition and the potential to continue improving in a manner that will lead to the successful completion of performance/composition requirements of the degree and major emphasis (the jury examination requirement must be met, regardless of double majors, before a student can enroll in MusA 324 or MusA 334).

Transfer students with at least two years of college study as a music major and double majors with one major outside of music may apply for UDS if they have at least one year of music theory, aural skills and piano, one semester of music history, four semesters of studio instruction at the music major level and the approval of the studio instructor or area coordinator in the case of voice and keyboard. An Upper Division Standing jury examination presented after the third week will not count towards the semester in which it was presented. Students who fail to pass the UDS requirements within three tries are ineligible to continue to pursue a music major.

In order to register for upper-division music education courses (not including instrumental techniques courses), an undergraduate music education major must: (1) make application to upper-division music education courses by completing and submitting an application form (available in the music office) to the chair of the Music Education Committee–this should be done in the semester in which the student applies for upper division standing (UDS). If the student does not pass UDS, he/she must resubmit a music education application form; (2) successfully complete EDCI 201 and the necessary core courses to meet the requirements of the application to Teacher Education in the College of Education; (3) obtain a "C" or better in music courses and at least a 2.5 overall GPA; and (4) pass the studio instruction upper-division standing jury.

Application for Candidacy in the B.F.A. Musical Theatre Program. The Bachelor of Fine Arts degree in Musical Theatre is a rigorous training program for students wishing to pursue a career in musical theatre. In order for a B.F.A. candidate to enroll in MusA 324 Studio Instruction and The 425 Acting Studio, the student must be admitted to the B.F.A. Musical Theatre program. Students applying for candidacy in the B.F.A. Musical Theatre program must: (1) have completed MusC141 Music Theory, MusC 139 Aural Skills, one semester of MusA 115 and two semesters of MusA 124 Studio Instruction, MusA 145 Class Piano and The 105 Basics of Performance, with a grade of "C" or better in all completed courses; (2) have completed or be currently enrolled in MusC 142 Music Theory, MusC 140 Aural Skills, MusH 101 Survey of Music or MusH 111 Introduction to Music Literature, a third semester of MusA 124 Studio Instruction, MusA 146 Class Piano, The 101 Intro to the Theatre, The 106 Basics of Performance and The 305 Intermediate Acting, with a grade of "C" or better in all completed courses; (3) have a minimum 3.0 overall gpa or better;(4) submit a portfolio; (5) have passed the B.F.A. audition demonstrating the mastery of the fundamentals of voice and acting and the potential to continue improving in a manner that will lead to the successful completion of the requirements of the degree and (6) have faculty approval. Transfer students with at least two years of college study as a musical theatre major, may apply for candidacy in the B.F.A. Musical Theatre program if they have at least one year of music theory, aural skills and piano, one semester of music history, four semesters of studio instruction at the music major level, and The 101 Intro to the Theatre, The 105/106 Basics of Performance and The 305 Intermediate Acting. Students who fail to pass the BFA audition within three tries are ineligible to continue to pursue a Musical Theatre major.

Diagnostic Exam in Theory and Aural Skills. The goal of this exam is to advise transfer students regarding deficiencies in their prior theory training; this exam is not available to freshmen. A study guide is available on the web. The exam is given during the first week of classes each semester, as needed. . The exam will not be used for "advanced placement" or "credit by examination," as the regulations regarding these procedures are covered in regulation D-4. Written evaluation of each student's achievement will be placed in his or her advising file, and the student will be counseled appropriately.

Transfer Credits. Transfer credits will be accepted at the upper-division level only if taken at the upper-division level from the original institution (i.e., a 100- or 200-level course will not transfer as a 300- or 400-level course requirement). The applicability of these credits to the student's program of study is determined by the Lionel Hampton School of Music. If a transfer student has taken a 100-level survey of music course, the student may use this course in lieu of MusH 111, if he/she can demonstrate knowledge of world music. In order for a student to meet world music competency, he/she may:

1. Participate in an ensemble such as MusA 365 World Beat Ensemble
2. Take MusH 420 Studies in World Music

Music: Applied Music (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3), the CLASS requirements for the B.A. or B.S. degree, and:

MusA 115	Studio Instruction (2 cr)
MusA 124	Studio Instruction (major instrument or voice) (6 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 324	Studio Instruction (major instrument or voice) (8 cr)
MusA 490	Half Recital (0 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)

MusA ensembles (in eight different semesters) (see "Ensemble Participation" above for requirements) (8 cr)

Courses to total 128 credits for this degree (including at least 72 cr in non-music courses)

Students may also complete an optional Emphasis in Jazz Performance by completing the following course work (12 cr):

MusA 210	Jazz Improvisation (2 cr)
MusC 329	Theoretical Basis of Jazz (2 cr)
MusH 410	Studies in Jazz History (3 cr)

Electives in ensembles, combos, or applied study (5 cr)

Note: Students whose primary instrument is voice must substitute MusX 283-284 Diction for Singers for four credits of non-music electives, thus reducing the non-music credits from 72 to 68.

Music: History and Literature (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3), the CLASS requirements for the B.A. or B.S. degree, and:

MusA 114	Studio Instruction (4 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 314	Studio Instruction (one instrument/voice) (4 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusH 480	Senior Thesis in Music History I (1 cr)
MusH 481	Senior Thesis in Music History II (1 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)

Upper-division MusH electives (4 cr)
Upper-division MusC elective (2 cr)
MusA ensembles (in eight different semesters) (Keyboard majors: of these eight, two semesters must be MusA 315 Collaborative Piano) (Guitar majors: of these eight, two semesters must be MusA 365 Guitar Ensemble) (8 cr)

Courses to total 128 credits for this degree (including a least 70 cr in non-music courses)

Students may also complete an optional Emphasis in Jazz History by completing the following course work (12 cr):

MusA 210	Jazz Improvisation (2 cr)
MusC 329	Theoretical Basis of Jazz (2 cr)
MusH 410	Studies in Jazz History (3 cr)

Electives in history, ensembles, combos, or applied study (2 cr)

Music: Theory (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3), the CLASS requirements for the B.A. or B.S. degree, and:

MusA 114	Studio Instruction (4 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 314	Studio Instruction (one instrument/voice) (4 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 442	Musical Analysis (2 cr)
MusC 480	Senior Thesis in Music Theory I (1 cr)
MusC 481	Senior Thesis in Music Theory II (1 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)

Upper-division MusC electives (4 cr)
MusA ensembles (in eight different semesters) (Keyboard majors: of these eight, two semesters must be MusA 315 Collaborative Piano) (Guitar majors: of these eight, two semesters must be MusA 365 Guitar Ensemble) (8 cr)

Courses to total 128 credits for this degree (incl at least 72 cr in non-music courses)

Music: Instrumental Performance (B.Mus.)

Required course work includes the university requirements (see regulation J-3) and the specific requirements in one of the two sections below. It is strongly recommended and in some cases required that instrumentalists elect pedagogy courses appropriate to their major fields.

A. Keyboard

MusA 115	Studio Instruction (2 cr)
MusA 134	Studio Instruction (9 cr)
MusA 246	Piano Class for Music Majors/Minors (1 cr)
MusA 315	Collaborative Piano (4 cr)
MusA 334	Studio Instruction (12 cr)
MusA 365	Chamber Ensemble (2 cr)
MusA 387	Conducting I (2 cr)
MusA 455	Keyboard Performance Practices (1 cr)
MusA 490	Half Recital (0 cr)
MusA 491	Recital (0 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 331	Counterpoint (3 cr)
MusC 442	Musical Analysis (2 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusH 454	Keyboard Repertoire I (2 cr)
MusH 455	Keyboard Repertoire II (2 cr)
MusT 436	Pedagogy and Materials: Keyboard I (2 cr)
MusT 437	Pedagogy and Materials: Keyboard II (2 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)

MusH elective at the 400-level (3 cr)
Major ensemble (two different semesters chosen from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus, MusA 119/319 Marching Band, MusA 121/321 Concert Band, MusA 122/322 Orchestra, or MusA 320 Wind Ensemble) (2 cr)
Music electives to complete 84 cr in music (5 cr)
Courses to total 128 credits for this degree

B. Orchestral Instruments or Guitar

MusA 115	Studio Instruction (2 cr)
MusA 134	Studio Instruction (9 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 334	Studio Instruction (12 cr)
MusA 387	Conducting I (2 cr)
MusA 490	Half Recital (0 cr)
MusA 491	Recital (0 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 331	Counterpoint (3 cr)
MusC 442	Musical Analysis (2 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)

One of the following (2 cr):

MusH 450	Orchestral Literature (2 cr)
MusH 451	Repertoire (2 cr)

MusH elective at the 400-level (3 cr)
Major ensemble (eight different semesters chosen from MusA 121/321 Concert Band, MusA 122/322 Orchestra, MusA 320 Wind Ensemble.) (4 cr in four different semesters reqd for guitar majors, who may also choose from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus, MusA 119/319 Marching Band) (8 cr)
Chamber music (two different semesters chosen from MusA 323 Jazz Ensemble, MusA 365 Chamber Ensemble, MusA 366 Orchestral Repertoire (maximum of one semester) (4 cr in four different semesters of MusA 365: Guitar Ensemble, reqd for guitar majors) (2 cr)
Music electives to complete 84 cr in music (5-7 cr)
Courses to total 128 credits for this degree

Students may also complete an optional Emphasis in Jazz Performance by completing the following course work (15 cr):

MusA 210	Jazz Improvisation (2 cr)
MusC 329	Theoretical Basis of Jazz (2 cr)
MusH 410	Studies in Jazz History (3 cr)

Electives in ensembles, combos, or applied study (8 cr)

Note: MusT 435, Pedagogy and Materials: Guitar (2 cr) and MusH 451 Repertoire: Guitar (2 cr) are required of guitar majors. All other orchestral instrument majors are required to take MusH 450 Orchestral Literature. Saxophone majors may take MusH 410 History of Jazz in place of MusH 450.

Music: Vocal Performance (B.Mus.)

Required course work includes the university requirements (see regulation J-3) and:

MusA 115	Studio Instruction (2 cr)
MusA 134	Studio Instruction (9 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 334	Studio Instruction (12 cr)
MusA 380	Opera/Musical Theatre Studio (two different semesters) (2 cr)
MusA 387	Conducting I (2 cr)
MusA 490	Half Recital (0 cr)
MusA 491	Recital (0 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 331	Counterpoint (3 cr)
MusC 442	Musical Analysis (2 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusH 452	Solo Vocal Repertoire (2 cr)
MusT 435	Pedagogy and Materials: Voice (2 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)
MusX 283, MusX 284	Diction for Singers (4 cr)

MusH elective at the 300/400 level (3 cr)
Foreign language (two years of one language or one year each of two languages) (16 cr)
Major ensemble (eight different semesters chosen from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus) (8 cr)
Music electives to complete 84 cr in music (1 cr)
Courses to total 128 credits for this degree

Music: Composition (B.Mus.)

Required course work includes the university requirements (see regulation J-3) and:

MusA 114	Studio Instruction (if major performing medium is other than piano, piano is suggested for the minor area) (2 cr)
MusA 115	Studio Instruction (2 cr)
MusA 124	Studio Instruction (6 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 324	Studio Instruction (4 cr)
MusA 387	Conducting I (2 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 260	Introduction to Composition (1 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusC 331	Counterpoint (3 cr)
MusC 425	Composition (8 cr)
MusC 426	Electronic Music (2 cr)
MusC 442	Musical Analysis (2 cr)
MusC 490	Senior Recital (0 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)

MusH elective at the 400-level (3 cr)
Major ensemble (eight different semesters chosen from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus, MusA 119/319 Marching Band, MusA 121/321 Concert Band, MusA 122/322 Orchestra, MusA 125/325 Symphonic Band or MusA 320 Wind Ensemble) (Keyboard majors: six semesters of major ensembles in addition to two semesters of MusA 315 Collaborative Piano and/or MusA 365 Keyboard Ensemble)(Guitar majors: six semesters of major ensembles and two semesters of MusA 365 Guitar Ensemble) (8 cr)
Chamber music (two different semesters chosen from MusA 118/318 Jazz Choir, MusA 323 Jazz Ensemble, MusA 365 Chamber Ensemble, MusA 366 Orchestral Repertoire (maximum of one semester)) (2 cr)
Music electives to complete 84 cr in music (4 cr)
Courses to total 128 credits for this degree

Students may also complete an optional Emphasis in Jazz Composition/Arranging by completing the following course work (15 cr):

MusA 210	Jazz Improvisation (2 cr)
MusC 204	Special Topics: Jazz Arranging (2 cr)
MusC 329	Theoretical Basis of Jazz (2 cr)
MusH 410	Studies in Jazz History (3 cr)

Electives in composition, arranging, ensembles, or combos (6 cr)

Music: Business (B.Mus.)

Required course work includes the university requirements (see regulation J-3) and:

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
Bus 301	Financial Management (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 201	Principles of Macroeconomics (3 cr)
Econ 202	Principles of Microeconomics (3 cr)
MusA 115	Studio Instruction (2 cr)
MusA 124	Studio Instruction (6 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 324	Studio Instruction (8 cr)
MusA 387	Conducting I (2 cr)
MusA 490	Half Recital (0 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusX 101	Orientation for Music Majors (0 cr)

MusX 140	Convocation (seven semesters) (0 cr)
Stat 251	Statistical Methods (3 cr)

MusA ensemble (in eight different semesters) (see "Ensemble Participation" above for requirements) (8 cr)
MusC elective at the 300 or 400 level (2-3 cr)
MusH elective at the 400 level (2-3 cr)
Music electives (to total 64 credits in music) (0-2 cr)

Two of the following courses (6 cr):

BLaw 265	Legal Environment of Business (3 cr)
Bus 324	Consumer Behavior (3 cr)
Bus 412	Human Resource Management (3 cr)
Bus 413	Organizational Behavior (3cr)
Bus 427	Services Marketing (3 cr)

Courses to total 128 credits for this degree

Note: Students who wish to emphasize composition must: (1) take four credits of MusC 425 Composition, as their upper-division theory elective, and (2) substitute MusC 490, Recital, for MusA 490, Half Recital.

Students whose primary instrument is voice must substitute MusX 283-MusX 284 Diction for Singers for either the MusC or MusH elective.

Music Education: Vocal (B.Mus.)

NOTE: For registration in upper-division courses in education, students must have been admitted to the teacher education program and maintain a GPA of 2.75. For admission criteria, refer to "Admission to the Teacher Education Program" in the College of Education section.

Required course work includes the university requirements (see regulation J-3) and the specific requirements in one of the two sections below:

A. Voice

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 453	Phonics, Phonological Awareness, Fluency, and Assessment (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
MusA 114	Studio Instruction: Piano (2 cr)*
MusA 115	Studio Instruction (2 cr)
MusA 124	Studio Instruction: Voice (6 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 324	Studio Instruction: Voice (6 cr)
MusA 380	Opera/Musical Theatre Studio (1 cr)
MusA 387, 487	Conducting I, II (4 cr)
MusA 490	Half Recital (0 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusT 382	General Music Methods (3 cr)
MusT 383	Principles of Music Teaching (3 cr)
MusT 385	Choral Music in the Secondary School (3 cr)
MusT 432	Practicum: Music Teaching (14 cr)
MusT 435	Pedagogy and Materials: Voice (2 cr)
MusT 445	Proseminar in Music Teaching (1 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)
MusX 283, MusX 284	Diction for Singers (4 cr)
Psyc 101	Introduction to Psychology (3 cr)

Major ensemble (six different semesters chosen from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus) (6 cr)
Other ensemble (one semester chosen from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus, MusA 118/318 Jazz Choir, MusA 365 Chamber Ensemble, MusA 380 Opera/Musical Theatre Studio) (1 cr)

Courses to total 128 credits for this degree

** Voice majors must register for piano class before enrolling in applied piano instruction.*

B. Keyboard

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
MusA 114	Studio Instruction: Voice (5 cr)*
MusA 115	Studio Instruction (2 cr)
MusA 124	Studio Instruction: Piano (6 cr)
MusA 147	Voice Class (1 cr)
MusA 246	Piano Class for Music Majors/Minors (1 cr)
MusA 315	Collaborative Piano (2 cr)
MusA 324	Studio Instruction: Piano (6 cr)
MusA 380	Opera/Musical Theatre Studio (1 cr)
MusA 387, MusA 487	Conducting I, II (4 cr)
MusA 490	Half Recital (0 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusT 382	General Music Methods (3 cr)
MusT 383	Principles of Music Teaching (3 cr)
MusT 385	Choral Music in the Secondary School (3 cr)
MusT 432	Practicum: Music Teaching (14 cr)
MusT 435	Pedagogy and Materials: Voice (2 cr)
MusT 445	Proseminar in Music Teaching (1 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)
MusX 283, MusX 284	Diction for Singers (4 cr)
Psyc 101	Introduction to Psychology (3 cr)

Major ensemble (six different semesters chosen from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus) (6 cr)
Other ensemble (one semester chosen from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus, MusA 118/318 Jazz Choir, MusA 365 Chamber Ensemble, MusA 380 Opera/Musical Theatre Studio) (1 cr)

Courses to total 128 credits for this degree

** Keyboard majors must register for voice class before enrolling in applied voice instruction.*

Music Education: Instrumental (B.Mus.)

NOTE: For registration in upper-division courses in education, students must have been admitted to the teacher education program and maintain a GPA of 2.75. For admission criteria, refer to "Admission to the Teacher Education Program" in the College of Education section.

Required course work includes the university requirements (see regulation J-3) and:

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 453	Phonics, Phonological Awareness, Fluency, and Assessment (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
MusA 115	Studio Instruction (2 cr)
MusA 124	Studio Instruction (6 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 387, MusA 487	Conducting I, II (4 cr)
MusA 324	Studio Instruction (6 cr)
MusA 490	Half Recital (0 cr)
MusC 139, MusC 140,	Aural Skills (6 cr)

MusC 239, MusC 240	
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusT 251, MusT 253, MusT 254, MusT 255, MusT 352	Instrumental Techniques (5 cr)
MusT 256	String Techniques and Orchestral Literature (1 cr)
MusT 382	General Music Methods (3 cr)
MusT 383	Principles of Music Teaching (3 cr)
MusT 386	Instrumental Music in the Secondary School (3 cr)
MusT 432	Practicum: Music Teaching (14 cr)
MusT 445	Proseminar in Music Teaching (1 cr)
MusT 465	Jazz Band Rehearsal Techniques (2 cr)
MusT 466	Marching Band Techniques (1 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)
Psyc 101	Introduction to Psychology (3 cr)

Major ensembles (six different semesters) (6 cr)*
Other ensembles (two different semesters chosen from MusA 119/319 Marching Band, MusA 121/321 Concert Band, MusA 122/322 Orchestra, or MusA 320 Wind Ensemble, MusA 323 Jazz Ensemble, MusA 365 Chamber Ensemble, MusA 366 Orchestral Repertoire (maximum of one semester)) (students whose major applied medium is keyboard must select MusA 315 Collaborative Piano to satisfy this requirement) (2 cr)
Courses to total 128 credits for this degree

Students may also complete an optional Emphasis in Jazz Education by completing the following course work (15 cr):

MusA 210	Jazz Improvisation (2 cr)
MusC 204	Special Topics: Jazz Arranging (2 cr)
MusC 329	Theoretical Basis of Jazz (2 cr)
MusH 410	Studies in Jazz History (3 cr)
MusT 465	Jazz Band Rehearsal Techniques (2 cr)

Electives in ensembles, combos, or applied study (5 cr)

** The major ensemble requirement must be completed in six different semesters; **wind and percussion majors** must register for three different semesters of MusA 119/319 Marching Band and three different semesters of MusA 121/321 Concert Band, or MusA 320 Wind Ensemble. **Wind and percussion majors** may, by audition, substitute two semesters of MusA 122/322 Orchestra for MusA 121/321 Concert Band, or MusA 320 Wind Ensemble. **String majors** must register for six different semesters of MusA 122/322 Orchestra and one semester of MusA 119/319 Marching Band. **Keyboard and guitar majors** must enroll in one semester of MusA 119/319 Marching Band. **Keyboard and guitar majors** may substitute one semester of MusA 323 Jazz Band or MusA 365 Jazz Combo, a prerequisite for MusT 465, for one semester of major ensemble. They may enroll in large vocal ensembles to satisfy the remaining major ensemble requirements. **Wind, percussion, keyboard, and string majors** must have a total of four semesters of major ensemble participation (as defined above) at UI.*

Music Education: Vocal-Instrumental (B.Mus.)

NOTE: For registration in upper-division courses in education, students must have been admitted to the teacher education program and maintain a GPA of 2.75. For admission criteria, refer to "Admission to the Teacher Education Program" in the College of Education section of part four of this catalog.

Required course work includes the university requirements (see regulation J-3) and:

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 201	Contexts of Education (2 cr)
EDCI 301	Learning, Development, and Assessment (3 cr)
EDCI 453	Phonics, Phonological Awareness, Fluency, and Assessment (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
MusA 114	Studio Instruction (voice) (3 cr)
MusA 115	Studio Instruction (2 cr)
MusA 124	Studio Instruction (instrumental) (6 cr)
MusA 145 and MusA 245	Piano Class for Music Majors/Minors (2 cr)
MusA 146 and MusA 246	Piano Class for Music Majors/Minors (2 cr)
MusA 147	Voice Class (1 cr)
MusA 324	Studio Instruction (6 cr)
MusA 387, 487	Conducting I, II (4 cr)
MusA 490	Half Recital (0 cr)
MusC 139, MusC 140, MusC 239, MusC 240	Aural Skills (6 cr)
MusC 141, MusC 142, MusC 241, MusC 242	Theory of Music (10 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, MusH 322, MusH 323	Music in Western Civilization (9 cr)
MusT 251, MusT 253, MusT 254, MusT 255, MusT 352	Instrumental Techniques (5 cr)
MusT 256	String Techniques and Orchestral Literature (1 cr)
MusT 382	General Music Methods (3 cr)
MusT 383	Principles of Music Teaching (3 cr)
MusT 385	Choral Music in the Secondary School (3 cr)
MusT 386	Instrumental Music in the Secondary School (3 cr)
MusT 432	Practicum: Music Teaching (14 cr)
MusT 445	Proseminar in Music Teaching (1 cr)
MusT 465	Jazz Band Rehearsal Techniques (2 cr)
MusT 466	Marching Band Techniques (1 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)
Psyc 101	Introduction to Psychology (3 cr)

Major ensembles (six different semesters)* (6 cr)
Major ensembles (two different semesters chosen from MusA 116/317 Concert Choir - Vandaleers, MusA 117/ 317 University Chorus) (2 cr)
Other ensembles (two different semesters chosen from MusA 119/319 Marching Band, MusA 121/321 Concert Band, MusA 122/322 Orchestra, or MusA 320 Wind Ensemble, MusA 323 Jazz Ensemble, MusA 365 Chamber Ensemble, MusA 366 Orchestral Repertoire (maximum of one semester)) (students whose major applied medium is keyboard must select MusA 315 Collaborative Piano to satisfy this requirement) (2 cr)
Courses to total 128 credits for this degree

** The major ensemble requirement must be completed in six different semesters; **wind and percussion majors** must register for three different semesters of MusA 119/319 Marching Band and three different semesters of MusA 121/321 Concert Band, or MusA 320 Wind Ensemble. **Wind and percussion majors** may, by audition, substitute two semesters of MusA 122/322 Orchestra for MusA 121/321 Concert Band, or MusA 320 Wind Ensemble. **String majors** must register for six different semesters of MusA 122/322 Orchestra and one semester of MusA 119/319 Marching Band. **Keyboard and guitar majors** must enroll in one semester of MusA 119/319 Marching Band. **Keyboard and guitar majors** may substitute one semester of MusA 323 Jazz Band or MusA 365 Jazz Combo, a prerequisite for MusT 465, for one semester of major ensemble. They may enroll in large vocal ensembles to satisfy the remaining major ensemble requirements. **Wind, percussion, and string majors** must have a total of four semesters of major ensemble participation (as defined above) at UI.*

Musical Theatre (B.F.A.)

no longer offered

Required course work includes the university requirements (see regulation J-3) and:

MusA 115	Studio Instruction (2 cr)
MusA 124	Studio Instruction (6 cr)
MusA 145	Piano Class for Music Major/Minors (1 cr)
MusA 146	Piano Class for Music Majors/Minors (1 cr)
MusA 324	Studio Instruction (8 cr)
MusA 380	Opera/Musical Theatre Studio (in four different semesters) (4 cr)
MusA 491	Recital (0 cr)
MusC 139	Aural Skills I (2 cr)

MusC 140	Aural Skills II (2 cr)
MusC 141	Theory of Music I (2 cr)
MusC 142	Theory of Music II (2 cr)

MusH 330	History of Music Theatre (3 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 283	Diction for Singers (2 cr)
The 101	Introduction to the Theatre (3 cr)
The 105	Basics of Performance (3 cr)
The 106	Basics of Performance (3 cr)
The 206	Theatrical Makeup (1 cr)
The 390	Theatre Practice II (in four different semesters; at least 2 semesters in production and 2 semesters in performance) (4 cr)
The 425	BFA Acting Studio (18 cr)

One of the following (3 cr):

MusH 101	Survey of Music (3 cr)
MusH 111	Introduction to Music Literature (3 cr)

One of the following (3 cr):

The 417	Movement Studio (3 cr)
The 418	Voice Studio (3 cr)

Dance Electives (6 cr over 6 semesters) to be chosen from Dan 105, Dan 216, and Dan 416 in consultation with advisor*
Major ensemble (four different semesters chosen from MusA 116/316 Concert Choir - Vandaleers, MusA 117/317 University Chorus) (4 cr)
Courses to total 128 credits for this degree

**Note: Transfer students must have a minimum of 2 semesters of dance at the University of Idaho*

Music Academic Minor Requirements

Music Minor

MusA 114	Studio Instruction (4 cr)
MusA 145	Piano Class for Music Majors/Minors (1 cr)
MusA 146	Piano Class for Music Majors/Minors (1 cr)
MusC 139, MusC 140	Aural Skills I-II (4 cr)
MusC 141, MusC 142	Theory of Music I-II (4 cr)
MusX 140	Convocation (2 semesters) (0 cr)

One of the following (3 cr):

MusH 101	Survey of Music (3 cr)
MusH 111	Introduction to Music Literature (3 cr)

Select two courses (6 cr):

MusH 321	Music in Western Civilization I (3 cr)
MusH 322	Music in Western Civilization II (3 cr)
MusH 323	Music in Western Civilization III (3 cr)
MusH 330	History of Music Theatre (3 cr)

Music electives (4 cr)
Courses to total 20 credits for this minor

Note: Ensemble participation is recommended to meet the music electives requirement. Two credits of a major vocal ensemble (University Chorus or Vandaleers) are required for a music minor whose studio instruction is in voice.

Music Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the School of Music. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Arts. General M.A. requirements apply. Applicants for the M.A. degree may concentrate in music history. A reading competency in one foreign language is required. Admission to the program is by permission of the music history faculty.

Master of Music. Applicants for the M.Mus. degree may concentrate in music education; performance (with degree patterns in brass, choral conducting, keyboard, percussion, strings, voice and woodwinds); composition; piano pedagogy and performance studies; or collaborative piano. Admission to the Master of Music program varies by the area of concentration. Please see the Lionel Hampton School of Music website (www.uidaho.edu/class/music/graduate/applicationprocedures) for the requisite application materials listed by concentration. Except for students enrolled in the Master of Music in Music Education degree, all graduate music students must complete at least 18 semester hours of credit towards the Master of Music degree in residence on the University of Idaho Moscow campus..

Natural Resources

Kurt Pregitzer, Dean; Thomas Gorman, Associate Dean (202 College of Natural Resources Bldg.; 208/885-6442).

With approximately 90 percent of its area in forest and range lands, together with its wealth of water resources, Idaho offers excellent opportunities for undergraduate and graduate study in all the disciplines related to management of renewable resources of wildlands. The college has its own research organization, the Forest, Wildlife and Range Experiment Station, including the Idaho Cooperative Fish and Wildlife Research Unit and the Cooperative Park Studies Unit. All faculty members have teaching responsibilities in the college as well as research responsibilities in the experiment station. Additional facilities include the Taylor Wilderness Research Station, in the Frank Church River of No Return Wilderness Area, the Experimental Forest near Moscow, the Lee A. Sharp Experimental Area near Burley, Idaho, the McCall Field Campus in central Idaho, and the USDA Rocky Mountain Research Station, Forestry Sciences Laboratory, in Moscow.

Admission for graduate study normally requires completion of course work equivalent to that required in one of the undergraduate curricula offered by the college. Students with differing backgrounds but substantial preparation in the sciences may also be admitted. The study plans developed will allow for differences in preparation while providing all students with comparable backgrounds by the time the graduate program is completed.

Courses

See the course description section for courses in Natural Resources (NR).

Natural Resources Undergraduate Curricular Requirements

Ecology and Conservation Biology (B.S.Ecol.-Cons.Biol.)

Improving global environmental conditions requires researchers and other citizens who can understand ecological principles, who can analyze and interpret ecological conditions, and who can predict the consequences of alternative natural resource management decisions. Understanding the importance of social values and policy for ecology and management of rare, threatened, and endangered species and their habitat is necessary to reverse the order of their decline. In the ecology and conservation biology program, students learn to apply biological, ecological, social, and political understanding to solve problems related to long-term conservation of biological diversity and to sustainable management of ecosystems.

This degree combines the biological, ecological, and social sciences to provide (1) an interdisciplinary understanding of the composition, structure, and processes of ecosystems, and (2) the skills necessary to provide long-term planning for the conservation and sustainable management of populations, species, and ecosystems.

Students will examine topics from molecular to landscape scales and integrate the social and biophysical worlds. Graduates will be equipped to address the issues and problems of sustainable resource use, conservation of rare, threatened, or endangered biota, management of ecosystems, and long-term conservation of biological diversity. This program is flexible enough to adapt to the interests of individual students, while remaining firmly grounded in ecological principles applicable to species, populations, communities, landscapes, and ecosystems. It is distinctly different from the emphasis on management in the other forestry, wildlife, fisheries, range, and conservation social sciences programs, or the more general environmental science programs. Graduates of the program often continue advanced studies at national and international universities. This natural resources "liberal science" degree can also serve as pre-professional training for law school, or for professional positions in federal, state, and private environmental organizations including local and regional planning groups and consulting firms.

The program requires 120 credits, and students must choose either the natural resources ecology or conservation biology option. Students pursuing a B.S. in Ecology & Conservation Biology must receive a grade of 'C' or better in each of the following 4 indicator courses to register in upper division courses in CSS/Fish/For/REM/WLF and to graduate with a B.S.

in either option: Biol 116, Biol 213, Stat 251, For 221 or REM 221. Before students are allowed to begin their senior thesis or project (485 or 497), they must attend two evening thesis / project sessions and one senior poster presentation.

Required course work includes the university requirements (see regulation J-3) and:

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms and Environments (4 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
CSS 383	Natural Resource and Ecosystem Service Economics (3 cr)
Engl 317	Technical Writing (3 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
NR 101	Exploring Natural Resources (1 cr)
NR 200	(s) Seminar (1 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3-4 cr):

Econ 202	Principles of Microeconomics (3 cr)
Econ 272	Foundations of Economic Analysis (3-4 cr)

One of the following (3-4 cr):

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

One of the following (4 cr):

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

One of the following (3-4 cr):

For 320	Dendrology (4 cr)
REM 341	Systematic Botany (3 cr)

Choose one of the following (1 cr):

CSS 483	Senior Project Presentation (1 cr)
Fish 483	Senior Project Presentation (1 cr)
For 483	Senior Project Presentation (1 cr)
REM 483	Senior Project Presentation (1 cr)
WLF 483	Senior Project Presentation (1 cr)

Choose one of the following (3 cr):

CSS 485	Ecology and Conservation Biology Internship (3 cr)
Fish 485	Ecology and Conservation Biology Internship (3 cr)
Fish 497	Senior Thesis (3 cr)
For 485	Ecology and Conservation Biology Internship (3 cr)
For 497	Senior Thesis (3 cr)
NR 497	Senior Thesis (3 cr)
REM 485	Ecology and Conservation Biology Internship (3 cr)
REM 497	Senior Thesis (3 cr)
WLF 485	Ecology and Conservation Biology Internship (3 cr)
WLF 497	Senior Thesis (3 cr)

And one of the following options:

A. Natural Resources Ecology Option

The natural resources ecology option combines ecological theory, field experience, and quantitative tools to gain an interdisciplinary understanding of the structure and function of ecosystems. This field covers ecological topics from local, regional, and landscape scales while integrating the social and biophysical worlds.

To graduate in this option, students must achieve a "C" or better in the following six core courses: NR 200, For 330, REM 429, Soil 205/206, and WLF 316 or Fish 316.

For 330	Forest Soil and Canopy Processes (4 cr)
REM 429	Landscape Ecology (3 cr)
Soil 205	The Soil Ecosystem (3 cr)
Soil 206	The Soil Ecosystem Lab (1 cr)

One of the following (3 cr):

Phys 100, Phys 100L	Fundamentals of Physics and Lab (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)

One of the following (2-4 cr):

WLF 316	Wildlife Ecology II (4 cr)
Fish 316	Principles of Population Dynamics (2 cr)

Quantitative Resource Analysis Restricted Electives (one course from the following):

CSS 310	Social Research Methods in Conservation (4 cr)
For 472 or REM 472	Remote Sensing of Environment (4 cr)
Geog 385	GIS Primer (3 cr)
REM 410	Principles of Vegetation Measurement and Assessment (2 cr)*
REM 411	Ecological Monitoring and Analysis (2 cr)*
Stat 431	Statistical Analysis (3 cr)
Stat 422	Sample Survey Methods (2 cr)
WLF 448	Fish & Wildlife Population Ecology (4 cr)

Resource Management Restricted Electives (one course from the following):

CSS 385	Conservation Management and Planning I (4 cr)
CSS 490	Wilderness and Protected Area Management (3 cr)
CSS 496	Monitoring Impacts in Protected Areas and Wilderness (3 cr)
Fish 418	Fisheries Management (4 cr)
For 424	Forest Dynamics and Management (4 cr)
For 462	Watershed Science and Management (3 cr)
REM 456	Integrated Rangeland Management (3 cr)
WLF 492	Wildlife Management (4 cr)

Ecology Restricted Electives (at least 2 credits from Fish 315, Fish 415, Fish 430, REM 460, and/or WLF 315) (10 cr):

Biol 421	Advanced Evolutionary Biology (3 cr)
Biol 478	Animal Behavior (3 cr)
Ent 469	Introduction to Forest Insects (2 cr)
Ent 472	Aquatic Entomology (3 cr)
Fish 314	Fish Ecology (3 cr)
Fish 315	Fish Ecology Lab (1 cr)
Fish 415	Limnology (4 cr)
Fish 430	Riparian Ecology and Management (3 cr)
For 326	Fire Ecology and Management (3 cr)
For 468	Forest and Plant Pathology (2 cr)
Geog 410	Biogeography (3 cr)
MMBB 425	Microbial Ecology (3 cr)
PlSc 410	Invasive Plant Biology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 450	Global Environmental Change (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Integrating GIS and Field Studies in Rangelands (2 cr)
WLF 314	Wildlife Ecology I (3 cr)
WLF 315	Wildlife Ecology I Lab (1 cr)
WLF 440	Conservation Biology (3 cr)

Social/Political Restricted Electives (one course from the following):

Comm 410	Conflict Management (3 cr)
CSS 387	Environmental Communication Skills (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 489	Personalities and Philosophies in Conservation (3 cr)
CSS 492	Ecotourism Principles and Issues (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Hist 424	American Environmental History (3 cr)
Phil 452	Environmental Philosophy (3 cr)
PolS 364 or CSS 364	Politics of the Environment (3 cr)

Courses to total 120 credits for this degree

**Note: Both REM 410 and REM 411 must be completed to satisfy Quantitative Resource Analysis Restricted Elective requirement.*

B. Conservation Biology Option

The conservation biology option is centered around a multidisciplinary curriculum that provides students with training to work in jobs aimed at conserving the earth's biodiversity. This option provides a broad-based education that covers biological diversity from the genetic level to the landscape level, and provides additional training in social sciences and management. In the words of Hunter (1996), "Conservation biology is cross-disciplinary, reaching far beyond biology into subjects such as philosophy, economics, and sociology; disciplines that are concerned with

the social environment in which we practice conservation--as well as into subjects such as law and education that determine the ways we implement conservation."

To graduate in this option, students must achieve a "C" or better in the following seven core courses: Biol 421, NR 200, REM 429, Phil 452, CSS 492 or CSS 493, Fish or WLF 316, and WLF 440.

Biol 421	Advanced Evolutionary Biology (3 cr)
Phil 452	Environmental Philosophy (3 cr)
REM 429	Landscape Ecology (3 cr)
WLF 440	Conservation Biology (3 cr)

One of the following (3 cr):

Biol 310	Genetics (3 cr)
Gene 314	General Genetics (3 cr)

One of the following (3 cr):

CSS 492	Ecotourism Principles and Issues (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)

One of the following (2-4 cr):

WLF 316	Wildlife Ecology II (4 cr)
Fish 316	Principles of Population Dynamics (2 cr)

Quantitative Resource Analysis Restricted Electives (one course from the following):

CSS 310	Social Research Methods in Conservation (4 cr)
For 472 or REM 472	Remote Sensing of Environment (4 cr)
Geog 385	GIS Primer (3 cr)
REM 410	Principles of Vegetation Measurement and Assessment (2 cr)*
REM 411	Ecological Monitoring and Analysis (2 cr)*
Stat 422	Sample Survey Methods (3 cr)
Stat 431	Statistical Analysis (3 cr)
WLF 448	Fish & Wildlife Population Ecology (4 cr)

Resource Management Restricted Electives (one course from the following):

CSS 385	Conservation Management and Planning I (4 cr)
CSS 490	Wilderness and Protected Area Management (3 cr)
CSS 496	Monitoring Impacts in Protected Areas and Wilderness (3 cr)
Fish 418	Fisheries Management (4 cr)
For 424	Forest Dynamics and Management (4 cr)
For 462	Watershed Science and Management (3 cr)
REM 456	Integrated Rangeland Management (3 cr)
WLF 492	Wildlife Management (4 cr)

Ecology Restricted Electives (at least 2 credits from Fish 315, Fish 415, Fish 430, REM 460, and/or WLF 315) (6 cr):

Biol 478	Animal Behavior (3 cr)
Ent 469	Introduction to Forest Insects (2 cr)
Ent 472	Aquatic Entomology (3 cr)
Fish 314	Fish Ecology (3 cr)
Fish 315	Fish Ecology Lab (1 cr)
Fish 415	Limnology (4 cr)
Fish 430	Riparian Ecology and Management (3 cr)
For 330	Forest Soil and Canopy Processes (4 cr)
For 326	Fire Ecology and Management (3 cr)
For 468	Forest and Plant Pathology (2 cr)
Geog 410	Biogeography (3 cr)
MMBB 425	Microbial Ecology (3 cr)
PlSc 410	Invasive Plant Biology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 450	Global Environmental Change (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Integrating GIS and Field Studies in Rangelands (2 cr)
WLF 314	Wildlife Ecology I (3 cr)
WLF 315	Wildlife Ecology I Lab (1 cr)

Organismal Biology Restricted Elective (one course from the following):

Biol 481	Ichthyology (4 cr)
Biol 483	Mammalogy (3 cr)
Biol 489	Herpetology (4 cr)
WLF 482	Ornithology (4 cr)

Social/Political Restricted Electives (one course from the following):

Comm 410	Conflict Management (3 cr)
CSS 387	Environmental Communication Skills (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 489	Personalities and Philosophies in Conservation (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Hist 424	American Environmental History (3 cr)
PolS 364 or CSS 364	Politics of the Environment (3 cr)

Courses to total 120 credits for this degree

**Note: Both REM 410 and REM 411 must be completed to satisfy Quantitative Resource Analysis Restricted Elective requirement.*

Natural Resources Academic Minor Requirements

Natural Resources Minor

Note: Not open to students pursuing a major in the College of Natural Resources.

For 235	Society and Natural Resources (3 cr)

One of the following (3 cr):

For 221	Ecology (3 cr)
REM 221	Ecology (3 cr)

Courses chosen from at least three of the following subjects, including at least 3 credits at the 300 level or above (12 cr):
Conservation Social Sciences (CSS)
Fishery Resources (Fish)
Forest Resources (For)
Natural Resources (NR)
Rangeland Ecology and Management (REM)
Renewable Materials (RMat)
Wildlife Resources (WLF)

Courses to total 20 credits for this minor

Natural Resources Graduate Academic Certificates Requirements

Restoration Ecology Graduate Academic Certificate

CSS 572	Human Dimensions of Restoration Ecology (3 cr)
CSS 580	Restoration Ecology Practicum (2 cr)
Fish 540	Wetland Restoration (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)

One of the following (3 cr):

For 426	Global Fire Ecology and Management (3 cr)
For 526	Fire Ecology (3 cr)

Courses to total 12 credits for this certificate

Natural Resources Graduate Degree Programs

Candidate must fulfill the requirements of the College of Graduate Studies and of the College of Natural Resources. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science. Thesis and non-thesis options are offered with a major in natural resources See the respective departmental sections for details.

Master of Natural Resources. Major in Natural Resources. The Master of Natural Resources (MNR) is an interdisciplinary course-based graduate program designed for mid- and executive-level professionals who wish to enhance their educational credentials for a career in natural resources. The fundamental objective of the MNR graduate program is to integrate and scale various perspectives - ecological, the human dimension, planning, policy and law, and practical tools - into a systems view of natural resources. This unique professional degree is accessible to students of diverse academic backgrounds and will help graduates develop credentials and skills for the effective management of natural resources. The degree consists of 30 semester credits (five credits from each of four MNR program categories - Ecology & Management, Law, Human Dimensions, Policy, Planning, and Tools & Technology, eight elective course credits from the MNR curriculum, and two credits for a case study project). Up to 12 semester credits can be transferred into the program from other institutions. General MNR requirements apply.

The MNR program can be combined with two different certificate programs specializing in restoration ecology and fire science. Admission to the College of Graduate Studies requires a minimum graduate point average (GPA) of 3.0, three letters of reference, and the Graduate Record Examination (GRE).

Complete admission and degree information available online at www.MyMNR.net.

Doctor of Philosophy. General Ph.D. requirements apply. Doctoral candidates are required to have an understanding of the principles of resource management in areas other than that chosen as a specialization. There is no general college requirement of proficiency in a foreign language for the doctorate, but one may be required by an individual student's committee where this seems desirable.

There is only one major for the Ph.D. degree, "natural resources". However, dissertation topics are selected from disciplinary areas within each department. The single designation for the major is in keeping with the college's philosophy of integrated resource management.

Department of Naval Science

Hayes Hall, University of Idaho; phone (208) 885-6333; www.uidaho.edy/navyrotc

The Navy-Marine Corps Officer Education Program is administered and taught by the Naval Science Department Staff on the University of Idaho, Moscow campus. The Program's objective is to provide instruction and training to students in preparation for being commissioned as officers in the United States Navy or Marine Corps through the Naval Reserve Officers Training Corps (NROTC). Students are designated as midshipmen and receive extensive academic, physical, and leadership training while pursuing a degree. The Program is open to men and women and offers scholarships leading to active duty commissions. Normally, students enter the program at the beginning of their freshman year; however, selected students may enter up to the beginning of their sophomore year and in very limited cases the beginning of their junior year. Students take up to 25 hours of professional development courses taught by the NROTC Unit and must participate in the Naval Science Laboratory (NS 103) each semester. All Naval Science courses and the lab are conducted at the University of Idaho. Students attending Washington State University are able to participate in the Program and can register for these courses via the UI/WSU Cooperative Courses program. In addition to the required Naval Science courses, all NROTC students must complete additional academic requirements as stipulated in their contract. For Navy Option students, Service Assignment is completed during their senior year and students may be assigned to duty on nuclear submarines, surface ships, naval aviation or special warfare. Service assignment for Marine Option students occurs following completion of The Basic School after graduation.

Scholarship Program

NROTC scholarship students' benefits include tuition, fees, a book allowance, and a monthly stipend. Room and board are not covered by the scholarship.

Application for this Program is normally made during the spring of the junior year or early fall of the student's senior year of high school. Initial selections for these National Four-Year Scholarships are completed by a Naval Service Training Command-sponsored board and are based on college entrance examination scores (SAT or ACT) and high school academic performance.

A student on scholarship will complete three summer training cruises of four to six weeks duration. During the first cruise, students are introduced to the submarine, amphibious warfare (Marine Week), surface warfare, and aviation communities. For Navy option students, the second and third cruises can be aboard nuclear submarines, surface ships, or with aviation units of the Pacific or Atlantic fleets and may include overseas travel. Marine Option students conduct their second summer training session at Mountain Warfare Training School in Bishop, CA and attend Officer Candidate School in Quantico, VA for their final summer training evolution. During summer training events, the students receive one-half of the pay of an Ensign/Second Lieutenant, plus room and board.

Graduates of this program are commissioned as officers in the Navy or Marine Corps.

College Program

College Program students receive uniforms and Naval Science textbooks at no cost but receive no other financial benefits.

Application for this program is normally made during the spring of the student's senior year of high school and in limited cases the end of their freshman year of college. Applications can be obtained from the Unit's website and should be sent directly to the Naval Science Department Head of the University of Idaho. Selections are based on college entrance examination scores (SAT or ACT) and high school/university academic performance. Students can apply to either the Navy or Marine option programs.

College Program students may be nominated by the Professor of Naval Science for a three-year scholarship during their freshman year or a two-year scholarship or Advanced Standing during their sophomore year if their grades and military aptitude marks are sufficient to warrant such nomination. Students who are not selected for a scholarship or Advanced Standing by the end of their sophomore year are not allowed to continue in the Program. Students who are selected for a scholarship or Advanced Standing will conduct, at a minimum, one summer training evolution following their junior year. It is an afloat cruise (Navy Option) or attendance at Officer Candidate School (Marine Option) of the same type and with the same pay as described for the Scholarship Program. Graduates of this program are commissioned as officers in the Navy or Marine Corps.

Naval Science Institute

In limited cases, university students not involved with the NROTC Program may apply for a National Two-Year Scholarship during their sophomore year of college. Those selected will be required to attend the Naval Science Institute (NSI) in Newport, RI during the summer between their sophomore and junior years. At NSI they will study the material taken by the four-year candidates during their freshman and sophomore years. On completion of NSI, candidates return to the university and complete their junior and senior years of the naval science curriculum with their peers. Candidates in the two-year program will participate in one summer training session between their junior and senior years. Students in this program receive the same financial benefits as juniors and seniors enrolled in the four-year scholarship program. Interested students should contact the NROTC Unit early in their sophomore year to obtain information on application submission and deadlines.

Field Trips

Field trips to Navy and Marine Corps facilities are arranged periodically in order to allow the Navy-Marine Corps Officer Education Program members the opportunity to learn more about the naval service.

Courses

See the course description section for courses in Naval Science (NS).

Naval Science Academic Minor Requirements

Naval Science Minor

NS 102	Ships Systems I (3 cr)
NS 201	Ships Systems II (3 cr)
NS 202	Seapower and Maritime Affairs (2 cr)

Students must complete a minimum of four courses from the lists below to equal 12 credits:

Two from the following:

NS 301	Navigation (3 cr)
NS 302	Naval Operations (3 cr)
NS 311	Evolution of Warfare (3 cr)
NS 401	Naval Leadership and Management (3 cr)
NS 402	Naval Leadership and Ethics (3 cr)
NS 412	Amphibious Operations (3 cr)

One from the following:

Hist 180	Introduction to East Asian History (3 cr)
Hist 331	The Age of African Empires (3 cr)
Hist 438	Modern Mexico and the Americas (3 cr)
Hist 440	Social Revolution in Latin America (3 cr)
Hist 457	History of the Middle East (3 cr)
Hist 484	Modern China, 1840s to Present (3 cr)
Hist 485	Chinese Social and Cultural History (3 cr)
IS 325	The Contemporary Muslim World (3 cr)
IS 326	Africa Today (3 cr)
IS 370	African Community, Culture, and Music (1-3 cr)
PolS 420	Introduction to Asian Politics (3 cr)

One from the following:

Aero 411	National Security Affairs/Preparation for Active Duty (3 cr)
Aero 412	National Security Affairs/Preparation for Active Duty (3 cr)
Hist 412	Revolutionary North America and Early National Period,

	1763-1828 (3 cr)
Hist 415	Civil War and Reconstruction, 1828-1877 (3 cr)
Hist 430	U.S. Diplomatic History (3 cr)
Hist 458	Military History (3 cr)
Hist 481	America's Wars in Asia (3 cr)
MS 227	American Military History (3 cr)
PolS 338	American Foreign Policy (3 cr)
PolS 449	World Politics and War (3 cr)

Courses to total 21 credits for this minor

Program in Neuroscience

Steffen Werner, Program Director (Student Health 008A; phone 208/885-9241; neuro@uidaho.edu ; www.grad.uidaho.edu/neuro/). Faculty: Onesmo Balemba, Eric Brauns, Steven Chandler, Rajal Cohen, Brian Dyre, Elizabeth Fortunato James Frenzel, Peter Fuerst, Milos Manic, Craig McGowan, Steven Meier, Barrie Robison, Jeff Seegmiller, Terence Soule, Deborah Stenkamp, Steffen Werner.

Neuroscience is the study of the nervous system; this study is broad and includes investigations of the development, anatomy and physiology of the nervous system, research of cognitive and behavioral processes, and the application of mathematics and computer science to understand and model neurological function. One major goal of Neuroscience research is to understand how the nervous system forms and functions so that treatments and cures can be developed for neurological disorders such as Alzheimer's disease, depression, drug addiction and spinal cord injury. Neuroscience research also strives to understand cognitive processes and apply this understanding to the industrial and policy arenas. The Neuroscience Graduate Program integrates across many traditional disciplines to provide training in neurobiology, cognitive neuroscience, and computational neuroscience. Graduates of the program may enter careers in academics, biomedical or technical industry, or scientific communications.

Ongoing neuroscience projects produce a stimulating environment for graduate research. These projects include areas such as: nervous system development, anatomy, and physiology, neurobiology of aging, vertebrate and invertebrate behavior, neurochemistry, visual and auditory psychophysics, linguistics, spatial cognition, computational modeling, neural computing and artificial intelligence.

Admission to graduate programs in the department is based upon an estimate of probable success in work leading to a specific degree. The Graduate Record Examination (aptitude only) is required of all applicants.

Prospective students, or students desiring more information, may write or email (neuro@uidaho.edu) the Program Director or the College of Graduate Studies.

Courses

See the course description section for courses in Neuroscience (Neur).

Neuroscience Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Graduate Program in Neuroscience. See the College of Graduate Studies section for the general requirements applicable to each degree.

The University of Idaho offers M.S. and Ph.D. degrees in Neuroscience. The Neuroscience Program is offered on-campus in Moscow at the University of Idaho, and is administered by the College of Graduate Studies. A degree in Neuroscience requires coursework in neurobiology, cognitive neuroscience, and computational neuroscience, and original research experience in one of these areas. One goal of the program is to foster a broad, yet quantitative approach to neuroscience.

The Neuroscience Program is highly interdisciplinary. It requires students and faculty to bridge biological, computational and behavioral disciplines. Neuroscience faculty are drawn from eleven departments and programs in primarily three colleges (College of Science; College of Letters, Arts and Social Science; and College of Engineering). These faculty members are available to serve as major professors for Neuroscience graduate students, and on Neuroscience graduate student committees.

A Neuroscience degree from the University of Idaho is distinct in that the graduate can approach and describe the study of neuroscience from a variety of perspectives, and apply this broad understanding to address the important problems in neuroscience research that require an interdisciplinary approach.

Course and Credit Requirements

Incoming students admitted with background deficiencies will take background courses. For example, biology majors will little knowledge of computation will take at least one background course in computer science. The specific required background courses will be determined by each student's graduate committee with the approval of the program director. Note that credits from courses numbered 300 and below do not count toward the Neuroscience degree requirements, though they may be required to fulfill deficiencies.

The core courses form a central, shared educational experience for all Neuroscience students. These courses will enable them to share a common language, and to discuss problems from multiple disciplinary points of view. This shared experience will also give Neuroscience students a sense of identity and community, which will encourage them to help each other overcome cultural and terminological differences that may make such interdisciplinary interactions challenging. Core courses include those in neurobiology, cognitive neuroscience, computational neuroscience, methods and statistics, and scientific ethics. The neurobiology course is a core course shared by the Neuroscience graduate program at Washington State University (WSU). This practice fosters interactions between our two programs and promotes collaborative activities. M.S. students will also enroll in at least three credits, and Ph.D. students in seven credits, of Topics in Neuroscience. Topics in Neuroscience is a seminar course that includes presentation of the literature by graduate students, as well as informal seminars and discussions led by invited speakers. These seminars bring experts from around the world to campus, where they can interact with Neuroscience students and faculty.

Ph.D. students also have the option of pursuing 1-3 research rotations. Research rotations in neurobiology, computational neuroscience or cognitive and behavioral neuroscience provide practical experience in research questions and methods outside the major emphasis area of the student.

The elective courses provide more detailed knowledge of Neuroscience, and provide the depth needed to support graduate research. The list of elective courses will evolve with the research interests of the Neuroscience faculty participants. The M.S. will require at least four elective credits and the Ph.D. will require at least 25. Other courses may be required as determined by the student's committee and with approval of the program director. Please see the listing of current core and elective courses on our web page www.grad.uidaho.edu/neuro/.

The M.S. requires a minimum 32 credits and the Ph.D. requires a minimum 78 credits. The Neuroscience program assumes the usual graduate full time load of at least nine credits per semester.

Admissions Requirements and Procedures

Admission to this program is highly competitive and recruitment is international in scope. Even exceptional applicants are admitted only when there is an opening with one of the participating faculty. The Graduate Record Examination (GRE) is required of all applicants; successful applicants must have a total score of at least 1700 (in the old system: quant+verbal+analytical) or 1200+4 (in the new system). All applicants must provide three letters of reference that speak to the applicant's aptitude for graduate research. For applicants for whom English is a second language, a TOEFL score of at least 600 or its equivalent (CBT 250 or IBT 100) is required. Successful applicants must also have at least a 3.0 undergraduate GPA. In exceptional circumstances, these requirements may be adjusted. Applicant must provide a statement of research interests that clearly identifies the research he or she would like to pursue at the University of Idaho.

To apply: Please go to the University of Idaho Graduate Admissions webpage at www.students.uidaho.edu/gradadmissions or contact the Graduate Admissions Office, University of Idaho, P.O. Box 444266, Moscow, ID 83844-4266.

Program in Nuclear Engineering

Akira T. Tokuhiro, Program Director (UI at Idaho Falls, 1776 Science Center Dr., Idaho Falls, ID 83402; phone 208/533-8107; fgunners@if.uidaho.edu; www.if.uidaho.edu/ne). Faculty: John Crepeau, Thomas E. Bitterwolf, Batric Pesic, Vivek Utgikar, Indrajit Charit, Supathorn Pongikaroon, Akira Tokuhiro.

The world's growing need for energy requires a diversity of energy sources, including nuclear energy. Approximately 20% of the electricity used in the U.S. stems from nuclear power. As power plants continue to age there is a need to develop next-generation nuclear reactors and to

educate future generations of nuclear scientists and engineers. The demand for nuclear engineers is projected to significantly outpace supply during the next decade. For more information please see our webpage at www.if.uidaho.edu/ne/.

Admissions Requirements and Procedures. The minimum requirements to enter any of the graduate programs in nuclear engineering are: an undergraduate degree in engineering or closely related field from an ABET accredited U.S. program, does not include technical degrees; and a cumulative GPA of 2.8 or better on a 4.0 scale. GRE General Exam is recommended but not required for students with an undergraduate degree from a U.S. ABET accredited program. The GRE General Exam is required for all other applicants. Minimum scores required: Verbal 470, Quantitative 680, Analytical Writing 4.5. TOEFL (minimum score: computer based 249, paper based 605) is required for all students whose primary language is not English. All applicants are required to submit 3 letters of recommendation, a 1-2 page Statement of Career Objectives and a 1-2 page Curriculum Vitae/Resume. Applicants to any of the graduate programs are reviewed on a case-by-case basis by the program's Graduate Committee. Some applicants who have a baccalaureate degree in a field other than engineering may be required to complete certain undergraduate deficiency courses before they will be allowed to take graduate level courses.

Courses

See the course description section for courses in Nuclear Engineering (NE).

Nuclear Engineering Graduate Academic Certificates Requirements

Nuclear Criticality Safety Graduate Academic Certificate

Students who wish to earn an academic certificate in Nuclear Criticality Safety have two possible tracks that can be used to complete this certificate. Students who are majoring within the Program in Nuclear Engineering are encouraged to complete the first track and students who are majoring within the College of Education are encouraged to complete the second track. Students interested in this academic certificate should contact the Program Director of Nuclear Engineering.

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

Track 1:

NE 450	Principles of Nuclear Engineering (3 cr)
NE 535	Nuclear Criticality Safety I (3 cr)
NE 555	Nuclear Criticality Safety II (3 cr)

One of the following (3 cr):

NE 533	Monte Carlo Methods (3 cr)*
NE 554	Radiation Detection and Shielding (3 cr)

Upper-Division or Graduate level Mathematics course (3 cr)

Courses to total 12 credits for this certificate

**Note: Students are encouraged to complete NE 533 Monte Carlo Methods.*

OR

Track 2:

TM 513	Nuclear Criticality Safety (3 cr)
TM 514	Nuclear Safety (3 cr)
TM 516	Nuclear Rules and Regulations (3 cr)

One of the following (3 cr):

TM 512	Fundamental Concepts of Nuclear Science (3 cr)
NE 450	Principles of Nuclear Engineering (3 cr)

Courses to total 12 credits for this certificate

Nuclear Engineering Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Nuclear Engineering Committee. See the College of Graduate Studies section for the general requirements applicable to each degree. These degrees are offered only through the graduate program at the University of Idaho Center, Idaho Falls. Consult the center's bulletin for specific details.

Master of Science. General M.S. requirements apply.

Master of Engineering. General M.Engr. requirements apply.

Doctor of Philosophy. General Ph.D. requirements apply. Preliminary screening of candidates and program planning for those admitted are essential features of the Ph.D. program. Early in the program, the student must complete a qualifying examination, which will be oral and possibly written. The preliminary examination is taken after most of the course work is completed. This examination is generally limited to the areas of emphasis indicated by the student's dissertation topic and includes a presentation of the dissertation proposal; it will be written and oral. No foreign language is required; however, the program does require a satisfactory level of achievement in mathematics and numerical analyses and in computer programming.

Program in Organizational Sciences

Richard Reardon (1000 W. Hubbard, Coeur d'Alene 83814-2277; 208/292-2523), Coordinator; Debbie Storrs (112 Administration Bldg 83844-3154; phone 208/885-4561), Coordinator

The purpose of this program is to provide leadership training for students interested in a variety of purpose-driven organizations.

Organizational settings, including for-profit businesses, political organizations (e.g., legislative bodies, political parties, PACs), not-for-profit organizations (e.g., health care companies, charities, volunteer agencies), and public and private boards (e.g., boards of education, homeowners associations, church boards), are dynamic entities that rely on skilled leaders to function efficiently and to ensure positive workplace culture and climate. The interdisciplinary program in Organizational Sciences draws from business, industrial/organizational psychology, public administration, industrial sociology, educational leadership and other disciplines to provide students with an understanding of interpersonal workplace dynamics and fundamentals of leadership.

It has become increasingly evident over the last century that many problems in the workplace are the result of relationship failures. Examples of such failures include conflict between managers and employees, conflict between employees and other employees, conflict between groups within organizations, poor communication between organizations and the communities they serve, lack of proper coordination of efforts, lack of proper understanding of worker capabilities and training needs, lack of concern for both employee and manager professional development, and the inability of both managers and employees to understand that organizational success depends on leaders and workers keeping the natural tension between them from becoming destructive.

Courses

See the course description section for courses in Organizational Sciences (OrgS).

Organizational Sciences Undergraduate Curricular Requirements

Organizational Sciences (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3), the general requirements for either the B.A. or B.S. degree, and:

OrgS 210	Introduction to Organizational Sciences (1 cr)
OrgS 220	OrgS 220 Budgeting for Small Organizations (1 cr)
OrgS 410	Capstone Project in Organizational Sciences (1-6 cr)
OrgS 444	Methods and Analysis in Organizational Science (4 cr)

Complete three of the following courses (9 cr):

Anth 100	Introduction to Anthropology (3 cr)
Bus 101	Introduction to Business Enterprises (3 cr)
Comm 111	Introduction to Communication Studies (3 cr)
JAMM 100	Media and Society (3 cr)
OrgS 110	Governance in Small Organizations (3 cr)
OrgS 155	Financial Literacy (3 cr)
PolS 101	Introduction to Political Science and American Government (3 cr)
Psyc 101	Introduction to Psychology (3 cr)
Soc 101	Introduction to Sociology (3 cr)

Choose a specialization from one of the following areas:

Organizational Communication

Select 6 courses from Comm and 2 from other disciplines for this specialization. Student may not pursue both this specialization and a minor in Communication Studies (24 cr):

Comm 233	Interpersonal Communication (3 cr)

Comm 235	Organizational Communication (3 cr)
Comm 332	Communication and the Small Group (3 cr)
Comm 335	Intercultural Communication (3 cr)
Comm 347	Persuasion (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 421	Nonverbal Communication (3 cr)
Comm 431	Applied Business and Professional Communication (3 cr)
Comm 433	Organizational Communication Theory, Research, and Application (3 cr)
Comm 456	Nonprofit Fundraising (3 cr)
Engl 207	Persuasive Writing (3 cr)
JAMM 265	Principles of Advertising (3 cr)
JAMM 440	Critical Issues in Mass Media (3 cr)
JAMM 444	Mass Media and Public Opinion (3 cr)
OrgS 305	Nonprofit Organizations (3 cr)
OrgS 317	Explore Mentoring & Leadership (3 cr)
OrgS 407	Advanced Nonprofit Organizations (3 cr)
OrgS 415	Planning Professional Conferences and Events (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)
Psyc 345	Group Dynamics (3 cr)
Psyc 441	Psychology in the Workplace (3 cr)

Organizations and Communities

Select 7 courses from at least 2 different disciplines from the courses listed for this specialization (18 cr):

Bus 311	Introduction to Management (3 cr)
Bus 413	Organizational Behavior (3 cr)
Bus 414	Entrepreneurship (3 cr)
Comm 235	Organizational Communication (3 cr)
Comm 332	Communication and the Small Group (3 cr)
Comm 335	Intercultural Communication (3 cr)
Comm 347	Persuasion (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 456 or JAMM 456	Nonprofit Fundraising (3 cr)
Comm 492	Dark Side of Communication (3 cr)
FCS 448	Consumer Economics Issues (3 cr)
Hist 425	Immigration and Ethnicity in the United States (3 cr)
JAMM 252	Introduction to Public Relations (3 cr)
JAMM 325	Publications Editing (3 cr)
JAMM 350	Public Relations Writing and Production (3 cr)
JAMM 444	Mass Media and Public Opinion (3 cr)
JAMM 452	Public Relations Campaign Design (3 cr)
OrgS 305	Nonprofit Organizations (3 cr)
OrgS 317	Explore Mentoring & Leadership (3 cr)
OrgS 404	Special Topics (3 cr)*
OrgS 407	Advanced Nonprofit Organizations (3 cr)
OrgS 415	Planning Professional Conferences and Events (3 cr)
OrgS 416	Planning Professional Conferences and Events Laboratory (1 cr)
OrgS 435	Personnel (3 cr)
OrgS 450	Training and Performance Support (3 cr)
PolS 451	Public Administration (3 cr)
PolS 452	Administrative Law and Regulation (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)
Psyc 345	Group Dynamics (3 cr)
Psyc 404	Special Topics (3 cr)**
Psyc 441	Social Psychology in the Workplace (3 cr)
Psyc 470	Introduction to Chemical Addictions (3 cr)
Soc 250	Social Conflict (3 cr)
Soc 301 or Anth 301	Introduction to Diversity and Stratification (3 cr)
Soc 313	Collective Behavior (3 cr)
Soc 423	Social Class & Stratification (3 cr)
Soc 424	Sociology of Gender (3 cr)

**Note: a maximum of 3 credits of OrgS 404 may be used towards the completion of this major.*

***Note: a maximum of 3 credits of Psyc 404 may be used towards the completion of this major.*

A second major, an academic minor, an academic certificate, or a CLASS approved emphasis*

Courses to total 120 credits for this degree

**Note: If a second major or an academic minor is used to satisfy this requirement, the area of emphasis or academic minor required for the CLASS general B.S. requirements is also considered satisfied.*

Department of Philosophy

Douglas Lind, Dept. Chair (407 Morrill Hall 83844-3016; phone 208/885-7107; www.uidaho.edu/philosophy). Faculty: Janice Capel Anderson, Justin Jeffrey, Douglas Lind, Michael O'Rourke. Affiliate Faculty: Raymond Dacey, Dale D. Goble, James A. Foster, Gundars Rudzitis, Richard B. Wells.

Philosophy examines the grounds of knowledge, the nature of reality, and the nature of value, justice, and morality. It asks fundamental questions about how we reason and how we ought to reason. Its subject matter encompasses all the other academic disciplines, indeed all areas of human experience, e.g., society, values, mind, language, art, and science.

The main value of philosophy lies in its contribution to a liberal education. As a central discipline of the humanities, philosophy encourages those who study it to gain insight into themselves and others, which proves helpful in setting high standards and working in productive collaboration with one's associates. In addition, philosophy is an excellent means of learning to reason and write clearly which are skills useful in every conceivable human enterprise. Some philosophy majors pursue careers in academia; others, however, make rewarding careers for themselves in business, government, journalism, law, and human services.

Courses

See the course description section for courses in Philosophy (Phil).

Philosophy Undergraduate Curricular Requirements

Philosophy (B.A. or B.S.)

Note: Students who intend to do graduate work are advised to take the Bachelor of Arts degree.

Required course work includes the university requirements (see regulation J-3), the general requirements for either the B.A. or B.S. degree, and:

Phil 103	Ethics (3 cr)
Phil 240	Belief and Reality (3 cr)
Phil 320	History of Ancient and Medieval Philosophy (3 cr)
Phil 321	History of Modern Philosophy (3 cr)
Phil 490	Senior Seminar (3 cr)

One of the following (3 cr):

Phil 201	Critical Thinking (3 cr)
Phil 202	Intro to Symbolic Logic (3 cr)

Philosophy electives (upper-div; must include at least one course in non-Western thought)* (12 cr)
Related fields (humanities, social sc, and sc)* (20 cr)
Courses to total 120 credits for this degree

** The electives in philosophy and related fields are to be selected with the approval of the chair of philosophy.*

Philosophy Academic Minor Requirements

Bioethics Minor

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms and Environments (4 cr)
Phil 103	Ethics (3 cr)
Phil 201	Critical Thinking (3 cr)
Phil 351	Philosophy of Science (3 cr)
Phil 361	Professional Ethics (3 cr)
Phil 417	Philosophy of Biology (3 cr)

Courses to total 20 credits for this minor

Philosophy Minor

Phil 320	History of Ancient and Medieval Philosophy (3 cr)
Phil 321	History of Modern Philosophy (3 cr)

One of the following (3 cr):

Phil 103	Ethics (3 cr)
Phil 201	Critical Thinking (3 cr)
Phil 202	Intro to Symbolic Logic (3 cr)
Phil 240	Belief and Reality (3 cr)

Three upper-division philosophy courses (9 cr)
Courses to total 18 credits for this minor

Religious Studies Minor

See the Religious Studies section for details on this minor.

Philosophy Undergraduate Academic Certificates Requirements

Global Justice Undergraduate Academic Certificate

This academic certificate program is offered jointly with the Department of Sociology & Anthropology.

Note: A grade of 'B' or higher is required in all course work for this academic certificate.

One of the following (1 cr):

Anth 203	Workshop (1 cr)*
Soc 403	Workshop (1 cr)*

Electives (11 cr):

Anth 498	Internship (cr arr)*
Phil 367	Global Justice (3 cr) (May be repeated for credit)
Phil 499	Directed Study (cr arr)*
Soc 367	Global Justice (3 cr) (May be repeated for credit)
Soc 498	Internship (cr arr)*
Soc 499	Directed Study (cr arr)*

Courses to total 15 credits for this certificate

**Approval of program coordinator required*

Professional Ethics Undergraduate Academic Certificate

This academic certificate program is offered jointly with the Department of Sociology & Anthropology.

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

Phil 361	Professional Ethics (3 cr)

Electives (7 cr):

AgEc 477	Law, Ethics, and the Environment (3 cr)
Biol 553	Ethical Issues in Biological Research (1 cr)
BLaw 265	Legal Environment of Business (3 cr)
CSS 489	Personalities and Philosophies in Conservation (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
For 235	Society and Natural Resources (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 420	Land, Resources, and Environment (3 cr)
JAMM 341	Mass Media Ethics (3 cr)
JAMM 403	Workshop (1-3 cr)*
JAMM 490	Global Media (3 cr)
Phil 450	Ethics in Science (3 cr)
Phil 452	Environmental Philosophy (3 cr)
Phil 470	Philosophy of Law (3 cr)
Soc 403	Workshop (1-3 cr)*
Soc 423	Social Class & Stratification (3 cr)

Courses to total 13 credits for this certificate

**Approval of program coordinator required*

Philosophy Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Philosophy. See the College of Graduate Studies section for the general requirements applicable to each degree.

The M.A. program in Philosophy is a cooperative one, offered jointly by the University of Idaho and Washington State University, so that University of Idaho students may have the benefit of additional faculty and classes available at Washington State.

Master of Arts. All students earning the M.A. degree in Philosophy will be required to complete 30 credit hours, including twelve hours of core courses, twelve hours of elective courses, and six hours of Master's Thesis research. Up to six hours of course work may be completed at the 400-level. Students may pursue a traditional Philosophy M.A. or choose one of two options for emphasis: Environmental Philosophy or Ethics.

Environmental Philosophy Option. For students choosing the Environmental Philosophy Option, administered by the Department of Philosophy at the University of Idaho: the thesis must be in Environmental Philosophy and at least 15 of the letter-graded credit hours must be in environmental courses, some of which may be offered through other departments. Relevant courses approved by the student's thesis advisor.

Ethics Option. For students choosing the Ethics Option, administered by the Department of Philosophy at Washington State University: the thesis must be in Ethics and at least 15 of the letter-graded credit hours must be in ethics or other normative theory courses approved by the student's thesis advisor.

Department of Physics

David N. McIlroy, Dept. Chair (323 Engineering/Physics Bldg. 83844-0903; phone 208/885-6380; www.uidaho.edu/physics). Faculty: Leah Bergman, Gwen Barnes, Jason Barnes, Christine Berven, David Jeffrey, Ruprecht Machleidt, David N. McIlroy, John McIver, You Qiang, Liudmila Pozhar, Francesca Sammarruca, Bernhard J. Stumpf, Wei Jiang Yeh, Frederick M. Ytrebarg.

Physics is the scientific study of the nature and behavior of matter and energy. On the basis of quantitative observations, physicists develop theories to describe the observed behavior. Further experiments and observations are used to verify or refine the theories. The scientific method demands logical and mathematical rigor. The wealth of applications of physics to technology appeals to pragmatic persons, yet physics has much greater similarity to the arts and humanities than is commonly realized, because of the intellectual curiosity and creativity on which it is built.

The physics program at UI introduces students in technical and nontechnical curricula alike to the scientific method and to physical laws. The B.A. and B.S. curricula in physics emphasize a broad liberal-arts education and the core subjects in physics. Many B.A. and B.S. recipients go on to graduate study in physics or related disciplines.

Training in the theory, history, and philosophy of physics is provided by the required core courses and electives in most of the major areas of specialization. Formal laboratory courses and directed research familiarize students with experimental techniques, modern instrumentation, and computers. Equipment in the department's research laboratories includes low-temperature, strong magnetic field, high-vacuum, and vapor deposition facilities, electron and atomic beam apparatus, plasma devices, various lasers, spectrometers, optical telescopes, and nuclear radiation detectors. All offices, laboratories, and classrooms have computer network connections. The program is supported by a machine shop and a computer services shop. Collaborations with other universities and research institutes provide access to an even wider range of facilities.

The department offers graduate curricula leading to the M.S. and Ph.D. degrees. A bachelor's degree in physics is normally required as preparation for graduate study. Students with a bachelor's degree in another physical science, engineering, or mathematics will generally qualify after removal of a few upper-division-level deficiencies.

Research in the Department of Physics emphasizes the areas of condensed matter physics, nuclear physics, atomic physics, astrophysics, and biophysics. In addition, there is an interest in research on physics teaching.

The M.S. is not a prerequisite for the Ph.D., but beginning doctoral students may earn the M.S. if they wish. General departmental course requirements exist for the M.S. and Ph.D. degrees, in addition to the general requirements of the Graduate College. Other course requirements are specified in the student's study plan, developed by the student and his or her advisor and approved by the student's supervisory committee. All graduate students are encouraged to gain some teaching experience during the course of their graduate studies.

Physics Department Statement of Objectives

Undergraduate Program: Our goal is to provide students with a qualitative and quantitative understanding of the core topics in theoretical physics: classical mechanics, electricity and magnetism, modern physics, quantum mechanics, thermal physics, and mathematical methods, as well as a familiarity with the experimental techniques on which advances in physics are based. In addition, it is expected that each student will develop a more detailed knowledge of several special areas in physics such as atomic and molecular physics, nuclear and particle physics, classical optics and quantum optics, solid state physics, astronomy, relativity and computational physics.

In the process of developing specific knowledge of areas in physics, students will learn to analyze physical phenomena using basic physical principles and acquire skills in: basic logic and reasoning, mathematics

and computation, problem solving, experimental technique, and oral and written communication.

Students completing the undergraduate program should be well prepared for further study at the graduate level or to apply their skills successfully in other professional settings. They will be able to communicate effectively orally and in writing either with co-workers in a team effort, or with non-scientists in public discussions of scientific issues

Graduate Program: In the graduate program we aim to deepen a student's basic knowledge and understanding of theoretical and experimental physics, as well as to guide him or her to achieving expert status in a particular area of contemporary interest to the physics community. By carrying out a research project in collaboration with a major-professor acting as mentor, the student will develop the skills required to initiate, and carry to completion, an independent research program upon obtaining an advanced degree.

Faculty members in the department will be happy to discuss programs in detail with interested persons. Requests for information or a tour of the facilities can be made by a letter, e-mail, or telephone call (208/885-6380) to the department.

Courses

See the course description section for courses in Physics (Phys).

Physics Undergraduate Curricular Requirements

Physics (B.S.)

Required course work includes the university requirements (see regulation J-3) and:

Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Phys 200	Physics Seminar (1 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)
Phys 305	Modern Physics (3 cr)
Phys 321	Analytical Mechanics (3 cr)
Phys 341	Electromagnetic Fields I (3 cr)
Phys 351	Introductory Quantum Mechanics I (3 cr)

And one of the following emphases:

A. General Physics Emphasis

Phys 342	Electromagnetic Fields II (3 cr)
Phys 371	Mathematical Physics (3 cr)
Phys 433	Statistical Thermodynamics (3 cr)

Upper-division mathematics electives (6 cr)

Upper-division physics courses, including at least 4 cr of lab and 9 cr from the following: Phys 411, Phys 412, Phys 425, Phys 428, Phys 443, Phys 444, Phys 464, Phys 465, and Phys 484 (at least 15 cr).

Courses to total 120 credits for this degree

B. Applied Physics Emphasis

Math 310	Ordinary Differential Equations (3 cr)
Math 330	Linear Algebra (3 cr)
Phys 411	Physical Instrumentation I (3 cr)

Four credits of upper-division lab work in physics and engineering

Physics and engineering electives (27 credit, of which at least 21 credits must be upper-division and at least 9 credits must be 400-level and 21 credits must come from the following: ECE 350 + ECE 351, ECE 460, ECE 462, Engr 210, Engr 240, Engr 335, Engr 350, ME 301, ME 412, ME 413, ME 420, MSE 201, MSE 313, MSE 427, Phys 428, Phys 433, Phys 443, Phys 444.)

Courses to total 120 credits for this degree

Physics (B.A.)

Required course work includes the university requirements (see regulation J-3) and:

Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
Phys 200	Physics Seminar (1 cr)
Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)
Phys 305	Modern Physics (3 cr)
Phys 321	Analytical Mechanics (3 cr)
Phys 341	Electromagnetic Fields I (3 cr)

Physics elective courses numbered 300 or above (11 cr)

Mathematics upper-division elective courses (6 cr)

3 credits in the humanities, in a course numbered 300 or above in addition to the minimum university-wide general education requirements.*

3 credits in the social sciences, in a course numbered 300 or above in addition to the minimum university -wide general education requirements.*

4 credits in any course(s) numbered 300 or above approved by student's advisor

Courses to total 120 credits for this degree

Physics Academic Minor Requirements

Physics Minor

Phys 211, Phys 211L	Engineering Physics I and Lab (4 cr)
Phys 212, Phys 212L	Engineering Physics II and Lab (4 cr)

Physics courses numbered 300 or above (usual prerequisites are Math 170, Math 175, Math 275) (9 cr)

One of the following (3-4 cr)

Engr 210	Engineering Statics (3 cr)
Phys 213, Phys 213L	Engineering Physics III and Lab (4 cr)

Courses to total 18 credits for this minor

Physics Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Physics. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Science (Non-thesis Option). Major in Physics. General M.S. non-thesis requirements apply. The requirement is a minimum of 30 credits in coursework and the credits must be distributed as follows: (1) 20 cr in physics courses numbered 500 and higher (including 2 cr for Phys 501); (2) 10 cr in courses numbered 400 and higher (these may be non-physics courses upon the approval of the physics department Academic Standards Committee). Phys 521, Phys 533, Phys 541, Phys 542, and Phys 550 are required.

Students must pass a comprehensive examination, which must be taken at the first offering after the student has completed the core courses required for the M.S. degree. Full-time students may not delay the completion of their core course requirements by avoiding the taking of a core course when offered except with the prior written consent of the Academic Standards Committee and the student's major professor. The examination is written and covers all of general graduate-level physics as defined by the required courses for the M.S. degree. Typically, it will be administered on two different days, with a time limit of approximately three hours for each day. The results of the examination will be evaluated by the physics faculty. If the comprehensive examination is failed, it may be repeated only once; the repeat examination must be taken within a period of not less than three nor more than 14 months following the first attempt.

Master of Science (Thesis Option). Major in Physics. General M.S. requirements for a degree with thesis apply. The student must complete a total of at least 30 credits at 400 level or higher, 20 of which must be at the graduate level, including a maximum of 10 credits in research and thesis. Specific departmental graduate course requirements are 2 credits in Phys 501 and Phys 521, Phys 541, Phys 542, and Phys 550. If a student's undergraduate preparation is considered deficient (e.g., if it lacks laboratory experience at the upper-division level), then certain undergraduate courses will be required in the study plan. Such remedial credits

are not to be counted towards the total required for the degree. No departmental comprehensive exam is required.

A final defense of the M.S. thesis is scheduled upon completion of the thesis. Full-time students have to take this examination no later than two years after passing the comprehensive examination. The candidate is required to defend his or her work and show a satisfactory knowledge of the field in which the thesis research has been performed. The defense is oral and would typically last for one hour. The exam has to be announced to the physics faculty at least one week in advance. All members of the physics faculty are permitted to attend and ask questions. A recommendation of a majority of the student's graduate committee is necessary to pass the defense. If the defense is failed, it may be repeated only once; the repeat defense must be taken within a period of not less than three months nor more than one year following the first attempt.

Doctor of Philosophy. Major in Physics. General Ph.D. requirements apply. Correspondence concerning the student's specific goals is encouraged in the preliminary planning of the Ph.D. program.

Specific departmental course requirements are: Phys 501 (2 cr), Phys 521, Phys 533, Phys 541, Phys 542, Phys 550, Phys 551, Phys 571, and at least nine additional semester-hours of physics courses at the 500 level. A typical study plan would include 40 to 50 credits of course work at the 500 level in physics and about 30 credits in research and thesis. The study plan also would include at least six units of upper-division or graduate course work outside of physics. The nature and number of these additional units will depend upon the professional goals of the individual student. In planning a program, the student should consult with the departmental Academic Standards Committee for approval of any particular choice of nonphysics course work. The Ph.D. degree in physics is primarily a recognition of ability and accomplishment in research. The purpose of the course work is to provide the factual and theoretical background for research. Successful completion of course work is not in itself considered as completion of the major requirement for the degree.

All Ph.D. graduate students are required to enroll in Phys 501 (Physics Seminar) each semester while in residence.

No formal foreign language requirement exists for Ph.D. candidates; however, in individual cases, depending on the research topic, a reading knowledge in one foreign language may be required by the thesis advisor.

A two-Part preliminary examination is required. Part I is taken after the student has completed the courses required for the Ph.D. degree. Full-time students must take this exam no later than 2 years after entering the Ph.D. program. Students who have earned a masters degree in physics or wish to transfer credits to satisfy any of the departmental requirements (Phys 521, Phys 533, Phys 541, Phys 542, Phys 550, Phys 551, or Phys 571) may be required by the Academic Standards Committee to take the exam earlier. The examination is written and covers all of general graduate-level physics as defined by the required courses for a Ph.D. degree. Typically, it will be administered on two different days, with a time limit of approximately five hours for each day. The results of the examination will be evaluated by the physics faculty. If the preliminary examination, Part I, is failed, it may be repeated only once; the repeat examination must be taken within a period of not less than three months nor more than 14 months following the first attempt.

Part II of the preliminary examination is set by the major professor of the Ph.D. student for a date within the second semester after Part I has been passed. The student is required to explain the goals of his or her planned Ph.D. research to the thesis committee and show general familiarity with the fields relevant for the research. Part II is oral and would typically last for one hour. The exam is to be announced to the physics faculty at least one week in advance. All members of the physics faculty are permitted to attend and ask questions. The student's committee certifies to the Graduate College the results of the preliminary examinations. Upon passing, the student is advanced to candidacy for the Ph.D. degree. If Part II is failed, it may be repeated only once; the repeat examination must be taken within a period of not less than three months nor more than one year following the first attempt.

A final defense of the Ph.D. thesis is scheduled upon completion of the dissertation. The candidate is required to defend his or her work and show a superior knowledge of the field in which the thesis research has been performed. The defense is oral and would typically last for one hour. The exam is to be announced to the physics faculty at least one week in advance. All members of the physics faculty are permitted to attend and ask questions. A recommendation of a majority of the student's graduate committee is necessary to pass the defense. If the defense is failed, it may be repeated only once; the repeat defense must be taken within a period of not less than three months nor more than one year following the first attempt.

Department of Plant, Soil and Entomological Sciences

Paul McDaniel, Dept. Head (Ag. Sci. Bldg. Room 242, 875 Perimeter Drive MS 2339, Moscow, ID 83844-2339; phone (208) 885-7012; paulm@uidaho.edu). Entomology Division: Division Chair, Sanford D. Eigenbrode. James D. Barbour, Edward J. Bechinski, Nilsa A. Bosque-Perez, Steve Cook, Sanford D. Eigenbrode, James B. Johnson, Arash Rashed, Mark Schwarzlaender and Erik Wenninger. Plant Science Division: Division Chairs, Michael Thornton (south) and Robert R. Tripepi (north). Jack Brown, Allan Caplan, Jianli Chen, Esmaeil Fallahi, Saad L. Hafez, Zonglie Hong, Pamela J.S. Hutchinson, Alexander Karasev, Joseph C. Kuhl, Stephen L. Love, Juliet Marshall, S. Krishna Mohan, Don W. Morishita, Phillip Nolte, Nora L. Olsen, Timothy S. Prather, Bahman Shafii, Glenn E. Shewmaker, Kurtis Schroeder, Shree P. Singh, Jeffrey C. Stark, Donald C. Thill, Michael Thornton, Robert R. Tripepi, Phillip S. Wharton and Fangming Xiao. Soil and Land Resources Division: Division Chair, Robert L. Mahler. John Hammel, Robert Heinse, Jodi L. Johnson-Maynard, Guy R. Knudsen, Robert L. Mahler, Paul A. McDaniel, Amber Moore, Matthew J. Morra and Daniel G. Strawn.

The Department of Plant, Soil and Entomological Sciences is within the College of Agricultural and Life Sciences. We offer a B.S. degree in Agricultural and Life Sciences with our Sustainable Crop and Landscape Systems major. We offer M.S. and Ph.D. degrees in Entomology, Plant Science, and Soil and Land Resources.

We offer degree programs that focus on the earth's biological and physical resources. This allows students to pursue graduate education or careers in agriculture, horticulture, environmental science, or an array of biological sciences. Students in agriculture and horticulture develop skills needed for professional careers in crop production, plant maintenance, pest control, biotechnology, and biological control of insects, weeds and diseases. Students in soil and land resources are prepared for careers relevant to environmental quality and the protection, restoration and sustainable use of soil and water resources. Specialization in entomology or more basic areas of plant sciences, e.g. molecular biology, prepares students for continuing education or employment in many fields of biology.

Undergraduate Degree Program:

The multidisciplinary **Sustainable Crop and Landscape Systems major** offers students broad-based preparation in agricultural, horticultural, biological and ecological sciences. There are five areas of emphasis:

The **insects and society** emphasis area addresses basic and applied aspects of the study of insects and how they influence human activities. The program provides a broad entomological education with opportunities to specialize in such areas as agricultural and aquatic entomology, biological control, host plant resistance, insect ecology, insect physiology and insect-plant relations. The curriculum is designed for students pursuing professional careers in the basic and applied fields of entomology, or for those interested in continuing their education at the graduate level.

Under the **sustainable cropping systems** emphasis area, students may study crop management, plant protection and fundamental aspects of plant sciences. Many courses emphasize environmental concerns, ecological relationships and sustainability of agricultural systems. Students interested in crop management gain the necessary background to be successful in a wide range of crop-related careers in agriculture. They may tailor their academic program in the basic and applied aspects of crop science to suit their individual interests and career goals. Our crop and weed science offerings will prepare students for graduate education or professional careers in cropping systems management, plant protection, agricultural consulting, plant biotechnology, plant breeding and genetics, seed production and certification and weed science.

The **environmental horticulture** emphasis area is designed to provide students with a background in production of various horticultural crops and/or urban landscape management. Students may select courses to help them specialize in a particular career path. An internship is also available, which will provide insight into professional horticulture careers. Students may learn about many facets of horticulture, including horticultural crop production (floral crops, woody landscape plants, fruits or vegetables), by enrolling in courses on production and management of horticultural crops that are economically significant to Idaho and the nation. Students enrolled in this emphasis area may prepare for careers in man-

PlSc 415 Plant Pathology (3 cr)
Biology of diseases and disorders of crop, forest, and ornamental plants, with emphasis on plant-microbe interactions and on disease cause, development, diagnosis, and control. Three 1-hr lectures. (Fall only)
Prereq: PlSc 102 , and MMBB 154, 155 or Biol 250 (or permission)

PlSc J433/J533 Plant Tissue Culture Techniques (3 cr)
Laboratory-oriented course involving tissue culture techniques with an emphasis on regenerating herbaceous and woody plant species from organs or tissues. Requirements for grad cr include completion of a special project and report. One lec and 5 hrs of lab a wk. Recommended Preparation: PlSc 300. PlSc 533 is a cooperative course available to WSU degree-seeking students. (Alt/yrs)

PlSc 438 Pesticides in the Environment (3 cr)
See Soil 438.

PlSc 440 Advanced Laboratory Techniques (4 cr)
See MMBB 440.

PlSc J446/J546 Plant Breeding (3 cr)
Application of genetic principles to improvement of crop plants. Grad students reqd to complete additional term paper. PlSc 546 is a cooperative course available to WSU degree-seeking students. (Alt/yrs)
Prereq: Gene 314 or Equivalent

PlSc J451/J551 Vegetable Crops (3 cr)
Production, physiology, storage, and marketing of major and minor vegetable, herb, and spice crops from a worldwide perspective. Recommended preparation: PlSc 201, PlSc 205, PlSc 300 or equivalents. PlSc 451 is a cooperative course available to WSU degree-seeking students.
Prereq: PlSc 102 or equivalent

PlSc 464 Landscape Maintenance (3 cr)
Use and culture of landscape plants to enhance the environment. Two lec and one 2-hr lab a wk; one 1-day field trip. Recommended Preparation: Soil 205 and LArc 288. (Alt/yrs)
Prereq: PlSc 102 or Biol 213 or Permission

PlSc J476/J576 Cell Biology (3 cr)
See MMBB J475/J575.

PlSc 480 Field Trip (1 cr, max 3)
Three-day field trip to production areas.
Prereq: Permission

PlSc J486/J586 Plant Biochemistry (3 cr)
See MMBB J486/J586.

PlSc J488/J588 Genetic Engineering (3 cr)
See MMBB J488/J588.

PlSc J490/J590 Potato Science (3 cr)
History, botanical characteristics, seed physiology and production, plant population, physiology of growth, and pest management; factors influencing maturation, harvest, yield, grade, bruise control, storage, and quality maintenance; economics of production and research on a global basis. Requirements for grad cr include comprehensive term paper and class presentation on selected topic. Cooperative: open to WSU degree-seeking students.

PlSc 499 (s) Directed Study (cr arr)

PlSc 500 Master's Research and Thesis (cr arr)

PlSc 501 (s) Seminar (cr arr)

PlSc 502 (s) Directed Study (cr arr)

PlSc 504 (s) Special Topics (cr arr)

PlSc 510 Invasive Plant Biology (3 cr)
See PlSc J410/J510.

PlSc 520 Plant Cytogenetic Techniques (3 cr)
Techniques to study plant genes and chromosomes. Two lec and 4 hrs of lab a wk. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Gene 314 or Equivalent

PlSc 533 Plant Tissue Culture Techniques (3 cr)
See PlSc J433/J533.

PlSc 542 Biochemistry (3 cr)
See MMBB 541.

PlSc 546 Plant Breeding (3 cr)
See PlSc J446/J546.

PlSc 547 Biometrics for Plant Scientists (3 cr)
Use of biometrical techniques in research with particular emphasis on designing, analyzing, and interpreting agricultural and biological experiments; application of statistical methods to biological experiments and problems that may be encountered when applying these techniques to biological systems. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: PlSc 102 and Stat 431 or Equivalent

PlSc 551 Vegetable Crops (3 cr) WSU Hort 320
See PlSc J451/J551.

PlSc 576 Cell Biology (3 cr)
See MMBB J475/J575.

PlSc 586 Plant Biochemistry (3 cr)
See MMBB J486/J586.

PlSc 588 Genetic Engineering (3 cr)
See MMBB J488/J588.

PlSc 590 Potato Science (3 cr)
See PlSc J490/J590.

PlSc 597 (s) Practicum (cr arr)

PlSc 598 (s) Internship (cr arr)

PlSc 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

PlSc 600 Doctoral Research and Dissertation (cr arr)

Political Science Courses

Donald W. Crowley, Dept. Chair, Dept. of Political Science and Public Affairs Research (205 Admin. Bldg. 83844-3165; phone 208/885-6328).

Note: Two-semester courses in this field may be taken in either order. Students may enroll in second-semester courses without having had the first.

PolS 101 Introduction to Political Science and American Government (3 cr)
Introduction to the study of politics focusing on basic concepts, processes, and institutions; emphasis on government and politics of the U.S. examined in comparative perspective; probable topics include nature of constitutional democracy, ideology, parties and elections, and formation of public policy.

PolS C152 Politics and Pollution (1 cr)
Political, government, and administrative aspects of overcoming air, water, and other types of pollution of our environment.

PolS 200 (s) Seminar (cr arr)

PolS 203 (s) Workshop (cr arr)

PolS 204 (s) Special Topics (cr arr)

PolS 205 Introduction to Comparative Politics (3 cr)
Basic structures, patterns, and sociocultural environment of foreign political systems; includes case studies of the government and politics in selected countries.

PolS 235 Political Research Methods and Approaches (3 cr)
Introduction to the study of politics, including scope of the discipline, principal fields, research design, and methods of political research and analysis.

PolS 237 International Politics (3 cr)
Survey of approaches used to describe and explain conflict and cooperation among states in the international system; special emphasis on games of strategic interaction.

PolS 275 American State and Local Government (3 cr)
American state and local politics from a comparative perspective; focus on parties, interest groups, voting behavior, legislative and executive government, judiciary, intergovernmental relations, and public policies.

Phys 541 Electromagnetic Theory (3 cr)
Includes Maxwell's equations, electrostatics, magnetostatics, currents and their interactions, general theory of emission, propagation and absorption of electromagnetic waves, boundary value problems, relativistic formulation of electrodynamics. Cooperative: open to WSU degree-seeking students.
Prereq: Phys 322, Phys 342

Phys 542 Electromagnetic Theory (3 cr)
Includes Maxwell's equations, electrostatics, magnetostatics, currents and their interactions, general theory of emission, propagation and absorption of electromagnetic waves, boundary value problems, relativistic formulation of electrodynamics. Cooperative: open to WSU degree-seeking students.
Prereq: Phys 322, Phys 342

Phys 543 Optics (3 cr)
See Phys J443/J543.

Phys 544 Quantum Optics (3 cr)
See Phys J444/J544.

Phys 550 Quantum Mechanics (3 cr)
Physical basis; Schroedinger wave formulation, Heisenberg matrix formulation, transformation theory, approximation methods, radiation theory, theory of scattering; application to atomic systems. Cooperative: open to WSU degree-seeking students.
Prereq: Phys 305, Phys 322

Phys 551 Quantum Mechanics (3 cr)
Physical basis; Schroedinger wave formulation, Heisenberg matrix formulation, transformation theory, approximation methods, radiation theory, theory of scattering; application to atomic systems. Cooperative: open to WSU degree-seeking students.
Prereq: Phys 305, Phys 322

Phys 564 Materials Physics and Engineering (3 cr)
See Phys J464/J564.

Phys 565 Particle and Nuclear Physics (3 cr)
See Phys J465/J565.

Phys 571 Mathematical Methods of Physics (3 cr)
Methods and problems. Cooperative: open to WSU degree-seeking students.
Prereq: Phys 322 or Permission

Phys 584 Astrophysics (3 cr)
See Phys J484/J584.

Phys 600 Doctoral Research and Dissertation (cr arr)

Plant Science Courses

Paul McDaniel, Dept. Head (Ag. Sci. Bldg. Room 242, 875 Perimeter Drive MS 2339, Moscow, ID 83844-2339; phone (208) 885-7012; paulm@uidaho.edu).

PlSc 100 Survey of Plant and Soil Sciences (1-3 cr, max 3)
This course is designed to introduce students to a scientific examination of the soil and plant relationships that affect the production and propagation of field crops and landscape plants. Topics include soils, irrigation, crop and weed identification, diseases, insects and plant growth regulators. (Spring only)

PlSc 102 The Science of Plants in Agriculture (3 cr)
Principles of structure, biology, and management of agronomic and horticultural crops; interaction of crop plants and cropping systems with environment; current issues related to plant science. Two lec and one 2-hr lab a wk.

PlSc 201 Principles of Horticulture (3 cr)
An introduction to the production and management of edible and ornamental horticultural crops and the maintenance of plants and turf in urban landscapes. Two lec and two hours of lab a wk; two field trips. (Spring, alt/yrs)
Prereq: PlSc 102

PlSc 205 General Botany (4 cr)
Growth, development and ecology of plants, fungi, and protists in relation to their environments. Recommended Preparation: Chem 101 and PlSc 102. (Spring only)
Prereq: Biol 115

PlSc 207 Introduction to Biotechnology (3 cr)
Offers an overview of modern biotechnology, focusing on basic concepts and applications of biotechnology with regards to plants, animals, environment and microorganisms, and medicine. Recommended preparation: Chem 101 or Chem 111. (Fall, alt even/yrs)

PlSc 212 Master Gardener (1-3 cr, max 3)
Basic horticultural skills required for home gardeners and landscapers, including soil, water, and fertility management, composting, pest and disease identification and management, vegetable and fruit culture, ornamentals, plant propagation, and lawn care. Graded Pass/Fail. Field trips.

PlSc 300 Plant Propagation (3 cr)
Sexual and asexual propagation techniques of herbaceous and woody ornamental plants; propagation methods covered including seed, cuttings, layering, grafting, and cloning/tissue culture. Two lec and one 3-hr lab a wk. (Alt/yrs)
Prereq: PlSc 102, 201, or Biol 115

PlSc 338 Weed Control (3 cr)
Nature and scope of weed problems, identification and biology of weeds, principles, theory, and practice of mechanical, chemical, and biological control of weeds; legal considerations; integration of methods into functional management systems. Two lec and one 2-hr lab a wk. Recommended Preparation: PlSc 102 or equivalent.

PlSc 340 Nursery Management (3 cr)
Management of commercial nurseries from plant propagation through sale of the plants. Cooperative: open to WSU degree-seeking students. (Alt/yrs)

PlSc 341 Nursery Management Laboratory (1 cr)
Lab study relevant to PlSc 340. Experiments on and demonstrations of different practices used in nurseries. One 2-hr lab a wk; one 1-day field trip. Cooperative: open to WSU degree-seeking students.
Coreq: PlSc 340

PlSc 398 Internship (1-6 cr, max 6)
Graded Pass/Fail.
Prereq: Permission of department

PlSc 399 (s) Directed Study (1-2 cr, max 2)

PlSc 400 (s) Seminar (1 cr)

PlSc 401 Plant Physiology (3 cr)
Application of physiological principles to the management of plants in agronomic, horticultural and forest systems. (Spring, alt even/yrs)
Prereq: PlSc 205

PlSc 402 Undergraduate Research in Plant Science (1-6 cr, max 6)
This course offers credits to students interested in gaining first-hand experience in today's plant research. Each student will acquire research skills by conducting laboratory or field research on a well-defined topic agreed to by the student and by a faculty supervisor. Students must receive permission from that supervisor prior to enrolling. This course is open to all undergraduates, and may be taken multiple times.
Prereq: PlSc 205

PlSc 404 (s) Special Topics (cr arr)

PlSc 407 Field Crop Production (3 cr)
Management and use of crops in Idaho and the Northwest.

PlSc 408 Cereal Science (3 cr)
Crop history and biology of major cereal crops, emphasizing cool season cereals. Recommended Preparation: Biol 115.

PlSc J410/J510 Invasive Plant Biology (3 cr)
Biology, ecology, and physiology of weeds with emphasis on crop and weed interactions. Requirements for graduate credit include comprehensive term paper and class presentation on weed-crop interaction. Two lec and one 3-hr lab a wk. PlSc 510 is a cooperative course available to WSU degree-seeking students. (Alt/yrs)

entific literature searches. One 1-hr lec and one 3-hr lab a wk. (Spring only)
Prereq: Phys 213/213L or Permission

Phys 305 Modern Physics (3 cr)
Quantum and relativity theories with applications to atomic, solid state, nuclear, and elementary particle physics. (Spring only)
Prereq: Phys 212/212L
Coreq: Math 275 and Phys 213/213L

Phys 321 Analytical Mechanics (3 cr)
Kinematics and dynamics of particles; oscillating systems; dynamics of the rigid body.
Prereq: Phys 212/212L and Math 275

Phys 322 Analytical Mechanics (3 cr)
Principle of least action, dynamics of systems of particles, theory of oscillations, mechanics of continuous media.
Prereq: Phys 321

Phys 341 Electromagnetic Fields I (3 cr)
Theory using vector calculus; electrostatics; magnetostatics, electromagnetism, analysis of AC and DC circuits; Maxwell's equations; radiation and propagation of electromagnetic waves.
Prereq: Phys 212/212L and Math 275

Phys 342 Electromagnetic Fields II (3 cr)
Theory using vector calculus; electrostatics; magnetostatics, electromagnetism, analysis of AC and DC circuits; Maxwell's equations; radiation and propagation of electromagnetic waves.
Prereq: Phys 341

Phys 351 Introductory Quantum Mechanics I (3 cr)
One-dimensional theory; free particle, bound states, potential barriers, harmonic oscillator, matrix methods, and Dirac notation; interpretations of quantum theory.
Prereq: Phys 305, 371

Phys 371 Mathematical Physics (3 cr)
Same as Math 371. Mathematical techniques needed in upper-division physics courses, including vector analysis, matrices, Sturm-Liouville problems, special functions, partial differential equations, complex variables.
Prereq: Phys 212/212L, Math 275

Phys 400 (s) Seminar (cr arr)

Phys 403 (s) Workshop (cr arr)

Phys 404 (s) Special Topics (cr arr)

Phys 411 Physical Instrumentation I (3 cr)
Methods and instruments used in experimental physics; electronic techniques; design problems in electronic measurement of physical quantities encountered in research. Two lec and one 3-hr lab a wk.
Prereq: Phys 212/212L or Phys 213/213L, and Math 275

Phys 412 Physical Instrumentation II (3 cr)
Methods and instruments used in experimental physics; electronic techniques; design problems in electronic measurement of physical quantities encountered in research. Two lec and one 3-hr lab a wk.
Prereq: Phys 411

Phys J425/J525 Relativity (3 cr)
Introduction to the Special and General Theories of Relativity. Principle of relativity, Poincare and Lorentz transformations and their consequences. Four-dimensional formulation of relativistic mechanics and electromagnetism. Principle of equivalence and the geometric theory of gravitation. Additional projects/assignments required for graduate credit.
Prereq for 425: Phys 305 and Senior standing
Prereq for 525: Admission to physics graduate program or Permission

Phys J428/J528 Numerical Methods (3 cr)
Phys 428 same as Math 428 and Engr 428. Systems of equations, root finding, error analysis, numerical solution to differential equations, interpolation and data fitting, numerical integration, related topics and applications. Additional projects and/or assignments required for graduate credit in Phys 528.
Prereq: Math 310

Phys J433/J533 Statistical Thermodynamics (3 cr)
Phys 433 same as Chem 495. Classical thermodynamics, entropy, thermodynamic potentials, kinetic theory, classical and quantum statistical mechanics, ensembles, partition functions, introduction to phase transitions. Additional assignments required for graduate credit.
Prereq: Chem 306 or Phys 305 or equivalent

Phys J443/J543 Optics (3 cr)
Geometrical optics, wave optics and physical optics with emphasis on modern instrumentation and methods of measurement. Additional projects/assignments required for graduate credit.
Prereq for Phys 443: Phys 342
Prereq for Phys 543: Admission to Physics Graduate program or Permission

Phys J444/J544 Quantum Optics (3 cr)
Introduction to the physics of lasers, laser spectroscopy, non-linear optical effects, and the interaction of radiation and matter. Additional projects/assignments required for graduate credit.
Prereq for Phys 444: Phys 212/212L or Phys 213/213L, Math 175, and Senior standing or Permission
Prereq for Phys 544: Admission to Physics Graduate program or Permission

Phys J464/J564 Materials Physics and Engineering (3 cr)
See MSE J464/J564.

Phys J465/J565 Particle and Nuclear Physics (3 cr)
Particle production and detection, properties and classification of particles, the quark model of hadrons, symmetries and conservation laws, interactions, grand unification, the strong interaction and nuclear forces, models for nuclear structure and reactions. Additional projects/assignments required for graduate credit. Cooperative: open to WSU degree-seeking students.
Prereq for 465: Phys 305
Prereq for 565: Admission to physics graduate program or Permission

Phys J484/J584 Astrophysics (3 cr)
Celestial mechanics; planets and planetary systems; structure and evolution of stars and star systems; special and general relativity; cosmology. Additional projects/assignments required for graduate credit. Phys 484 is a cooperative course available to WSU degree-seeking students.
Prereq for Phys 484: Phys 305 or Math 275; or Permission
Prereq for Phys 584: Admission to physics graduate program or Permission

Phys 490 Research (1-6 cr, max 6)
Undergrad thesis.
Prereq: Junior standing in physics and Permission of department

Phys 499 (s) Directed Study (cr arr)

Phys 500 Master's Research and Thesis (cr arr)

Phys 501 (s) Seminar (cr arr)
Graded Pass/Fail.
Prereq: Permission

Phys 502 (s) Directed Study (cr arr)

Phys 503 (s) Workshop (cr arr)

Phys 504 (s) Special Topics (cr arr)

Phys 521 Advanced Mechanics (3 cr)
Classical mechanics; Lagrange's and Hamilton's principles, two-body problem, rigid body motion, special relativity, canonical transformation, Hamilton-Jacobi theory, small oscillations, and Lagrangian and Hamiltonian formulations for continuous systems and fields. Cooperative: open to WSU degree-seeking students.
Prereq: Phys 322

Phys 525 Relativity (3 cr)
See Phys J425/J525.

Phys 528 Numerical Methods (3 cr)
See Phys J428/J528.

Phys 533 Statistical Thermodynamics (3 cr)
See Phys J433/J533.

PEP 532 Health and Community Development (3 cr)
This multidisciplinary course will discuss the determinants of sustainable and active healthy lifestyles, and explore the links between health, physical activity, and community development.

PEP 544 Program Development (3 cr)
Developing programs associated with physical education and sport science using current conceptual frameworks and models. Field-testing of programs may be required.

PEP 560 Sport Psychology (3 cr)
Provides an understanding of how psychological factors influence performance and how simple and easy-to-use mental training techniques may be employed to enhance performance and enjoyment; using the *Coaches' Guide to Sport Psychology* and accompanying workbook, teachers/coaches will address such important psychological topics as peak performance, motivation, communication, leadership, self-confidence, concentration, stress management, imagery, goal setting, arousal control, and mental plans/performance routines; workbook exercises, case studies, and hands-on projects will teach mental training principles and help practitioners develop skills that they can successfully use to enhance performance with their students/athletes. (Fall only)

PEP 561 Motivation in Sport and Recreation (3 cr)
Practical, hands-on course designed to teach basics of motivation to physical educators, coaches, and recreation professionals; major achievement motivation theories and primary antecedents and consequences of motivated behavior; five major motivational enhancement strategies including goal setting, personal science, competition, feedback, and reinforcement; guidelines for maximizing effectiveness; analysis of applied motivation questions such as dropouts/burnouts, peak performance, exercise adherence, injury rehabilitation, increasing enjoyment, designing reward systems, and positive parental involvement. (Spring only)

PEP 563 Physical Activity, Health and Metabolic Disease (3 cr)
See PEP J463/J563.

PEP 570 Ethical Practice and Communication in Physical Activity (3 cr)
Problem solving approach to communication and practice of ethics in physical activity. (Fall only)

PEP 597 (s) Practicum (cr arr)
Application of theories and techniques. Graded Pass/Fail.
Prereq: Permission

PEP 598 (s) Internship (cr arr)
Supervised field experience in an appropriate public or private agency. Graded Pass/Fail.
Prereq: Permission

PEP 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

PEP 600 Doctoral Research and Dissertation (cr arr)

PEP 699 Non-dissertation Doctoral Research (cr arr)
Research not directly related to dissertation.
Prereq: Enrollment to a doctoral program

Physics Courses

David N McIlroy, Dept. Chair, Dept. of Physics; (323 Engineering/Physics Bldg. 83844-0903; phone 208/885-5768; physics@uidaho.edu)

Credit Limitations: Phys 100 carries no credit after Phys 111 or Phys 211; Phys 111 carries no credit after Phys 211; Phys 112 carries no credit after Phys 212.

Phys 100 Fundamentals of Physics (3 cr)
For students in nontechnical fields. Conceptual study of laws of nature and their application, including mechanics, heat, electricity and magnetism, light, and modern physics. Three lec and one 2-hr lab a wk. (Spring only)

Phys 100L Fundamentals of Physics Lab (1 cr)
For students in nontechnical fields. Conceptual study of laws of nature and their application, including mechanics, heat, electricity and magnetism, light, and modern physics. Three lec and one 2-hr lab a wk. (Spring only)

Phys 103 General Astronomy (3 cr)
Descriptive and physical astronomy; development of astronomical thought; properties and evolution of the solar system, stars, galaxies, and the universe. (Fall only)

Phys 104 Astronomy Lab (1 cr)
May be used as general education credit in J-3-b. Naked eye, telescopic, and photographic observations of constellations, stars, and planets. One 2-hr lab a wk; some evening meetings.
Prereq or Coreq: Phys 103

Phys 111 General Physics I (3 cr)
Kinematics, forces and dynamics, conservation laws, thermodynamics, waves. Three lec, one recitation, and one 2-hr lab a wk.
Prereq: Math 143

Phys 111L General Physics I Lab (1 cr)
Kinematics, forces and dynamics, conservation laws, thermodynamics, waves. Three lec, one recitation, and one 2-hr lab a wk.
Prereq: Math 143

Phys 112 General Physics II (3 cr)
Electricity, magnetism, optics, and modern physics. Three lec, one recitation, and one 2-hr lab a wk.
Prereq: Phys 111

Phys 112L General Physics II Lab (1 cr)
Electricity, magnetism, optics, and modern physics. Three lec, one recitation, and one 2-hr lab a wk.
Prereq: Phys 111/111L

Phys 200 (s) Physics Seminar (1 cr, max 8)
Introductory-level discussion of topics in modern physics; introduction to physics research topics and scientific information search techniques; written and/or oral reports of a pertinent topic in current physics. (Fall only)

Phys 211 Engineering Physics I (3 cr)
Kinematics and dynamics, Newton's laws, work and energy, rotational dynamics, linear and angular momentum, collisions, static equilibrium, oscillations, gravity and central forces. Three lec, one recitation, and one 2-hr lab a wk.
Prereq or Coreq: Math 170

Phys 211L Engineering Physics I Lab (1 cr)
Kinematics and dynamics, Newton's laws, work and energy, rotational dynamics, linear and angular momentum, collisions, static equilibrium, oscillations, gravity and central forces. Three lec, one recitation, and one 2-hr lab a wk.
Prereq or Coreq: Math 170

Phys 212 Engineering Physics II (3 cr)
Electric fields and potentials, magnetic fields, capacitance and inductance, DC and AC circuits, electromagnetic waves. Three lec, one recitation, and one 2-hr lab a wk.
Prereq: Phys 211
Prereq or Coreq: Math 175

Phys 212L Engineering Physics II Lab (1 cr)
Electric fields and potentials, magnetic fields, capacitance and inductance, DC and AC circuits, electromagnetic waves. Three lec, one recitation, and one 2-hr lab a wk.
Prereq: Phys 211/211L
Prereq or Coreq: Math 175

Phys 213 Engineering Physics III (3 cr)
Fluid dynamics, waves in elastic media, sound waves, temperature, heat and thermodynamics, kinetic theory, geometric and physical optics. Three lec, one recitation, and one 2-hr lab a wk. (Spring only)
Prereq: Phys 211
Prereq or Coreq: Math 175

Phys 213L Engineering Physics III Lab (1 cr)
Fluid dynamics, waves in elastic media, sound waves, temperature, heat and thermodynamics, kinetic theory, geometric and physical optics. Three lec, one recitation, and one 2-hr lab a wk. (Spring only)
Prereq: Phys 211/211L
Prereq or Coreq: Math 175

Phys 301 Junior Physics Lab (2 cr)
Experimental techniques in modern physics, including optics, atomic, nuclear, and solid state physics; computer uses, error analysis, and sci-

PEP 371 Athletic Training Clinical Experience IV (1 cr)
Students participate in supervised clinical education experience in UI's Athletic Training Room applying athletic training knowledge and skills learned in previous course work.
Prereq: PEP 273 and Permission

PEP 372 Athletic Training Clinical Experience V (1 cr)
Students participate in supervised clinical education experience in UI's Athletic Training Room applying athletic training knowledge and skills learned in previous course work.
Prereq: PEP 371 and Permission

PEP 380 Assessment & Research in Physical Activity Pedagogy (3 cr)
This course will develop learner competencies of assessment and research in physical activity pedagogy. Lec-lab course.
Prereq: MvSc 201 or Permission
Coreq: PEP 440

PEP 400 (s) Seminar (cr arr)

PEP 403 (s) Workshop (cr arr)

PEP 404 (s) Special Topics (cr arr)

PEP J405/J505 (s) Professional Development (cr arr)
Credits earned may not be applied toward grad degree programs but may be accepted for fifth-yr certification. Professional development in physical education and sport professional personnel. Additional projects/assignments required for graduate credit.

PEP 412 Elementary Methods in Physical Activity Pedagogy (3 cr)
Study and application of teaching methods and teaching behavior; structuring learning outcomes through performance objectives and lesson and unit planning. Includes a 16-hr required practicum at the elementary level. Lecture-lab.
Prereq: Admission to teacher education program
Prereq or Coreq: PEP 360, PEP 380, and six professional activity courses

PEP 418 Physiology of Exercise (3 cr)
Effects of physical activity on the circulatory, respiratory, and other systems. Two lec and one 2-hr lab a wk.
Prereq: MvSc 201, Biol 120 and Biol 121; or Permission

PEP 421 Secondary Methods in Physical Activity Pedagogy (3 cr)
This course focuses on the study and application of effective teaching behaviors and methods (i.e., styles and models), and the teaching process of planning, implementing, and evaluating. A teaching practicum with junior high and high school students will be completed during this course. Lec-lab.
Prereq: Admission to teacher education program
Prereq or Coreq: PEP 360, PEP 380, and six professional activity courses

PEP 424 Inclusive Physical Education and Recreation (3 cr)
Same as Rec 424. To provide an overview of movement and physical activities in physical education and recreational settings for individuals with disabilities. Emphasis will be on history, etiology, characteristics, services, resources, professional competencies, and instructional strategies. Practical experience (16 hrs in the community) is required to enhance instructional abilities to adapt and create an inclusive physical education and recreational setting for all participants.
Prereq: Senior standing or Permission

PEP 440 Curriculum & Administration in Physical Activity Pedagogy (1 cr)
This course is designed to develop students' knowledge of curriculum and administration models, and community programming related to physical activity pedagogy.
Prereq: Admission to teacher education program
Prereq or Coreq: PEP 360, PEP 380, and six professional activity courses

PEP 455 Design & Analysis of Research in Movement Sciences (3 cr)
Same as H&S 455 and Rec 455. This course is designed to survey the basic types of research methods often found in exercise science and health; and recreation. A variety of research designs and computerized statistical analyses are studied to help students understand the systematic nature of problem solving. Various research problems as they relate to exercise science and health; and recreation are discussed for the purpose of identifying the broad and diverse nature of research in the movement, leisure, and health professions. (Spring only)
Prereq: Junior or Senior standing

PEP J463/J563 Physical Activity, Health and Metabolic Disease (3 cr)
An introduction to the history of physical activity and health, adaptations to training, and benefits of physical activity as related to specific metabolic disease states and conditions (e.g., insulin resistance). Students will be required to read and discuss pertinent literature in physical activity and health. Additional projects/assignments reqd for grad cr.
Prereq: PEP 418

PEP 471 Athletic Training Clinical Experience VI (1 cr)
Students participate in supervised clinical education experience in UI's Athletic Training Room applying athletic training knowledge and skills learned in previous course work.
Prereq: PEP 372 and Permission

PEP 472 Athletic Training Clinical Experience VII (1 cr)
Students participate in supervised clinical education experience in UI's Athletic Training Room applying athletic training knowledge and skills learned in previous course work.
Prereq: PEP 471 and Permission

PEP 475 Moral Reasoning in Sport (2 cr)
See PEP J275/J475.

PEP 484 (s) Internship in Physical Education Teaching (1-15 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in school settings. Students will be following the school district full semester calendar. Graded Pass/Fail.
Prereq: Admission to teacher education program
Coreq: EDCI 401

PEP 493 Fitness Assessment and Prescription (3 cr)
Development of skills in exercise testing, data interpretation, and prescription for health related fitness. Two lec and 2 hrs of lab per wk. (Spring only)
Prereq: Senior Standing and PEP 418; or Permission

PEP 495 (s) Practicum (1 cr, max arr)
Tutorial services performed by advanced students under faculty supervision. Graded Pass/Fail.
Prereq: Permission

PEP 498 (s) Internship in Exercise Science & Health (cr arr)
Supervised field work.
Prereq: MvSc 445, H&S 288, H&S 490, PEP 455, PEP 493, and PEP 495; or Permission

PEP 499 (s) Directed Study (cr arr)

PEP 500 Master's Research and Thesis (cr arr)

PEP 501 (s) Seminar (cr arr)

PEP 502 (s) Directed Study (cr arr)

PEP 503 (s) Workshop (cr arr)

PEP 504 (s) Special Topics (cr arr)

PEP 505 Professional Development (cr arr)
See PEP J405/J505.

PEP 518 Advanced Physiology of Exercise (3 cr)
Principles and methods essential to the experimental approach to physiological performance problems. Two lec and one lab a wk.

PEP 522 Pedagogy Applied to Health, Physical Education, Recreation, and Dance (3 cr)
Provides theoretical and practical skills in the study and analysis of the teaching and learning process in health, physical education, recreation, and dance.

PEP 523 Physical Activity Assessment (3 cr)
This course is designed to focus learners on current research in physical activity pedagogy with specific application to pediatric physical activity measurement within school, community, private, and family physical activity programs.

PEP 530 Contemporary Issues in Health and Activity (3 cr)
Studies of individual and community behavior, theories, policies and current issues related to health and activity; examination of research and development of research and grant proposals. (Fall only)

Phil 522 Seminar in Metaphysics (3 cr)
The nature of reality, through study of key concepts such as God, personhood, free will, causation, space, time, and identity. Cooperative: open to WSU degree-seeking students.

Phil 524 Seminar in Epistemology (3 cr)
Classical problems, questions, and theories involving the concept of knowledge. Cooperative: open to WSU degree-seeking students.

Phil 542 Philosophy of Mind (3 cr)
See Phil J442/J542.

Phil 543 Philosophy of Language (3 cr)
See Phil J443/J543.

Phil 552 Environmental Philosophy (3 cr)
See Phil J452/J552.

Physical Education Courses

Philip W. Scruggs, Dept. Chair (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

Activity Courses

Note: PEB 106, PEB 107, and PEB 108 may be repeated for cr if the student engages in a different activity or level of the same activity. Practical tests may be given at the beginning of the semester to determine the student's level of ability.

PEB 106 (s) Individual and Dual Sports (1 cr, max arr)
Bowling, racket sports, fencing, golf, gymnastics, conditioning, backpacking, cycling, cross-country skiing, etc. Two days of field trips may be a part of the course requirements for such activities as backpacking, cycling, etc. Two hrs a wk. Graded Pass/Fail.

PEB 107 (s) Team Sports (1 cr, max arr)
Field sports, volleyball, basketball, and softball. Two hrs a wk. Graded Pass/Fail.

PEB 108 (s) Water-Based Sports and Fitness Activities (1 cr, max arr)
All forms of physical activity performed in the water, including all levels of proficiency in swimming (beginning, intermediate, and advanced), diving, water fitness activities, and scuba. Two hrs a wk. Graded Pass/Fail.

Professional Courses

PEP 100 Introduction to Exercise Science & Health (1 cr)
Introduction to foundational content, subdisciplines of study in exercise science, and fields of health. Students will also gain an understanding of career opportunities within the areas of exercise science & health. (Fall only)

PEP 101 Introduction to Athletic Training (1 cr)
Introduction to career opportunities within the field of athletic training; topics on professional duties and activities performed by an athletic trainer, advising issues, and guest lectures. (Fall only)

PEP 107 Movement Fundamentals (1 cr)
Skill development and teaching knowledge of the fundamentals and concepts of movement. Two lec-labs a wk. (Fall, Alt/yrs)

PEP 132 Skill and Analysis of Tennis, Pickleball, and Badminton (1 cr)
Skill development and knowledge of teaching progressions, techniques, strategies, and analysis and correction of skills in tennis, pickleball, and badminton. Two lec-labs a wk.

PEP 133 Skill and Analysis of Golf, Archery, and Field Sports (1 cr)
Skill development and knowledge of teaching progressions, techniques, strategies, and analysis and correction of skills in golf, softball, archery, and field sports. Two lec-labs a wk. (Fall only)

PEP 134 Skill and Analysis of Walking/Jogging/Track and Field (1 cr)
The focus of this course is on pre-service teachers developing track and field and related content area knowledge, performance, and teaching skill. Lec-lab course.

PEP 135 Skill and Analysis of Basketball and Volleyball (1 cr)
Skill development and knowledge of teaching progressions, techniques, strategies, and analysis and correction of skills in basketball and volleyball. Two lec-labs a wk.

PEP 136 Skill and Analysis of Soccer and Speedball (1 cr)
Skill development and knowledge of teaching progressions, techniques, strategies, and analysis and correction of skills in soccer and speedball. Two lec-labs a wk.

PEP 161 Introduction to Physical Education (1 cr)
Introduction to the field of physical education teaching and coaching, professional and portfolio development, and national and state standards. (Fall only)

PEP 171 Athletic Training Clinical Experience I - Observation (1 cr)
Introductory clinical experience and insight into the profession of Athletic Training. Students will receive supervised clinical education experience in UI's Athletic Training Room. Students will complete the application process into the clinical experience portion of the Athletic Training major in this course. 40 hours/clinical observation. Graded Pass/Fail. (Spring only)
Prereq: Permission

PEP 200 (s) Seminar (cr arr)

PEP 203 (s) Workshop (cr arr)

PEP 204 (s) Special Topics (cr arr)

PEP 243 Recreation Activities (2 cr)
Experience in planning, organizing, leading, and evaluating a broad range of games, social recreation, music, drama, arts and crafts, and special events activities.

PEP 272 Athletic Training Clinical Experience II (1 cr)
Students participate in supervised clinical education experience in UI's Athletic Training Room applying athletic training knowledge and skills learned in previous course work.
Prereq: Permission

PEP 273 Athletic Training Clinical Experience III (1 cr)
Students participate in supervised clinical education experience in UI's Athletic Training Room applying athletic training knowledge and skills learned in previous course work.
Prereq: PEP 171, 272, and Permission

PEP J275/J475 Moral Reasoning in Sport (2 cr)
PEP 275: Current ethical issues in sport, such as performance-enhancing drugs, mechanization, cheating, eligibility; challenges students to creatively examine their beliefs. Additional projects/assignments reqd for cr in PEP 475.

PEP 299 (s) Directed Study (cr arr)

PEP 300 Applied Human Anatomy and Biomechanics (2-3 cr)
This course is designed to provide the student with the anatomical and biomechanical knowledge essential to conduct a systematic qualitative analysis of human movement in clinical, educational, performance, and wellness settings. Two hrs of lec, two hrs of lab per wk.
Prereq: Biol 120 or Permission

PEP 301 Mental Training (2 cr)
Students will learn and apply mental training skills that are necessary for developing a personalized peak performance program.
Prereq: Permission. Enrollment is restricted to students who are highly engaged in performance activities such as athletes, performing artists, military cadets, etc.

PEP 305 Applied Sports Psychology (3 cr)
Overview of key psychological issues in physical education and sport including competition, personality, anxiety, motivation, self-confidence, imagery, and stress management; practical applications of psychological concepts of youth sports and development of key psychological skills for competition.

PEP 350 Elementary Health and Physical Education (3 cr)
Specific methods, research, curricula, and media in teaching elementary health and physical education. Three lecture/lab hours per week and 15 hours of practicum work in the schools and community.
Prereq or Coreq: EDCI 327, EDCI 328, and EDCI 329

PEP 360 Motor Behavior (3 cr)
Overview of development, control, and learning throughout the lifespan. Four hrs of lec-lab a wk.
Prereq or Coreq: Biol 120

Phil 202 Introduction to Symbolic Logic (3 cr)
Development of systematic techniques for assessing validity of arguments; includes categorical logic, propositional logic, and elementary quantificational logic.

Phil 204 (s) Special Topics (cr arr)

Phil 221 Philosophy in Film (3 cr)
The use of film as "philosophical text", discussing philosophical theories and debates presented in films, both old and new. Cooperative: open to WSU degree-seeking students.

Phil 240 Belief and Reality (3 cr)
Introduction to epistemology (examination of grounds and limits of knowledge) and metaphysics (inquiry into the nature of reality) through historical and contemporary readings.

Phil 302 Biblical Judaism: Texts and Thought (3 cr)
Same as RelS 302. Analysis of the Hebrew Bible (Old Testament) and related texts with an emphasis on hermeneutics and thought.

Phil 303 Early Christianity: Texts and Thought (3 cr)
Same as RelS 303. Analysis of the New Testament and other early Christian texts of the first and second centuries C.E. with an emphasis on hermeneutics and thought.

Phil 307 Buddhism (3 cr)
Same as RelS 307. Philosophy and religion of Gautama Buddha as it developed in India, Tibet, China, and Japan.

Phil 320 History of Ancient and Medieval Philosophy (3 cr)
Philosophical thought from the early Greeks through the Middle Ages; concentration on metaphysics and theory of knowledge. Cooperative: open to WSU degree-seeking students.

Phil 321 History of Modern Philosophy (3 cr)
Critical evaluation of the thought of major figures in early modern philosophy, such as Descartes, Leibniz, Spinoza, Locke, Berkeley, Hume, and Kant; emphasis on metaphysics and epistemology. Cooperative: open to WSU degree-seeking students.

Phil 325 (s) Historical Figures in Philosophy (3 cr, max arr)
Study of a major philosophical figure from the history of philosophy. May be repeated for credit. Recommended preparation: one philosophy course.

Phil 351 Philosophy of Science (3 cr)
Introduction to the critical analysis of the aims and methods of science, its principles, practices, and achievements. Cooperative: open to WSU degree-seeking students.
Prereq: 3 credits of philosophy or 3 credits of natural science

Phil 361 (s) Professional Ethics (3 cr, max 6)
Study of ethical issues and problems arising in professions. Each section focuses on a specific area of professional ethics including, but not limited to, agricultural ethics, bioethics, business ethics, and engineering ethics.
Prereq: Phil 103

Phil 367 (s) Global Justice (3 cr, max arr)
Same as Soc 367. Topical study of issues of justice in the global context.

Phil 404 (s) Special Topics (cr arr)

Phil J409/J509 Advanced Logic (3 cr)
First-order predicate logic plus some metatheory, applications and/or extensions. Additional work required for graduate credit. Cooperative: open to WSU degree-seeking students.
Prereq: Phil 202

Phil J417/J517 Philosophy of Biology (3 cr)
Philosophical thinking about meaning, reference, and truth. Additional assignments required for graduate credit.
Prereq: 3 credits of biology and 3 credits of philosophy or Permission

Phil J442/J542 Philosophy of Mind (3 cr)
Survey of current philosophical theories of the nature of minds and mental states, including forms of dualism, reductive physicalism, functionalism, and eliminative materialism. Additional assignments required for graduate credit. Recommended Preparation: Phil 202 and 240. Phil 442 is a cooperative course available to WSU degree-seeking students.

Phil J443/J543 Philosophy of Language (3 cr)
Philosophical thinking about meaning, reference, and truth. Additional assignments required for graduate credit. Recommended Preparation: Phil 202 and 240. Phil 443 is a cooperative course available to WSU degree-seeking students.

Phil 446 Metaphysics (3 cr)
Classical and contemporary readings on such items as realism versus nominalism, free will and determinism, the nature of causality, the existence of God, personal identity, modality. Recommended Preparation: Phil 202 and Phil 240. Cooperative: open to WSU degree-seeking students.

Phil 447 Theory of Knowledge (3 cr)
Analysis of the nature of knowledge; survey of various philosophical positions on the sources and extent of what we know. Recommended Preparation: Phil 202 and Phil 240. Cooperative: open to WSU degree-seeking students.

Phil 450 Ethics in Science (3 cr)
An investigation of social and ethical issues in scientific research and the place of ethics in a scientific worldview.
Prereq: Phil 103, Phil 201, Phil 202, or Phil 240; or Permission

Phil J452/J552 Environmental Philosophy (3 cr)
Phil 552 same as EnvS 552. Philosophical examination of various ethical, metaphysical, and legal issues concerning humans, nature, and the environment; issues covered may include biodiversity and species protection, animal rights, radical ecology, environmental racism, wilderness theory, population control, and property rights. Additional projects/assignments required for graduate credit.

Phil 470 Philosophy of Law (3 cr)
Analysis of fundamental philosophical issues in law and legal systems, including the nature of law, relation of law to morality, judicial method, and nature and ascription of rights. Recommended Preparation: Phil 103. Cooperative: open to WSU degree-seeking students.

Phil 475 Philosophy, Law, & Literature (3 cr)
Examination of issues in jurisprudence and legal theory using philosophy and literature. Topics may include the nature of law, the interface of law and morality, and the ethics and obligations of legal and judicial practice. Readings from plays, novels, short stories, philosophy, and case law.

Phil 490 Senior Seminar (3 cr)
Required of all philosophy majors; capstone course devoted to mastery of the philosophical essay; topics will vary.
Prereq: Senior standing or completion of 24 credits in philosophy

Phil 496 Teaching Methods in Philosophy (2 cr, max 4)
Learn methods of teaching while assisting in an introductory-level philosophy course. Graded Pass/Fail.
Prereq: Four upper-division courses in philosophy, the introductory course in which the student will participate, and Permission of department

Phil 499 (s) Directed Study (cr arr)

Phil 500 Master's Research and Thesis (cr arr)

Phil 501 (s) Seminar (cr arr)
Graded Pass/Fail.
Prereq: Permission

Phil 502 (s) Directed Study (cr arr)

Phil 504 (s) Special Topics (cr arr)

Phil 509 Advanced Logic (3 cr)
See Phil J409/J509.

Phil 510 Seminar in the History of Philosophy (3 cr, max 6)
Systematic exploration of the central works of an individual philosopher or philosophical movement. Cooperative: open to WSU degree-seeking students.

Phil 517 Philosophy of Biology (3 cr)
See Phil J417/J517.

Phil 520 Seminar in Ethical Theory (3 cr)
The major issues, views, and figures of ethical theory from ancient Greece to the present. Cooperative: open to WSU degree-seeking students.

NE R570 Nuclear Chemical Engineering (3 cr)
Chemical engineering processes related to the nuclear industry; metals dissolution, solvent extraction, isotope separation, uranium processing and other topics.
Prereq: Permission

NE R575 Advanced Nuclear Power Engineering (3 cr)
Present and advanced nuclear power plant descriptions and analysis. Engineering aspects of converting nuclear fission energy to useful work.
Prereq: Permission

NE R582 Spent Nuclear Fuel Management and Disposition (3 cr)
The management of nuclear fuel after removal from a nuclear reactor; storage options, recycle and recovery of uranium and other radionuclides, geological repositories and related topics.
Prereq: Permission

NE 598 (s) Internship (cr arr)

NE 600 Doctoral Research and Dissertation (cr arr)

Organizational Sciences

Richard Reardon (1000 W. Hubbard, Coeur d'Alene 83814-2277; 208/292-2523), Coordinator

Orgs 110 Governance in Small Organizations (3 cr)
The basics of organizational structure, leadership, interpersonal relations, fiscal responsibility, and accountability. The course is designed to serve students who may be engaged in student or community leadership positions.

OrgS 155 Financial Literacy (3 cr)
Basics of financial literacy including terms and concepts. Topics include: influences on financial decisions, goal setting, spending plans, saving and organizing, controlling debt, banking, credit, housing, cars, cell phones, college, careers, life's financial phases, protecting assets, investing, and financial current events.

OrgS 204 (s) Special Topics (cr arr)

OrgS 210 Introduction to Organizational Sciences (1 cr)
An orientation course for students interested in pursuing the Bachelors Degree in Organizational Sciences. The goal of the course is to expose students to the major specializations offered by the degree program: General Organizational Science, Workplace Relations, and Nonprofit Community Organizations.
Prereq: Completion of at least 15 credit hours of college level course work.

OrgS 220 Budgeting for Small Organizations (1 cr)
A basic introduction to budgets and the budgeting process, focusing on how to prepare, interpret, use, and manage organizational budgets to increase students' likelihood of future success.

OrgS 305 Nonprofit Organizations (3 cr)
An introduction to nonprofit organizations. The course covers the several ways that nonprofits differ from for-profit and governmental organizations: mission and values, legal distinctions, leadership and oversight, expenses and revenue, and community relations/community impact. Recommended preparation: OrgS 210.

OrgS 310 Application/Experience in Organizational Sciences (1-6 cr, max 6)
Hands-on experience with a business, governmental agency, community or nonprofit organization. Students will be expected to provide a written account of their experience that both documents the time spent, and that relates the experience to other coursework.
Prereq: Permission of Instructor

OrgS 312 Practical Gerontology (3 cr)
See Psyc 312.

OrgS 317 Explore Mentoring & Leadership (3 cr)
See Intr 316.

OrgS 407 Advanced Nonprofit Organizations (3 cr)
Provides an in-depth exploration of nonprofit organizations and their role in society, nonprofit purpose, mission, characteristics and structure. Topics include how nonprofits differ from for-profit and governmental organizations, nonprofit industry and careers, starting a nonprofit; nonprofit operations (accountability, reporting, staffing, marketing, technology); planning, strategy, governance (boards and volunteers); nonprofit law; nonprofit programs and program evaluation.
Prereq: OrgS 305 or Instructor Permission

Orgs 410 Capstone Project in Organizational Sciences (1-6 cr, max 6)
Completion of a project with a business, governmental agency, community or nonprofit organization. The project can be research or service-based. Students will be expected to provide a final document that details all aspects of the project. Approval of a project proposal by the student's advisor should be sought before requesting permission to enroll.
Prereq: Permission of Instructor

OrgS 414 Traumatic Events: Preparation, Intervention, Evaluation (3 cr)
See Psyc 414.

OrgS 415 Planning Professional Conferences and Events (3 cr)
Organizational planning and logistics for successful professional meetings, conferences, and other events. Considerations include themes and missions; physical, site, and technological needs; budgeting; invitees, attendees, and registrants, vendors; contracts, risk, and liabilities; and contingency planning. Recommended preparation: OrgS 210.

OrgS 416 Planning Professional Conferences and Events Laboratory (1 cr)
Laboratory application of tools and concepts learned in OrgS 415. Students will go through procedures to plan an event or conference. The event or conference could be a virtual one, or it could be one associated with their university or outside lives. Organizational planning and logistics for successful professional meetings, conferences, and other events. Considerations include themes and missions; physical, site, and technological needs; budgeting; invitees, attendees, and registrants, vendors; contracts, risk, and liabilities; and contingency planning.
Prereq: OrgS 210
Coreq: OrgS 415

OrgS J435/J535 Personnel (3 cr)
See Psyc J435/J535.

OrgS J450/J550 Training and Performance Support (3 cr)
See Psyc J450/J550.

OrgS 444 Methods and Analysis in Organizational Science (4 cr)
Overview of the many tools of data gathering and analysis in the applied social sciences. Includes coverage of surveys, study design, analysis, online and bibliographic resources and archives, etc.
Prereq: Stat 251 (Off-campus and distance students may request advisor approval for a substitution for Stat 251)

OrgS 535 Personnel (3 cr)
See Psyc J435/J535.

OrgS 550 Training and Performance Support (3 cr)
See Psyc J450/J550.

Philosophy Courses

Douglas Lind, Dept. Chair, Dept. of Philosophy (407 Morrill Hall 83844-3016; phone 208/885-7107; www.uidaho.edu/philosophy).

Phil 102 Reason and Rhetoric (2 cr)
Form and style of argumentative discourse; development of critical thinking and rhetorical skills as students prepare and deliver written and oral presentations; construction, evaluation, and presentation of arguments; identification of arguments and fallacies to improve abilities to organize thoughts, express them clearly and simply, and judge the suitability of material for the audience.

Phil 103 Ethics (3 cr)
Introduction to philosophical reasoning through historical study of Western moral thought.

Phil 201 Critical Thinking (3 cr)
Acquiring and improving important skills of thinking, reading, and writing critically; emphasis on avoiding fallacies and mastering forms of valid argument in ordinary language.

Neuroscience Courses

Steffen Werner, Program Director (Student Health 008A; phone 208/885-9241; neuro@uidaho.edu ; www.grad.uidaho.edu/neuro/).

Neur 398 (s) Internship (cr arr)

Neur 500 Master's Research and Thesis (cr arr)

Neur 501 (s) Seminar (cr arr)

Neur 502 (s) Directed Study (cr arr)

Neur 503 (s) Workshop (cr arr)

Neur 504 (S) Special Topics (cr arr)

Neur 508 Topics in Neuroscience (1 cr, max arr)
See Biol 508.

Neur 520 Fundamentals of Neurobiology (4 cr)
Cooperative: open to WSU degree-seeking students.

Neur 521 Biological Signal Processing (3 cr)
Same as ECE 557. Introduction to computational neuroscience. Neurons and neuron models, basic signaling mechanisms of neurons, networks of neurons, learning models, learning model algorithms, weight-based memory models. The Hodgkin-Huxley model. A principal emphasis in this course is the development of quantitative models and analysis of neural systems. A term project is required. Recommended preparation: introductory course in linear algebra. Familiarity with at least one programming language. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)
Prereq: Math 160 or Math 170 and Permission

Neur 526 Cognitive Neuroscience (3 cr)
See Psyc 526.

Neur 565 Linguistics, Literacy, and Brain Function (3 cr)
See EDCI 565.

Neur 590 Research in Neurobiology (cr arr)
Research rotations in neurobiology.
Prereq: Permission

Neur 591 Research in Computational Neuroscience (cr arr)
Research rotations in computational neuroscience.
Prereq: Permission

Neur 596 Research in Cognitive and Behavioral Neuroscience (cr arr)
Research rotations in cognitive and behavioral neuroscience.
Prereq: Permission

Neur 600 Doctoral Research and Dissertation (cr arr)

Nez Perce Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Vertically-related courses in this subject field are: NezP 101-NezP 102. A maximum of 16 credits may be earned for vertical credit in any language, in the Department of Modern Languages & Cultures.

NezP 101 Elementary Nez Perce I (4 cr)
Pronunciation, vocabulary, reading, spoken Nez Perce, and functional grammar.

NezP 102 Elementary Nez Perce II (4 cr)
Pronunciation, vocabulary, reading, spoken Nez Perce, and functional grammar.
Prereq: NezP 101

NezP 200 (s) Seminar (cr arr)

Nuclear Engineering Courses

Akira Tokuhiro, Program Director (UI at Idaho Falls, 1776 Science Center Dr., Idaho Falls, ID 83402; phone 208/282-7962; gunner@if.uidaho.edu; www.if.uidaho.edu/ne).

Related Fields: For other courses offered in the nuclear field, see Phys 465, 565, 585, 586, and 587.

NE 404 (s) Special Topics (cr arr)

NE J437/J537 Radiation Effects on Materials (3 cr)
See MSE J437/J537.

NE J438/J538 Fundamentals of Nuclear Materials (3 cr)
See MSE J438/J538.

NE R450 Principles of Nuclear Engineering (3 cr)
Basic nuclear and atomic processes; radioactive decay, binding energy, radiation interactions, reaction cross sections. Neutron diffusion, radiation sources.
Prereq: Math 310, Engr 320, or Permission

NE 500 Master's Research and Thesis (cr arr)

NE 501 (s) Seminar (cr arr)

NE 502 (s) Directed Study (cr arr)

NE 504 (s) Special Topics (cr arr)

NE R530 Two Phase Flow (3 cr)
Treatment of fluid mechanics and heat transfer in conjunction with nuclear reactors where two-phase flow problems are found.
Prereq: Permission

NE R533 Monte Carlo Methods (3 cr)
Applications of the Monte Carlo method to neutron transport calculations from introductory concepts to advanced simulations of criticality in fissile materials.
Prereq: NE 450 or Permission

NE R535 Nuclear Criticality Safety I (3 cr)
Physics of criticality, factors that affect reactivity, hand calculation techniques, experiments and the development of subcritical limits, criticality accidents, standards and regulations, evaluations.
Prereq: NE 450 or Permission

NE 537 Radiation Effects on Materials (3 cr)
See MSE J437/J537.

NE 538 Fundamentals of Nuclear Materials (3 cr)
See MSE J438/J538.

NE R544 Reactor Analysis - Statics and Kinetics (3 cr)
Behavior of nuclear reactors in steady state and transient conditions. Calculation of varying power conditions, fuel burn-up, coolant perturbations, and other reactor parameters.
Prereq: Permission

NE R554 Radiation Detection and Shielding (3 cr)
Radiation transport and shielding concepts. Methods for quantifying attenuation of nuclear particles and electromagnetic radiation. Radiation detection methods, data acquisition and processing.
Prereq: Math 310 or Permission

NE R555 Nuclear Criticality Safety II (3 cr)
Applications of criticality safety techniques to facility design and review, requirements for unique isotopes, criticality safety evaluations, connections to nuclear materials management, applications of monte carlo analysis.
Prereq: NE 535 or Permission

NE R565 Reactor Engineering (3 cr)
Radiation shielding, materials, instrumentation and controls, separation of stable isotopes, chemical separation and processing, special techniques.
Prereq: Math 480 or Permission

NR 204 (s) Special Topics (cr arr)

NR 299 (s) Directed Study (cr arr)

NR 400 (s) Seminar (cr arr)

NR 403 (s) Workshop (cr arr)

NR 404 (s) Special Topics (cr arr)

NR 406 Teaching Asst. Practicum (1-2 cr)
Instructional and other classroom assistance for NR 101 - Exploring Natural Resources performed by students under faculty supervision.
Prereq: Permission

NR 407 Natural Resource Ambassador Practicum (2 cr)
Student ambassadors are selected through an application and interview process to represent CNR to future students at recruiting activities and functions. Students will learn skills in leadership, communication, networking, public speaking, and time management. Students will be responsible for visiting high schools, attending college and career fairs, recruiting events on campus.
Prereq: Permission

NR 496 Practicum in Leadership (1-4 cr)
Supervised leadership development through on-campus or off-campus organizations, living groups. Etc. Graded P/ F.
Prereq: Permission

NR 497 Senior Thesis (1-3 cr, max 3)
Independently plan and conduct a thesis project; write and defend the thesis under supervision of a supervisor.
Prereq: Senior standing and Permission

NR 499 (s) Directed Study (cr arr)
For the individual student; conferences, library, field, or lab work.
Prereq: Senior standing in the College of Natural Resources, GPA 2.5, and Permission

NR 501 (s) Seminar (cr arr)
Major philosophy, management, and research problems of wildlands; presentation of individual studies on assigned topics.
Prereq: Permission

NR 502 (s) Directed Study (cr arr)

NR 503 (s) Workshop (cr arr)
Selected topics in the conservation and management of natural resources.
Prereq: Permission

NR 504 (s) Special Topics (cr arr)

NR 505 Advanced GIS Applications in Wildlife Sciences (1 cr)
Advanced wildlife GIS applications focusing on spatial home range computations and habitat studies; accelerated.
Prereq: GIS experience or Permission

NR 507 Moral Reasoning in Natural Resources (3 cr)
Exploration of the practical aspects of moral reasoning on current issues in natural resources. The purpose of the course is to discover the essence of reasoning, rationality, and reflection on moral and ethical dilemmas with regard to current issues in natural resources.

NR 511 Preparing Scientific Manuscripts (1 cr)
Details the preparation of manuscripts for thesis chapters and submission to peer-reviewed journals. Exercises include identifying scope, unique requirements for manuscript parts, use of graphing and reference database tools, editing and peer reviewing. Two 75 min classes per week, first half of semester. Second half of semester involves weekly writing workshops to finalize projects. Entry into class requires possession of analyzed dataset.
Prereq: Instructor Permission

NR 597 (s) Practicum (cr arr)

NR 598 (s) Internship (cr arr)

NR 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

NR 600 Doctoral Research and Dissertation (cr arr)
Prereq: Admission to the doctoral program in "natural resources" and Permission of department

Naval Science Courses

CAPT. W. Scott Ryder, USN, Head, Dept. of Naval Science (101 Navy Bldg. 83844-1122; phone 208/885-6333; www.navy.uidaho.edu/).

NS 101 Introduction to Naval Science (2 cr)
Introduction to the Naval Service: custom and traditions, structure, career paths, basic leadership, ethics and character development, duties of a junior officer, and ships/aircraft of the U.S. Navy Fleet. Cooperative: open to WSU degree-seeking students. (Fall only).

NS 102 Ships Systems I (3 cr)
Intro to Naval shipboard engineering systems; propulsion systems; nuclear, gas turbine, and conventional; auxiliary systems and shipboard damage control; basic concepts in ship design. Cooperative: open to WSU degree-seeking students. (Fall only)

NS 103 Introduction to Naval Science Laboratory (1 cr)
Practical instruction for introduction to Naval Science. Graded P/F. Cooperative: open to WSU degree-seeking students.

NS 201 Ships Systems II (3 cr)
Naval weapons systems; theory and process of detection (radar and sonar), evaluation; weapons; delivery, guidance, and explosives; integration of weapons systems with command, control, and communications systems. Cooperative: open to WSU degree-seeking students. (Spring only)

NS 202 Seapower and Maritime Affairs (3 cr)
An overview of U.S. naval history; seapower and maritime affairs beginning with the Continental Navy to present-day naval history. Cooperative: open to WSU degree-seeking students. (Spring only)

NS 299 (s) Directed Study (cr arr)
Cooperative: open to WSU degree-seeking students.

NS 301 Navigation (3 cr)
Theory, principles, and procedures of terrestrial and electronic navigation, and "rules of the nautical road." Cooperative: open to WSU degree-seeking students. (Spring only)

NS 302 Naval Operations (3 cr)
Naval operations and tactics, relative motion, and Maneuvering Boards. Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq: NS 301

NS 311 Evolution of Warfare (3 cr)
Evolution of war through tactics; strategy from Sun Tzu to J.F.C. Fuller. Recommended preparation: NS 101, 202. Cooperative: open to WSU degree-seeking students. (Spring only)

NS 401 Naval Leadership and Management (3 cr)
Theories of management and management resources, motivational theories, and leadership. Cooperative: open to WSU degree-seeking students. (Fall only)

NS 402 Naval Leadership and Ethics (3 cr)
An intellectual exploration of Western moral traditions and ethical philosophy within a military context. Topics will include military leadership, core values, professional ethics, and conduct of warfare with applications appropriate for future Navy and Marine Corps officers. Recommended preparation: NS 401. Cooperative: open to WSU degree-seeking students. (Spring only)

NS 412 Amphibious Operations (3 cr)
Amphibious doctrine from Gallipoli to the Mayaguez. Recommended preparation: NS 311. Cooperative: open to WSU degree-seeking students. (Fall only)

NS 499 (s) Directed Study (cr arr)
Cooperative: open to WSU degree-seeking students.

MusT 509 Foundation of Music Education (3 cr)
A treatment of historical perspectives, philosophy- aesthetics identified with music education, and learning theories applied to music teaching/learning. Basic research and writing skills appropriate to graduate studies in music education. Offered via the Web only. (Spring, odd alt/yrs)

MusT 510 Portfolio 1 (1 cr)
First semester of work on the required capstone electronic portfolio. Must be taken the first semester of study. Offered via the Web only.

MusT 511 Introduction to Research in Music Education (3 cr)
Writing skills, materials, and procedures utilized in music research; measurement, experimental design, theories/ procedures for evaluation, statistics, computer applications, and initiation of scholarly research. Offered via the Web only. (Spring, odd alt/yrs)

MusT 512 Contemporary Trends in Music Education (3 cr)
Current philosophies and concepts influencing contemporary music education practices, methods, and material. Investigation into social psychology of music as applied to existing music instruction in public schools. Offered via the Web only. (Fall, odd alt/yrs)

MusT 513 Assessment of Musical Behaviors (3 cr)
Review of standardized music tests and an examination of methods for developing tests related to the measurement of musical behavior. Offered via the Web only. (Spring, odd alt/yrs)

MusT 514 Multicultural Music Education (3 cr)
Overview of historical, philosophical, cultural, and pedagogical issues in multicultural music education. Emphasis on the development of knowledge that will inform and enhance instructional practice. Offered via the Web only. (Spring, odd alt/yrs)

MusT 515 Music for Special Learners (3 cr)
Review of the learning styles of exceptional children and the implications for providing realistic musical activities in the classroom. Emphasis will be placed on developing musical skills with special learners. Offered via the Web only. (Fall, odd alt/yrs)

MusT 535 (s) Pedagogy and Materials (2 cr, max arr)
See MusT J435/J535.

MusT 536 Pedagogy and Materials: Keyboard I (2 cr)
See MusT J436/J536.

MusT 537 Pedagogy and Materials: Keyboard II (2 cr)
See MusT J437/J537.

MusT 538 (s) Practicum (cr arr)
Studio and classroom teaching of secondary music majors, minors, or electives.
Prereq: Permission

MusT 560 Portfolio 2 (1 cr)
Final semester of work to complete the required capstone electronic portfolio. Offered via the Web only.
Prereq: MusT 510

MusT 568 Technology in the Music Classroom (1 cr)
Advanced study of music technology with an emphasis on integration into the music classroom. (Summer, even yrs)

MusT 585 Advanced Choral Methods (1 cr)
Examination of contemporary research and pedagogy with an emphasis on developing appropriate instructional strategies for use with adolescent students in choral and general music classrooms. (Summer, odd yrs)

MusT 586 Advanced Instrumental Methods (1 cr)
Overview of current practice in learning and teaching music with emphasis on the development of practical strategies for implementation within the instrumental music classroom. (Summer, odd yrs)

MusT 597 (s) Practicum (cr arr)

MusT 598 (s) Internship (cr arr)

MusT 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

General

MusX 101 Orientation for Music Majors (0 cr)
An orientation to requirements, processes, and opportunities associated with the study of music as a discipline for new students in the School of Music; a foundation for success and survival in the study of music. Graded P/F. Hybrid lecture and online course for first year students; online only course for transfer students.

MusX 140 Convocation (0 cr)
Required of all music majors for seven semesters and music minors for two semesters (minimum of 10 recitals a semester). Graded P/F.

MusX 200 (s) Seminar (cr arr)

MusX 203 (s) Workshop (cr arr)

MusX 204 (s) Special Topics (cr arr)

MusX 283 (s) Diction for Singers (2 cr)
Two-semester sequence in study of English and foreign language diction as represented by the International Phonetic Association.
Prereq: Music Major or Permission

MusX 284 (s) Diction for Singers (2 cr)
Two-semester sequence in study of English and foreign language diction as represented by the International Phonetic Association.
Prereq: MusX 283

MusX 298 (s) Internship (1-3 cr)
Open to all students.
Prereq: Permission of School of Music

MusX 299 (s) Directed Study (cr arr)

MusX 301 Technology for Musicians (1 cr)
Current applicable music technologies and software, as well as lighting, acoustics, recording, sound reinforcement and troubleshooting associated with technology.
Prereq: Music major or Permission

MusX 400 (s) Seminar (cr arr)

MusX 403 (s) Workshop (cr arr)

MusX 404 (s) Special Topics (cr arr)

MusX 498 (s) Internship (1-3 cr)
Open to all students. Graded P/F.
Prereq: Permission of School of Music Director

MusX 499 (s) Directed Study (cr arr)

MusX 500 Master's Research and Thesis (cr arr)

MusX 501 (s) Seminar (cr arr)

MusX 502 (s) Directed Study (cr arr)

MusX 503 (s) Workshop (cr arr)

MusX 504 (s) Special Topics (cr arr)

MusX 511 Bibliography and Research (3 cr)
Orientation to grad study; bibliography and research procedures.
Prereq: Admission to graduate program or Permission

MusX 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Natural Resources Courses

Kurt Pregitzer, Dean, College of Natural Resources (202C CNR Bldg. 83844-1138; phone 208/885-6442)

Prerequisite: Courses in this subject field that are numbered above 299 are not open to students on academic probation.

NR 101 Exploring Natural Resources (1 cr)
Introduction to the interdisciplinary fields and professions in natural resources. (Fall only)

NR 200 (s) Seminar (cr arr)

NR 203 (s) Workshop (cr arr)

MusH 554 Keyboard Repertoire I (2 cr)
See MusH J454/J554.

MusH 555 Keyboard Repertoire II (2 cr)
See MusH J455/J555.

MusH 556 Choral Literature I (2 cr)
See MusH J456/J556.

MusH 557 Choral Literature II (2 cr)
See MusH J457/J557.

MusH 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Music Teaching

MusT 200 (s) Seminar (cr arr)

MusT 203 (s) Workshop (cr arr)

MusT 204 (s) Special Topics (cr arr)

MusT 251 String Instrument Techniques (1 cr)
Group instruction. Problems of playing and teaching stringed instruments in elementary and secondary schools. (Fall only)
Prereq: Permission

MusT 253 Brass Instrument Techniques (1 cr)
Group instruction. Problems of playing and teaching brass instruments in elementary and secondary schools. (Spring only)
Prereq: Permission

MusT 254 Percussion Techniques (1 cr)
Group instruction. Problems of playing and teaching percussion instruments in elementary and secondary schools. (Spring only)
Prereq: Permission

MusT 255 Woodwind Techniques (1 cr)
Group instruction. Problems of playing and teaching clarinet, flute, and saxophone in elementary and secondary schools. (Spring only)
Prereq: Permission

MusT 256 String Techniques and Orchestral Literature (1 cr)
Group Instruction. Continued study of problems of playing and teaching stringed instruments, including music literature and materials, elementary and secondary schools.
Prereq: MusT 251

MusT 299 (s) Directed Study (cr arr)

MusT 352 Double Reed Techniques (1 cr)
Group instruction. Problems of playing and teaching oboe and bassoon in elementary and secondary schools. (Fall only)
Prereq: MusT 255 or Permission

MusT 378 Teaching World Music/Cultures (2 cr)
Curriculum, instructional materials and resources, and multicultural educational strategies for incorporating world music cultures in the K-12 Music classroom. Out-of-class field teaching experience may be scheduled. Recommended preparation: MusT 383. (Fall, alt/yrs)

MusT 382 General Music Methods (3 cr)
Curriculum design, instructional materials, and methodologies (including Orff, Kodaly and Dalcroze approaches) for teaching general music in grades K-8. Practicum -approximately five field-teaching experiences must be scheduled in general music classrooms outside of class time. (Spring only)
Prereq: EDCI 201 and admission to the teacher education program; or Permission
Prereq or Coreq: MusT 383

MusT 383 Principles of Music Teaching (3 cr)
Philosophy, principles, curriculum, and organization of the school music program; world music pedagogy; teaching cultural diverse learners. (Fall only)
Prereq: EDCI 201, MusC 142, and admission to teacher education program; or Permission

MusT 385 Choral Music in the Secondary School (3 cr)
Methods, instructional materials, rehearsal techniques and techniques for teaching choral music in grades 7-12. Includes practicum hours. (Fall, Alt/even yrs)
Prereq: 1 cr in MusA 116/MusA 316 or 1 cr in MusA 117/MusA 317
Prereq or Coreq: 1 additional cr in MusA 116/MusA 316 or 1 cr in MusA 117/MusA 317; and MusT 383; and MusA 387; or Permission

MusT 386 Instrumental Music in the Secondary School (3 cr)
Methods, instructional materials, rehearsal techniques and techniques for teaching instrumental music in grades 7-12. Includes practicum hours. (Spring only)
Prereq: MusC 142
Prereq or Coreq: MusT 383, MusA 387, or Permission

MusT 400 (s) Seminar (cr arr)

MusT 403 (s) Workshop (cr arr)

MusT 404 (s) Special Topics (cr arr)

MusT 432 (s) Practicum: Music Teaching (14 cr)
Supervised music teaching in public schools. Graded P/F.
Prereq: Successful completion of all required course work for the Music Education: Vocal, Instrumental, or Vocal-Instrumental major, cumulative GPA of 2.75, acceptance to the College of Education and permission of the School of Music.
Coreq: MusT 445

MusT J435/J535 (s) Pedagogy and Materials (2 cr, max arr)
Methods and materials of performance techniques for each performance field. Additional projects/assignments required for graduate credit. (Vocal Pedagogy - Spring, Alt/odd yrs)
Prereq: Permission

MusT J436/J536 Pedagogy and Materials: Keyboard I (2 cr)
Objectives and goals of teaching the beginning piano student in regards to business aspects, literature and techniques. Additional projects/assignments required for graduate credit. (Fall, Alt/even yrs)
Prereq: Permission

MusT J437/J537 Pedagogy and Materials: Keyboard II (2 cr)
Objectives and goals of teaching the intermediate and early advanced piano student in regards to literature and techniques. Additional projects/assignments required for graduate credit. (Spring, Alt/odd yrs)
Prereq: Permission

MusT 438 (s) Practicum (cr arr)
Studio and classroom teaching of secondary music majors, minors, or electives.
Prereq: Permission

MusT 445 Proseminar in Music Teaching (1 cr)
Coreq: MusT 432.

MusT 465 Jazz Band Rehearsal Techniques (2 cr)
Methods, materials, and literature for jazz bands in public schools. (Spring only)
Prereq or Coreq: MusT 383
Coreq: MusA 323 or MusA 365 (Jazz Combo)

MusT 466 Marching Band Techniques (1 cr)
Techniques of drilling; materials for field and street maneuvers; preparation of shows. (Fall only)
Prereq: MusC 142
Prereq or Coreq: MusA 119/MusA 319 and MusT 383; or Permission

MusT 499 (s) Directed Study (cr arr)

MusT 500 Master's Research and Thesis (cr arr)

MusT 501 (s) Seminar (cr arr)

MusT 502 (s) Directed Study (cr arr)

MusT 503 (s) Workshop (cr arr)

MusT 504 (s) Special Topics (cr arr)

MusT 508 Psychology of Music (3 cr)
The physical and psychological aspects of music involving human behavior.

MusC 590 (s) Master's Recital (0 cr)
For students whose degree requires a composition recital as part of the degree requirements. Graded P/F.
Prereq: Audition and Permission of committee
Coreq: MusC 525

MusC 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

History and Literature

MusH 101 (s) Survey of Music (3 cr)
Not open for cr to majors. Intro to the art and nature of music; emphasis on aural skills, historical styles, musical forms, and the literature of music.

MusH 111 Introduction to Music Literature (3 cr)
Introduction to the study of music literature, including western and world traditions. Emphasis on aural and score analysis, writing, and research techniques. (Spring only)
Prereq: MusC 141

MusH 200 (s) Seminar (cr arr)

MusH 201 History of Rock and Roll (3 cr)
A study of the history and culture of rock music. May not be counted as a required music history elective for music majors.

MusH 203 (s) Workshop (cr arr)

MusH 204 (s) Special Topics (cr arr)

MusH 299 (s) Directed Study (cr arr)

MusH 321 Music in Western Civilization I (3 cr)
Musical culture, styles, and genres from the Middle Ages through 1750. (Fall only)
Prereq: "C" or better in MusH 101 or 111

MusH 322 Music in Western Civilization II (3 cr)
European and American musical culture, styles, and genres from 1750 to World War I. (Spring only)
Prereq: "C" or better in MusH 101 or 111

MusH 323 Music in Western Civilization III (3 cr)
European and American musical cultures, styles, and genres, including jazz, from World War I to the present. (Fall only)
Prereq: "C" or better in MusH 101 or 111

MusH 330 History of Music Theatre (3 cr)
A study of the development of American musical theatre. Students will analyze the forms and styles of representative works. (Spring,. Alt/even yrs)

MusH 400 (s) Seminar (cr arr)

MusH 403 (s) Workshop (cr arr)

MusH 404 (s) Special Topics (cr arr)

MusH J410/J510 (s) Studies in Jazz History (3 cr)
Selected topics in jazz. Additional projects/assignments required for graduate credit. (Fall, Alt/odd yrs)
Prereq: MusH 321-323 or Permission

MusH J418/J518 (s) Studies in Classic/Romantic Music (3 cr)
Selected topics in Classic/Romantic music. Additional projects/assignments required for graduate credit. (Fall, Alt/even yrs)
Prereq: MusH 321-323 or Permission

MusH J419/J519 (s) Studies in 20th-Century Music (3 cr)
Selected topics in 20th-century music. Additional projects/assignments required for graduate credit. (Spring, Alt/even yrs)
Prereq: MusH 321-323 or Permission

MusH J420/J520 Studies in World Music (3 cr)
Selected topics in the music of world cultures. Additional projects/assignments required for graduate credit. (Spring, alt/odd yrs)
Prereq: MusH 321, MusH 322, and MusH 323; or Permission

MusH J450/J550 Orchestral Literature (2 cr)
Open to all students. Survey of standard orchestral literature. Additional assignments required for graduate credit. (Spring, Alt/even yrs)
Prereq: MusH 322, 323, and Junior standing or Permission

MusH J451/J551 (s) Repertoire (2 cr, max arr)
May be repeated for cr as content changes. Historical and analytical survey of literature available in all performing media. Additional projects/assignments required for graduate credit.
Prereq: Junior standing and Permission

MusH 452 Solo Vocal Repertoire (2 cr)
Historical and analytical survey of solo vocal literature. (Fall, Alt/even yrs)
Prereq: Permission

MusH J454/J554 Keyboard Repertoire I (2 cr)
Content will cover the development of keyboard literature from J.S. Bach through Beethoven. Additional projects/assignments required for graduate credit. (Fall, Alt/odd yrs)
Prereq: Permission

MusH J455/J555 Keyboard Repertoire II (2 cr)
Content will cover the development of keyboard literature from Schubert to present. Additional projects/assignments required for graduate credit. (Spring, Alt/even yrs)
Prereq: Permission

MusH J456/J556 Choral Literature I (2 cr)
Historical and analytical survey of choral literature from the early Renaissance through Classical era. Additional projects/assignments required for graduate credit.

MusH J457/J557 Choral Literature II (2 cr)
Historical and analytical survey of choral literature from the Romantic through Contemporary era. Additional projects/assignments required for graduate credit.
Prereq for MusH 457: MusH 456
Prereq for MusH 557: MusH 556

MusH 480 Senior Thesis in Music History I (1 cr)
Extended research paper, with documentation; subject to be determined in consultation with supervising faculty.
Prereq: MusH 321, MusH 322, MusH 323, one 400 music history elective, approval of music history faculty via the Music History Qualifying Procedure (see Lionel Hampton School of Music – undergraduate curricular requirements), and Permission

MusH 481 Senior Thesis in Music History II (1 cr)
Continuation and completion of extended research paper, with documentation; subject to be determined in consultation with supervising faculty.
Prereq: MusH 480

MusH 499 (s) Directed Study (cr arr)

MusH 500 Master's Research and Thesis (cr arr)

MusH 501 (s) Seminar (cr arr)
(Spring, even yrs on-line, odd yrs on-campus)

MusH 502 (s) Directed Study (cr arr)

MusH 503 (s) Workshop (cr arr)

MusH 504 (s) Special Topics (cr arr)

MusH 510 (s) Studies in Jazz History (3 cr)
See MusH J410/J510.

MusH 518 (s) Studies in Classic/Romantic Music (3 cr)
See MusH J418/J518.

MusH 519 (s) Studies in 20th-Century Music (3 cr)
See MusH J419/J519.

MusH 520 Studies in World Music (3 cr)
See MusH J420/J520.

MusH 550 Orchestral Literature (2 cr)
See MusH J450/J550.

MusH 551 (s) Repertoire (2 cr, max arr)
See MusH J451/J551.

MusA 565 (s) Chamber Ensemble (1 cr, max arr)
See MusA J365/J565.

MusA 580 (s) Opera/Musical Theatre Studio (1-3 cr, max arr)
See MusA J380/J580.

MusA 587 (s) Advanced Conducting (1 cr, max arr)
Advanced score study, baton technique, expressive gestures for conductors.
Prereq: Undergraduate conducting course

MusA 590 (s) Elective Master's Recital (0 cr)
For students whose emphasis is other than performance. May be repeated. Graded P/F.
Prereq: Audition and Permission of committee
Coreq: MusA 524

MusA 591 (s) Required Master's Recital (0 cr)
For students whose emphasis is in performance. May be repeated. Graded P/F.
Prereq: Audition and Permission of committee
Coreq: MusA 524 or MusA 534

MusA 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Theory and Composition

MusC 139 Aural Skills I (2 cr)
Exercises and drill in sight-singing and ear training. Three lec-labs a wk. Recommended Coreq: MusA 145-146. (Fall only)
Prereq: Permission

MusC 140 Aural Skills II (2 cr)
Exercises and drill in sight-singing and ear training. Three lec-labs a wk. Recommended Coreq: MusA 145-146. (Spring only)
Prereq: "C" or better in MusC 139

MusC 141 Theory of Music I (2 cr)
Melodic and harmonic materials, part-writing skills, and analysis. (Fall only)
Prereq: Permission

MusC 142 Theory of Music II (2 cr)
Harmonic materials, part-writing skills, and analysis. (Spring only)
Prereq: "C" or better in MusC 141 or Permission

MusC 200 (s) Seminar (cr arr)

MusC 203 (s) Workshop (cr arr)

MusC 204 (s) Special Topics (cr arr)

MusC 239 Aural Skills III (1 cr)
Continuation of MusC 140. Two lec-labs a wk. Recommended Coreq: MusA 245-246. (Fall only)
Prereq: "C" or better in MusC 139-140
Coreq or Prereq: MusC 241

MusC 240 Aural Skills IV (1 cr)
Continuation of MusC 140. Two lec-labs a wk. Recommended Coreq: MusA 245-246. (Spring only)
Prereq: "C" or better in MusC 239.
Coreq or Prereq: MusC 242

MusC 241 Theory of Music III (3 cr)
(Fall only)
Prereq: "C" or better in MusC 142

MusC 242 Theory of Music IV (3 cr)
(Spring only)
Prereq: "C" or better in MusC 241

MusC 260 Introduction to Composition (1 cr)
Fundamentals of musical composition, using short original composition assignments to focus on common techniques used by past and contemporary composers and to develop skill in manuscript and notation. Active participation and performance is emphasized. (Spring only)
Prereq or Coreq: MusC 241 or Permission

MusC 299 (s) Directed Study (cr arr)

MusC 328 Instrumental and Choral Arranging (3 cr)
Principles of instrumentation, transcription, and arranging with emphasis on idiomatic instrumental and choral writing leading to projects in scoring for chamber, band, orchestral, and vocal ensembles. (Spring only)
Prereq: "C" or better in MusC 240 and 242

MusC 329 Theoretical Basis of Jazz (2 cr)
Harmonic, melodic, rhythmic, and stylistic analysis of principal trends. (Fall only)
Prereq: MusC 141 or Permission

MusC 331 Counterpoint (3 cr)
Style and technique of polyphonic 16th century vocal music through 18th century instrumental music, with emphasis on two- to three-part writing; motet, canon, invention, and fugue.
Prereq: MusC 242 or Permission

MusC 400 (s) Seminar (cr arr)

MusC 403 (s) Workshop (cr arr)

MusC 404 (s) Special Topics (cr arr)

MusC 425 Composition (2 cr, max arr)
Creative writing with increasing emphasis on varied media and larger forms, but with value being placed on creativity and originality.
Prereq: MusC 240, MusC 242, and MusC 260; and a portfolio

MusC 426 Electronic Music (2 cr)
Techniques of musical composition using electronic media. (Spring, Alt/odd yrs)
Prereq: MusC 242 or Permission

MusC J437/J537 Music in Film (3 cr)
A seminar in the processes, techniques and evaluation of music as used in film. Materials will change each time the course is offered but the major focus will be main-stream motion pictures. Students enrolled for graduate credit will be expected to complete deeper analysis of selected film scores, and to make a presentation in class. (Fall, Alt/odd yrs)

MusC 442 Musical Analysis (2 cr)
Study of traditional forms and analytical techniques. (Spring only)
Prereq: MusC 242

MusC 480 Senior Thesis in Music Theory I (1 cr)
Extended research paper, with documentation; subject to be determined in consultation with supervising faculty.
Prereq: MusC 442

MusC 481 Senior Thesis in Music Theory II (1 cr)
Continuation and completion of extended research paper, with documentation; subject to be determined in consultation with supervising faculty.
Prereq: MusC 480

MusC 490 Senior Recital (0 cr)
For students in composition required to have a full recital. Graded P/F.
Prereq: Audition and Permission
Coreq: MusC 425

MusC 499 (s) Directed Study (cr arr)

MusC 500 Master's Research and Thesis (cr arr)

MusC 501 (s) Seminar (cr arr)

MusC 502 (s) Directed Study (cr arr)

MusC 503 (s) Workshop (cr arr)

MusC 504 (s) Special Topics (cr arr)

MusC 521 Musical Analysis (3 cr)
Analysis of selected musical compositions.
Prereq: Permission

MusC 525 Composition (2 cr, max arr)
Creative writing.

MusC 537 Music in Film (3 cr)
See MusC J437/J537.

MusC 541 Graduate Theory Review (1 cr)
Review of melodic, harmonic and rhythmic materials, part-writing skills and analysis. This course will not count towards the graduate music curriculum.

MusA 318 (s) Jazz Choir (1 cr, max arr)
See MusA J118/J318/J518.

MusA 319 (s) Marching Band (1-3 cr, max arr)
See MusA J119/J319/J519.

MusA J320/J520 (s) Wind Ensemble (1 cr, max arr)
Open to all students by audition. Students earning graduate credit will be held to a higher standard.
Prereq: Audition and Permission

MusA 321 (s) Concert Band (1 cr, max arr)
See MusA J121/J321/J521.

MusA 322 (s) Orchestra (1 cr, max arr)
See MusA J122/J322/J522.

MusA J323/J523 (s) Jazz Ensemble (1 cr, max arr)
Open to all students. Students earning graduate credit will be held to a higher standard. Three rehearsals a wk.
Prereq: Audition and Permission

MusA 324 (s) Studio Instruction (2 cr, max arr)
See MusA 124 for description; see "Upper-Division Standing" for prerequisites.

MusA J326/J526 Pep Band (1 cr, max arr)
Open to all students. Performances at home basketball games and other events. Travel to conference tournament. Recommended Preparation: MusA J119/J319/J519. (Spring only)
Prereq: Audition and Permission

MusA 334 (s) Studio Instruction (3 cr, max arr)
See MusA 134 for description; see "Upper-Division Standing" for prerequisites.

MusA J365/J565 (s) Chamber Ensemble (1 cr, max arr)
Open to all students. Performance opportunities in chamber ensembles: string, brass, woodwind, percussion, keyboard, vocal, and mixed. Students earning graduate credit will be held to a higher standard.
Prereq: Audition and Permission

MusA J366/J566 Orchestral Repertoire (1 cr, max arr)
Meets one hour weekly to increase familiarity with standard orchestral works. Emphasizes intonation, blend, stylistic awareness, and ensemble precision. Features mock auditions and special guests. Students earning graduate credit will be held to a higher standard.
Prereq: Recommendation of studio instructor or Permission

MusA J380/J580 (s) Opera/Musical Theatre Studio (1-3 cr, max arr)
Analysis, rehearsal, and performance of operatic and musical theatre literature. In order to be considered for a production, a student must have a 3.0 GPA. A mid-term overall GPA of 2.75 is required to continue involvement in a production. Students earning graduate credit will be held to a higher standard.
Prereq: Audition and Permission

MusA 387 Conducting I (2 cr)
Conducting techniques, score reading, and interpretation of scores for large choral and instrumental ensembles.
Prereq: MusC 141. (Fall only)

MusA 400 (s) Seminar (cr arr)

MusA 403 (s) Workshop (cr arr)

MusA 404 (s) Special Topics (cr arr)

MusA J410/J510 Advanced Jazz Improvisation (2 cr)
Advanced study of jazz improvisation with an emphasis on advanced jazz theory, transcription, and developing facility in all keys. Additional projects/assignments required for graduate credit. (Fall only)
Prereq: MusA 210

MusA J455/J555 Keyboard Performance Practices (1 cr)
Study of interpretation of keyboard music from Baroque through 20th century; learn to interpret scores, teach, and perform keyboard music stylistically; acquire knowledge of major performing artists and recordings from each period of music. Registration for graduate credit requires additional research into original treatises from each period of music, resulting in the editing of a piece of music from each of these periods. (Fall, Alt/even yrs).

MusA 487 Conducting II (2 cr)
(Spring only)
Prereq: MusA 387 or Permission

MusA 490 Half Recital (0 cr)
For students required to have one-half recital. Graded P/F.
Prereq: audition and must be enrolled in a least the second semester of MUSA 324 or MusA 334 Individual Instruction and Permission
Coreq: MusA 324 or 334

MusA 491 Recital (0 cr)
For students required to have a full recital. May be repeated. Graded P/F.
Prereq: audition and must be enrolled in at least the third semester of MusA 324 or MusA 334 Individual Instruction and Permission
Coreq: MusA 334

MusA 492 Elective Half Recital (0 cr)
For students who wish to present an elective half recital. Graded P/F.
Prereq: Audition and Permission
Coreq: MusA 324 or 334

MusA 493 Elective Recital (0 cr)
For students who and wish to present an elective full recital. Graded P/F.
Prereq: Audition and Permission
Coreq: MusA 324 or 334

MusA 499 (s) Directed Study (cr arr)

MusA 500 Master's Research and Thesis (cr arr)

MusA 501 (s) Seminar (cr arr)

MusA 502 (s) Directed Study (cr arr)

MusA 503 (s) Workshop (cr arr)

MusA 504 (s) Special Topics (cr arr)

MusA J410/J510 Advanced Jazz Improvisation (2 cr)
See MusA J410/J510.

MusA 514 (s) Studio Instruction (1 cr, max arr)
See MusA 114 for description.

MusA 515 Collaborative Piano (1 cr, max arr)
See MusA J315/J515.

MusA 516 Concert Choir--Vandaleers (1 cr, max arr)
See MusA J116/J316/J516.

MusA 517 (s) University Choir (1 cr, max arr)
See MusA J117/J317/J517.

MusA 518 (s) Jazz Choir (1 cr, max arr)
See MusA J118/J318/J518.

MusA 519 (s) Marching Band (1-3 cr, max arr)
See MusA J119/J319/J519.

MusA 520 (s) Wind Ensemble (1 cr, max arr)
See MusA J320/J520.

MusA 521 (s) Concert Band (1 cr, max arr)
See MusA J121/J321/J521.

MusA 522 (s) Orchestra (1 cr, max arr)
See MusA J122/J322/J522.

MusA 523 (s) Jazz Ensemble (1 cr, max arr)
See MusA J323/J523.

MusA 524 (s) Individual Instruction (2-3 cr, max arr)
See MusA 124 for description.

MusA 526 Pep Band (1 cr, max arr)
See MusA J326/J526.

MusA 534 (s) Individual Instruction (3-6 cr, max arr)
For students in the M.Mus. performance degree; see MusA 134 for description.

MusA 555 Keyboard Performance Practices (1 cr)
See MusA J455/J555.

MvSc 486 Marketing, Implementation and Evaluation for Healthy, Active Lifestyles (1 cr)
Examines and develops practice in marketing, implementation, and evaluation of healthy active lifestyle programs for groups and communities.
Prereq: MvSc 429 and major in Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation.

MvSc 570 Research in Physical Activity, Theory and Design (3 cr)
To understand and apply principles of scientific inquiry using both quantitative and qualitative research methodology; and apply such principles through individual research projects in physical activity.

MvSc 580 Research: Writing and Dissemination (1 cr)
Professional writing of research not directly related to a thesis or dissertation. (Spring only)
Prereq: MvSc 570

MvSc 581 Research: Group Programming (1 cr)
Group professional service projects based on research, needs assessment and implementation strategies. (Spring only)
Prereq: Rec 575

MvSc 582 Research: Individual Programming (1 cr)
Individual professional service projects based on research, needs assessment and implementation strategies. (Spring only)
Prereq: Rec 575

Music Courses

Torrey E. Lawrence, Director, Lionel Hampton School of Music (205 Music Bldg. 83844-4015; phone 208/885-7281; e-mail music@uidaho.edu).

Vertically-related courses in this subject field are: MusA 145-146-245-246.

Applied Performance Studies

MusA 114 (s) Studio Instruction (1 cr, max arr)
For secondary or minor instrument, nonmajors, and undeclared majors; may not be taken for audit. Weekly instruction. Instruction offered in piano, organ, harpsichord, voice, flute, oboe, clarinet, saxophone, bassoon, trumpet, horn, euphonium, trombone, tuba, percussion, violin, viola, cello, contrabass, or guitar. Final exam conducted by jury in some sections.
Prereq: Audition or Permission

MusA 115 (s) Studio Instruction (2 cr, max 8)
Review of fundamentals of technique and musicianship in preparation for MusA 124 and MusA 134. Maximum two semesters on the same instrument.
Prereq: Placement audition by committee

MusA J116/J316/J516 Concert Choir--Vandaleers (1 cr, max arr)
Open to all students. Students earning upper division and graduate credits will be held to higher standards. Field trips.
Prereq: Audition and Permission

MusA J117/J317/J517 (s) University Choir (1 cr, max arr)
Open to all students. Students earning upper division and graduate credits will be held to higher standards.

MusA J118/J318/J518 (s) Jazz Choir (1 cr, max arr)
Open to all students. Students earning upper division and graduate credits will be held to higher standards.
Prereq: Permission

MusA J119/J319/J519 (s) Marching Band (1-3 cr, max arr)
Open to all students. Performance at home football games and other events and travel to selected away football games; field trips. Students earning upper division and graduate credits will be held to higher standards. (Fall only)
Prereq: Permission

MusA J121/J321/J521 (s) Concert Band (1 cr, max arr)
Open to all students. Students earning upper division and graduate credits will be held to higher standards.
Prereq: Permission

MusA J122/J322/J522 (s) Orchestra (1 cr, max arr)
Open to all students. Students earning upper division and graduate credits will be held to higher standards.
Prereq: Audition and Permission

MusA 124 (s) Studio Instruction (2 cr, max arr)
For music majors in music degree programs other than performance; may not be taken for audit. Weekly instruction plus convocation/area recital/studio class; final exam conducted by jury. See MusA 114 for instruction areas.
Prereq: Placement audition by committee

MusA 134 (s) Studio Instruction (3 cr, max arr)
For applied music majors in the B.Mus. performance degree; may not be taken for audit. Weekly instruction plus convocation/area recital/studio class; final exam conducted by jury. See MusA 114 for instruction areas.
Prereq: Placement audition by committee

MusA 143 Piano Class for Non-Majors (1 cr)
Beginning piano for non-majors. (Spring only)

MusA J145 /J245 (s) Piano Class for Music Majors/Minors(1 cr)
May not be taken for audit. Four-semester beginning piano sequence for music majors and minors. Two lec-labs a wk. (Fall only)
Prereq for MusA 145: Major or minor in the School of Music or Permission
Prereq for MusA 245: "C" or better in MusA 146

MusA J146/ J246 Piano Class for Music Majors/Minors (1 cr)
May not be taken for audit. Four-semester beginning piano sequence. Two lec-labs a wk. (Spring only)
Prereq for MusA 146: "C" or better in MusA 145 or Permission
Prereq for MusA 246: "C" or better in MusA 245

MusA 147 Voice Class (1 cr)
May not be taken for audit. For beginning singers. Two lec-labs a wk.

MusA 153 Guitar Class (2 cr)
Group instruction in guitar. May not be taken for audit.

MusA 200 (s) Seminar (cr arr)

MusA 203 (s) Workshop (cr arr)

MusA 204 (s) Special Topics (cr arr)

MusA 210 Jazz Improvisation (2 cr)
Overview of basic jazz improvisation with an emphasis on style and basic jazz theory. (Spring only)

MusA 212 Introduction to Jazz Piano I (1 cr)
Interpretation of fake books and lead sheets in various styles including swing, blues, ballad, Latin and pop. Emphasis on chord voicings, comping, style, and basic improvisation. Recommended Preparation: Equivalent of 2 years piano instruction.

MusA 213 Introduction to Jazz Piano II (1 cr)
This course is designed to expand upon styles and techniques learned in Intro to Jazz Piano I.
Prereq: MusA 212

MusA 245 Piano Class (1 cr)
See MusA J145/J245.

MusA 246 Piano Class for Music Majors/Minors (1 cr)
See MusA J146/J246.

MusA 299 (s) Directed Study (cr arr)

MusA 314 (s) Studio Instruction (1 cr, max arr)
See MusA 114 for description.
Prereq: Permission

MusA J315/J515 Collaborative Piano (1 cr, max arr)
Principles of collaborative piano; lab assignments under supervision.
Prereq: Audition and completion of semester of MusA 124 or MusA 134

MusA 316 Concert Choir--Vandaleers (1 cr, max arr)
See MusA J116/J316/J517.

MusA 317 (s) University Choir (1 cr, max arr)
See MusA J117/J317/J517.

MS 401 Seminar in Leadership and Management (3 cr)
Practical application of leadership and management skills, military justice system, administrative and logistical procedures; preparation for service as an Army lieutenant.
Prereq: MS 301-302
Coreq: MS 411

MS 402 Seminar in Leadership and Management (3 cr)
Practical application of leadership and management skills, military justice system, administrative and logistical procedures; preparation for service as an Army lieutenant.
Prereq: MS 301-302
Coreq: MS 412

MS 411 Leadership Lab (1 cr)
Building fundamental characteristics of leadership using a military model; hands-on training in small group leadership. Two hrs of lab every other week.
Coreq: MS 401

MS 412 Leadership Lab (1 cr)
Building fundamental characteristics of leadership using a military model; hands-on training in small group leadership. Two hrs of lab every other week.
Coreq: MS 402

MS 451 Physical Fitness Training (1 cr)
Physical fitness training focused on Army Standards for instruction and testing. (Fall only)
Coreq: MS 401

MS 452 Physical Fitness Training (1 cr)
Physical fitness training focused on Army Standards for instruction and testing. (Spring only)
Coreq: MS 402

MS 489 Leadership Development Assessment Course (cr arr)
Intensive and broad-ranging leadership training provided to cadets at Fort Lewis over a four week period during the summer. Cadets are assessed on their ability to lead units ranging from 11-135 persons, to master a variety of physical and mental challenges, and to exhibit composure and leadership skills in stressful situations.
Prereq: MS 301, MS 302 and Permission

MS 499 (s) Directed Study (cr arr)

Modern Languages & Cultures Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Courses Offered in English Courses

No knowledge of foreign language required. May be used to fulfill the CLASS humanities requirement.

FLEN 204 (s) Special Topics (cr arr)

FLEN 210 Introduction to Classical Mythology (3 cr)
Introduction to classical myths and legends, focusing on the classical stories of creation, gods, and heroes.

FLEN 243 English Word Origins (3 cr)
Fundamental Latin and Greek roots of words used in the humanities, social and natural science; emphasis on terminology of fields in which students are interested; introduction to the history of the English Language and its relationship with other languages; knowledge of Greek or Latin is not required.

FLEN 270 Introduction to Greek and Roman Civilization (3 cr)
See Hist 270.

FLEN 299 (s) Directed Study (cr arr)

FLEN 307 The European Union (3 cr)
A cross-cultural examination of the European Union, its history, evolution, and current functioning; social, cultural, and political differences among union partners; economic structure and demographics; business culture.

FLEN 308 European Immigration and Integration (3 cr)
An examination of immigration and integration into Europe since the formation of the European Union; national and international debates; accomplishment and failures; hopes and fears; anti-foreign sentiments and the recurrence of nationalisms.

FLEN 313 French/Francophone Literature in Translation (3 cr)
Major modern French and Francophone authors in English translation; knowledge of French is not required.

FLEN 324 Topics in German Literature in Translation (3 cr, max 6)
Major German-language authors in English translation; knowledge of German is not required.

FLEN 331 Japanese Anime (3 cr)
Selected Japanese animated films are studied as cultural products; each film is situated in its socioeconomic, political, cultural, and/or historical contexts. Japanese language proficiency not required.

FLEN 391 Hispanic Film (3 cr)
Same as LAS 391. Open to all students. A maximum of 3 cr in FLEN 391, 393, and 394 may be counted toward a major in Spanish. Genre, structure, and style of representative fiction and nonfiction films of Spain and Latin America.

FLEN 393 Spanish Literature in Translation (3 cr)
A maximum of 3 cr in FLEN 391, 393, and 394 may be counted toward a major in Spanish. Major Spanish-language authors in English translation; knowledge of Spanish is not required.

FLEN 394 Latin American Literature in Translation (3 cr)
Same as LAS 394. A maximum of 3 cr in FLEN 391, 393, and 394 may be counted toward a major in Spanish. Major Spanish-language authors in English translation; knowledge of Spanish is not required. (Alt/yrs)

FLEN 400 (s) Seminar (cr arr)

FLEN 499 (s) Directed Study (cr arr)

General Courses

FL 204 (s) Special Topics (cr arr)

FL 299 (s) Directed Study (cr arr)

FL 404 (s) Special Topics (cr arr)

FL 499 (s) Directed Study (cr arr)

Movement Sciences Courses

Philip W. Scruggs, Dept. Chair (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

MvSc 200 (s) Seminar (cr arr)

MvSc 201 Physical Activity, Wellness & Behavior Change for Healthy Active Lifestyles (3 cr)
Examines personal awareness and responsibility for maintenance of health, proper nutrition, fitness, and well-being. It teaches skills necessary for individual program development and implementation to effect positive health-related behavior change
Prereq: Major in Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation.
Prereq or Coreq: PEP 100, PEP 161, Rec 104, or Dan 101

MvSc 429 Leadership, Pedagogy and Program Planning for Healthy Active Lifestyles (3 cr)
Examines and develops skills in leadership, pedagogy and program assessment and planning to promote healthy active lifestyles for groups and communities
Prereq: MvSc 201 and major in Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation.

MvSc 445 Internship Preparation and Professional Development (1 cr)
This course explores the different factors that go into finding, obtaining, and getting the most out of an internship. Emphasis is placed on such skills related to understanding the student's chosen field/career path, professionalism, communication, and dealing with adversity in the work place.
Prereq: MvSc 201

the department head. Recommended Preparation: Undergraduate degree in Microbiology, Biochemistry or related topic.
Prereq: Enrollment in a doctoral program

Military Science Courses

LTC Braum P. Barton, Dept. Head, Dept. of Military Science (West End, Mem. Gym. 83844-2424; phone 208-885-6528).

MS 101 Introduction to Military Science (1 cr)
Introduction to mission and organization of the U.S. Army; provides background in role of an Army officer as a career choice in either the Active Army or the National Guard/Reserves; lecture, conference, and activities dealing with military subjects; texts provided by dept; no mandatory uniform wear; students also learn about available two- and three-year scholarships and other financial programs for which they may be eligible. Participation entails no military obligation.

MS 102 Fundamentals of Leadership and Management (1 cr)
Continuation of MS 101. Development of greater understanding of roles and responsibilities of Army officers; lecture, conference, and activities dealing with military subjects; texts provided by dept; more focus on leadership development and the development of personal confidence. Participation entails no military obligation.

MS 111 Leadership Lab (1 cr)
Building fundamental characteristics of leadership using a military model; hands-on training in small group leadership. Challenging outdoor activities such as mountaineering, rifle marksmanship, and land navigation skills. Two hours of lab every other week. Uniforms are furnished and wear is required during lab. By permission only, for those with an interest in pursuing an Army commission.
Coreq: Concurrent registration in MS 101

MS 112 Leadership Lab (1 cr)
Building fundamental characteristics of leadership using a military model; hands-on training in small group leadership. Challenging outdoor activities such as mountaineering, rifle marksmanship, and land navigation skills. Two hours of lab every other week. Uniforms are furnished and wear is required during lab. By permission only, for those with an interest in pursuing an Army commission.
Coreq: Concurrent registration in MS 102

MS 151 Physical Fitness Training (1 cr)
Physical fitness training focused on Army Standards for instruction and testing. Open to all UI students. (Fall only)

MS 152 Physical Fitness Training (1 cr)
Physical fitness training focused on Army Standards for instruction and testing. Open to all UI students. (Spring only)

MS 201 Applied Leadership and Management (2 cr)
Application of leadership and management skills to various case studies; organization and structure of Army units; basic first aid; texts provided by department. Participation entails no military obligation.
Prereq: MS 102 or Permission

MS 202 Applied Leadership and Management (2 cr)
Troop leading procedures and application of procedures to planning and conducting small unit operations; individual soldier skills, such as military communication, basic map reading, and survival skills; texts provided by department. Participation entails no military obligation.
Prereq: MS 201 or Permission

MS 211 Leadership Lab (1 cr)
Building fundamental characteristics of leadership using a military model; hands-on training in small group leadership. Practical field training in variety of outdoor skills. Uniforms are furnished and wear is required during lab. Two hrs of lab every other week. By permission only, for those with a potential interest in pursuing an Army commission.
Coreq: Concurrent registration MS 201

MS 212 Leadership Lab (1 cr)
Building fundamental characteristics of leadership using a military model; hands-on training in small group leadership. Practical field training in variety of outdoor skills. Uniforms are furnished and wear is required during lab. Two hours of lab every other week. By permission only, for those with a potential interest in pursuing an Army commission.
Coreq: Concurrent registration MS 202

MS 227 American Military History (3 cr)
Using lecture and small group discussions, this is a survey of the American military experience. Events are analyzed using the conventional discipline of historical methodology and the classical norms of the principles of warfare. Fulfills military history requirement for commissioning of cadets. Department permission required.

MS 251 Physical Fitness Training (1 cr)
Physical fitness training focused on Army Standards for instruction and testing. (Fall only)

MS 252 Physical Fitness Training (1 cr)
Physical fitness training focused on Army Standards for instruction and testing. (Spring only)

MS 280 Raider Challenge (1 cr, max 4)
This course prepares teams to compete in the two-day Ranger Challenge against Army ROTC programs from other universities. Skills focused on include weapons knowledge, physical fitness, land navigation, first aid, rope bridge construction, and small unit maneuvering. (Fall only)
Prereq: Permission
Coreq: MS 111, MS 112, MS 211, MS 311, MS 312, MS 411, or MS 412

MS 281 Military Proficiency Challenge (1 cr, max 4)
This course prepares cadets to take the two-day German Armed Forces Proficiency Badge test, which consists of track and field events, marksmanship, road march, swim test, and first aid course. Department permission required. (Spring only)
Coreq: MS 111, MS 112, MS 211, MS 212, MS 311, MS 312, MS 411, or MS 412

MS 290 Color Guard/Drill Team (1 cr, max 4)
Participation and training in color guard and drill team.
Coreq: MS 101 or 102 or 201 or 202 or 301 or 302 or 401 or 402

MS 299 (s) Directed Study (cr arr)

MS 301 Advanced Leadership and Management (3 cr)
Practical leadership skills in a light infantry environment; leadership techniques practiced while learning patrolling and offensive and defensive tactics at squad and platoon level; prepares cadets for four-week Leadership Training and Assessment course at Fort Lewis. Three hours of lecture per week.
Prereq: MS 202 or Permission. Permission may be granted to students who have attended Leadership Training Camp or Basic Training from any U.S. military branch of service
Coreq: MS 311

MS 302 Advanced Leadership and Management (3 cr)
Practical leadership skills in a light infantry environment; leadership techniques practiced while learning patrolling and offensive and defensive tactics at squad and platoon level; prepares cadets for four-week Leadership Training and Assessment course at Fort Lewis. Three hours of lecture per week.
Prereq: MS 301 or Permission. Permission may be granted to students who have attended Leadership Training Camp or Basic Training from any U.S. military branch of service
Coreq: MS 312

MS 311 Leadership Lab (1 cr)
Building fundamental characteristics of leadership using a military model; hands-on training in small group leadership. Two hrs of lab every other week.
Coreq: MS 301

MS 312 Leadership Lab (1 cr)
Building fundamental characteristics of leadership using a military model; hands-on training in small group leadership. Two hrs of lab every other week.
Coreq: MS 302

MS 351 Physical Fitness Training (1 cr)
Physical fitness training focused on Army Standards for instruction and testing. (Fall only)
Coreq: MS 301

MS 352 Physical Fitness Training (1 cr)
Physical fitness training focused on Army Standards for instruction and testing. (Spring only)
Coreq: MS 302

MMBB 398 (s) Internship (1-3 cr, max 3)
Supervised internship in professional, non-University of Idaho settings, integrating academic study with work experience in the fields of microbiology, molecular biology or biochemistry; requires formal written plan of activities to be approved by academic advisor and departmental head before engaging in the work; a final report will be evaluated by on-campus faculty.
Prereq: Permission

MMBB 400 (s) Seminar (1cr, max arr)
See Biol 400.

MMBB 401 Undergraduate Research (1-4 cr, max 8)
See Biol 401.

MMBB 404 (s) Special Topics (cr arr)

MMBB J409/J509 Immunology (3 cr)
See Biol J432/J532.

MMBB J412/J513 Pathogenic Microbiology (3 cr)
See Biol J433/J533.

MMBB J422/J522 Cellular and Molecular Basis of Disease (3 cr)
See Biol J441/J541.

MMBB J425/J525 Microbial Ecology (3 cr)
Same as Soil J425/J525. Biogeochemical activities and relationships of microorganisms in soil, water, plants, and animals. Extra oral and/or written assignments reqd for grad cr. Recommended Preparation: Biol 250, Math 137 or 143. (Spring, alt/yrs)

MMBB J432/J532 Virology (3 cr)
See Biol J447/J547.

MMBB 440 Advanced Laboratory Techniques (4 cr)
Same as PlSc 440. Intensive hypothesis-driven laboratory course that will prepare the student for research in molecular biology; emphasis on areas of microbial physiology, microbial genetics, immunology, and pathogenic microbiology. (Spring only)
Prereq: Biol 250

MMBB J460/J555 Microbial Physiology (3 cr)
Concepts of microbial growth, metabolism, regulation, variation, structural-functional relationships. Extra oral and/or written assignments required for graduate credit. (Fall, alt/yrs)
Prereq: Biol 250

MMBB J463/J563 Molecular Parasitology (3 cr)
See Biol J462/J562.

MMBB J475/J575 Cell Biology (3 cr)
Same as PlSc J476/J576. Introduction to the organization and function of the major components of the eukaryotic cell; emphasis on the composition of cells, the structures and assembly processes of molecules that make up cells, diversity of cell types found in multicellular organisms, and how common interacting processes are coordinately controlled. Extra oral and/or written assignments reqd for graduate credit. (Spring, Alt/yrs)
Prereq: Biol 115 and either Biol 300 or Biol 380

MMBB J482/J582 Protein Structure and Function (3 cr)
See Biol J482/J582.

MMBB J485/J585 Prokaryotic Molecular Biology (3 cr)
See Biol J485/J585.

MMBB J486/J586 Plant Biochemistry (3 cr)
Same as PlSc J486/J586. An in-depth introduction to metabolic processes carried out by plants, some fungi, and some alga with emphasis on cell wall synthesis, hormone synthesis, and photosynthesis. Extra oral and/or written assignments reqd for grad cr. (Spring, alt/years)
Prereq: Biol 300 or Biol 380

MMBB J487/J587 Eukaryotic Molecular Genetics (3 cr)
See Biol J487/J587.

MMBB J488/J588 Genetic Engineering (3 cr)
Same as PlSc J488/J588. Techniques and theory underlying practical genetic modifications of plants, microbes, and animals. Extra oral and/or written assignments required for graduate credit. Recommended Preparation: Biol 380. (Fall only)
Prereq: Gene 314 or Biol 310

MMBB 497 (s) Practicum in Teaching (2 cr)
See Biol 491.

MMBB 498 (s) Internship (1-3 cr, max 3)
See MMBB 398 for description.
Prereq: Permission

MMBB 499 (s) Directed Study (cr arr)

MMBB 500 Master's Research and Thesis (cr arr)

MMBB 501 (s) Seminar (1 cr, max arr)
A maximum of 2 cr may be counted toward an M.S. degree and a maximum of 4 cr toward a Ph.D. Graded P/F.
Prereq: Permission

MMBB 502 (s) Directed Study (cr arr)
Areas normally offered are: molecular biology, microbiology and biochemistry.
Prereq: Permission

MMBB 504 (s) Special Topics (cr arr)

MMBB 509 Immunology (3 cr)
See Biol J432/J532..

MMBB 511 Research and Curriculum Progress (1 cr, max arr)
See Biol 524.

MMBB 513 Pathogenic Microbiology (3 cr)
See Biol J433/J533.

MMBB 522 Cellular and Molecular Basis of Disease (3 cr)
See Biol J441/J541.

MMBB 525 Microbial Ecology (3 cr)
See MMBB J425/J525.

MMBB 532 Virology (3 cr)
See Biol J447/J547.

MMBB 541 Biochemistry (3 cr)
Same as PlSc 542. Max 7 cr in any combination of Biol 380, MMBB 541, and Biol 554. Intermediate biochemistry; intro to metabolism and the chemical and physical properties of biomolecules. (Fall only)
Prereq: Chem 372; Biol 380 or **Coreq:** *Chem 302 or 306; or Permission*

MMBB 555 Microbial Physiology (3 cr)
See MMBB J460/J555.

MMBB 563 Molecular Parasitology (3 cr)
See Biol J462/J562.

MMBB 575 Cell Biology (3 cr)
See MMBB J475/J575.

MMBB 582 Protein Structure and Function (3 cr)
See Biol J482/J582.

MMBB 585 Prokaryotic Molecular Genetics (3 cr)
See Biol J485/J585.

MMBB 586 Plant Biochemistry (3 cr)
See MMBB J486/J586.

MMBB 587 Eukaryotic Molecular Genetics (3 cr)
See Biol J487/J587.

MMBB 588 Genetic Engineering (3 cr)
See MMBB J488/J588.

MMBB 598 (s) Internship (1-3 cr, max 3)
See MMBB 398 for description. Graded P/F.
Prereq: Permission

MMBB 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

MMBB 600 Doctoral Research and Dissertation (cr arr)

MMBB 607 Doctoral Degree Rotation (1 cr, max 3)
Incoming PhD students receive a grade for laboratory rotations. The final grade is based on performance in the laboratory and on a public seminar at the end of the rotation semester. Rotation students are assigned to

ME 552 TechVentures: High Technology Entrepreneurship (3 cr)
See ME J452/J552.

ME 564 Robotics: Kinematics, Dynamics, and Control (3 cr)
See ME J464/J564.

ME 571 Building Performance Simulation for Integrated Design (3 cr)
See Arch 574.

ME 578 Neural Network Design (3 cr)
See ECE 578.

ME 580 Linear System Theory (3 cr)
See ECE 572.

ME 583 Reliability of Engineering Systems (3 cr)
See CE 541.

ME 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

ME 600 Doctoral Research and Dissertation (cr arr)

Medical Education Courses

Joseph Cloud, Interim Director, WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) Medical Education Program (304 Student Health Services Bldg. 83844-4207; phone 208/885-6696; e-mail marlanem@uidaho.edu).

Note: Ordinarily, only students enrolled at the University of Washington School of Medicine register to take medical education courses. Matriculated graduate and senior undergraduate students may register for credit in certain medical education courses under appropriate circumstances. In such cases prior approval must be obtained from the faculty member chairing the course and the WWAMI director. Permission to register will usually depend on the student also having approval from his or her academic advisor (senior undergraduate students must also obtain approval from the vice provost for research and graduate studies) and be limited to not more than two medical education courses per semester. MedS 505 (Preceptorship) and MedS 513, 522, and 535 (Introduction to Clinical Medicine I, II, and III) are closed to all but WWAMI medical students.

MedS 501 (s) Seminar (cr arr)

MedS 502 (s) Directed Study (cr arr)
Areas normally offered are directed dissection of the extremities, trunk, head, neck, abdomen, and pelvis; endocrinology, physiology, and other medically related studies. (Spring only)

MedS 504 (s) Special Topics (cr arr)

MedS 505 Preceptorship (1 cr, max 2)
First-year medical students gain experience and insight into medical practice situations; students are stationed in physician offices at WWAMI sites.

MedS 510 Microscopic Anatomy (4 cr)
Description and microscopic examination of cell types, tissues, and major organs of the human body. (Fall only)

MedS 511 Anatomy and Embryology 1 (5 cr)
Presents understanding of the formation and 3-dimensional relationships of the major structures in the human body. This is a laboratory course where the diversity variability and adaptability of the human phenotype will be examined in the dissection laboratory and in living anatomy. Focus is on trunk anatomy.

MedS 512 Mechanisms in Cellular Physiology (3 cr)
Fundamental cell physiology mechanisms: ionic, electrical gradients, sensory receptors, autonomic nervous system, energy metabolism, epithelial transport; gastrointestinal motility and secretions. (Fall only)

MedS 513 Introduction to Clinical Medicine I (2 cr)
Instruction in communications skills and interview techniques to form the basis for the eventual doctor-patient relationship. (Fall only)

MedS 514 Biochemistry I (3 cr)
Focus on genome information, gene functions, genetic information stored, mobilized, and used, regulation, molecular medicine, genomic therapies. Presents metabolism, as integrated at the level of the intact mammalian organism for the purpose of generating energy from food and converting small molecules to essential building blocks of our cells. Fundamental principles of nutrition and chemotherapy of viral, bacterial and neoplastic diseases will also be discussed. (Fall only)

MedS 516 Systems of Human Behavior I (3 cr)
Selected overview of contributions from behavioral sciences to clinical practice of primary care physicians. Sensitizes students to impact of such factors as emotional and physical development, cultural backgrounds, social roles, families, sexual identities, and belief systems upon their effectiveness as physicians. Encourages appreciation of the role of behavioral factors in major management problems faced in medical practice; covers physical and psychological development of the individual from the embryo through old age; teaches skills in analyzing behavior, defining behavior objectives, and designing precise treatment strategies to obtain these objectives. (Fall only)

MedS 522 Introduction to Clinical Medicine II (2 cr)
Communication skills as related to patients and dealing with patient history and professionalism.

MedS 523 Introduction to Immunology (2 cr)
Provides a medically relevant foundation regarding the principles of the immune system and the vocabulary and language of immunology; a working knowledge of the immunological basis for defense against infection, immune-mediated pathology, immunodeficiency, and immunological barriers to transplantation; and familiarity with beneficial therapies to modulate the immune response. (Fall only)

MedS 524 Biochemistry II (2 cr)
Continuation of MedS 514. (Fall only)

MedS 531 Anatomy and Embryology 2 (4 cr)
Gross anatomy; focus on head and neck anatomy, including skull, pharynx, and larynx; audition and balance. Continuation of MedS 511. (Spring only)

MedS 532 Nervous System (5 cr)
Presents the structure and function of the nervous system, including the eye. Neuropathological examples are presented as well as clinical manifestations of neurological disease. (Spring only)

MedS 534 Microbiology and Infectious Diseases (6 cr)
Biology of microbial pathogens and the mechanisms of pathogenesis; clinical manifestations, epidemiology and general principles of diagnosis, therapy and prevention of infectious disease. (Spring only)

MedS 535 Introduction to Clinical Medicine III (2 cr)
Teaches the basic physical exam of the adult through use of lectures, audiovisual aids and small group tutorials where students in supervised settings learn and practice the physical exam. Students are introduced to principals of clinical reasoning and continue to explore professional issues. (Spring only)

MedS 553 Anatomy & Embryology (Musculoskeletal) (3 cr)
Anatomy and clinical lectures, gross anatomy labs, living anatomy/clinical correlation, focus on musculoskeletal systems. (Spring only)

MedS 590 Medical Information for Decision Making (1 cr)
Examines medical literature for the purpose of primary research, diagnosis, and therapeutic and preventative intervention. (Spring only)

Microbiology, Molecular Biology and Biochemistry Courses

James J. Nagler, Interim Dept. Chair, Dept. of Biological Sciences (252 Life Sc. Bldg. 83844-3051; phone 208/885-6280).

MMBB 154 Introductory Microbiology (3 cr)
Carries no credit after Biol 250. May be taken by microbiology majors, but carries no cr after Biol 250. Introduction to microorganisms and their role in disease, health, foods, and the environment; current topics in microbiology. (Spring only)

MMBB 155 Introductory Microbiology Laboratory (1 cr)
See Biol 155.

MMBB 255 General Microbiology Lab (2 cr)
See Biol 255.

processing. Application of CFD software (ANSYS FLUENT) through five hands-on CFD Labs including internal viscous pipe flows, external flows over a 2D airfoil and a circular cylinder, and flows in a 2D driven cavity. Additional projects/assignments required for graduate credits.
Prereq: Engr 335 and Math 330

ME J452/J552 TechVentures: High Technology Entrepreneurship (3 cr)
TechVentures teaches students how to startup a technology company. Topics are (a) self-management, (b) product design, (c) marketing, (d) finance, and (e) organizational design. This project-based course is open to all majors. One extra project is required for graduate credit.
Prereq: Junior Standing and Permission

ME 461 Fatigue and Fracture Mechanics (3 cr)
Fracture mechanics approach to structural integrity, fracture control, transition temperature, microstructural and environmental effects, fatigue and failure analysis.
Prereq: Engr 350

ME J464/J564 Robotics: Kinematics, Dynamics, and Control (3 cr)
Mathematical analysis applied to spatial robotics including: Rigid body motion using screw theory, forward and inverse kinematics, analyses of forces and velocities using the manipulator Jacobian, serial and parallel chains, robot dynamics and simulation, nonlinear control and adaptive control, and Lyapunov stability theory. Additional projects/assignments required for graduate credit. Recommended Preparation: CS 120.
Prereq: Math 310, Math 330, and ME 313 or Equivalent

ME 472 Mechanical Vibrations (3 cr)
Free and forced vibration of single and multiple degree of freedom systems; response of mechanical systems to inputs of varying complexity, ranging from single frequency to pseudo-random; applications to mechanical design and vibration control. Cooperative: open to WSU degree-seeking students.
Prereq: ME 313

ME 481 Control Systems (3 cr)
Same as ECE 470. Analysis and design of feedback control systems utilizing frequency and time domain methods, and computer-aided design tools. Cooperative: open to WSU degree-seeking students.
Prereq for Electrical Engineering and Computer Engineering majors: ECE 350
Prereq for Mechanical Engineering majors: ME 313

ME 490 Solid Modeling, Simulation and Manufacturing Capstone (3 cr)
Use of solid modeling software focused on preparation for certification examinations, introduction to multi-physics numerical simulation, and computer aided manufacturing (CAM). A major final project is required. (Fall only)
Prereq: Permission

ME 499 (s) Directed Study (cr arr)
Selected topics. Detailed report required.
Prereq: Senior standing and Permission

ME 500 Master's Research and Thesis (cr arr)

ME 502 (s) Directed Study (cr arr)
Supervised study, including critical reading of current literature.
Prereq: Permission

ME 503 (s) Workshop (cr arr)

ME 504 (s) Special Topics (cr arr)

ME 513 Engineering Acoustics (3 cr)
See ME J413/ID-J513.

ME 514 HVAC Systems (3 cr)
See ME J414/J514.

ME 515 Transport Phenomena (3 cr)
See ChE 515.

ME 517 Turbomachinery (3 cr)
See ME J417/J517.

ME 519 Fluid Transients (3 cr)
See CE 519.

ME 520 Fluid Dynamics (3 cr)
See ME J420/J520.

ME 521 Design Synthesis with Solid Modeling (3 cr)
Use of solid modeling in the design synthesis process that focuses on optimized designs, reverse engineering to understand design intent, and aesthetics. Course concludes with one month-long final project.
Prereq: Graduate Standing or ME 421

ME 523 Human Factors and Ergonomics in Product Design (3 cr)
See ME J423/J523.

ME R525 Advanced Heat Transfer (3 cr)
Application of fundamentals of heat conduction, radiation, and convection; relationships to fluid dynamics and mass transfer; economics and design applications.
Prereq: Permission

ME 527 Thermodynamics (3 cr)
Thermodynamic laws for design and optimization of thermodynamic systems, equations of state, properties of ideal and real fluids and fluid mixtures, stability, phase equilibrium, chemical equilibrium, applications of thermodynamic principles. Cooperative: open to WSU degree-seeking students.
Prereq: Engr 320 or Permission

ME 529 Combustion and Air Pollution (3 cr)
Formation of pollutants during combustion processes and their subsequent transformations in the atmosphere; emphasis on the effects of design and operating parameters of combustion devices on the nature and composition of exhaust gases, improvements, post-combustion treatment of effluent gases, atmospheric chemistry, transport of pollutants, smog formation, acid rain, ozone formation and destruction.
Prereq: Engr 320 and 335, ME 345 or Permission

ME 539 Advanced Mechanics of Materials (3 cr)
Same as CE 510 and MSE 539. Limitations of results of elementary mechanics of materials, complex situations of loading and structural geometry, applications to design of machines and structure, introduction to elasticity.
Prereq: ME 341 or CE 342

ME 540 Continuum Mechanics (3 cr)
Stress and deformation of continua using tensor analysis; relationship between stress, strain, and strain rates in fluids and solids; applications.
Prereq: Permission

ME 541 Mechanical Engineering Analysis (3 cr)
Mathematical modeling and solutions to mechanical engineering problems; analytical solutions to linear heat and mass diffusion, waves and vibrations; introduction to approximate techniques.
Prereq: ME 345, Engr 350 or Equivalent

ME 543 Analysis of Thermal Energy Systems (3 cr, max arr)
See ME J443/J543.

ME 544 Conduction Heat Transfer (3 cr)
Formulation of steady-state and transient one- and multi-dimensional heat conduction problems; analytical solution techniques for linear problems including separation of variables, integral transforms, and Laplace transforms.
Prereq: ME 345 or equiv, or Permission

ME 546 Convective Heat Transfer (3 cr)
Energy conservation equations; laminar and turbulent forced convective heat transfer; internal and external flow; free convection. Cooperative: open to WSU degree-seeking students.
Prereq: ME 345 or Permission

ME 547 Thermal Radiation Processes (3 cr)
Thermal radiation; radiation interchange among surfaces; radiation in absorbing-emitting gases; combined modes of heat transfer.
Prereq: ME 345 or Permission

ME 548 Elasticity (3 cr)
Mathematical analysis of strain and stress, including vectors, tensors, and coordinate transformations; equations of elasticity; stress problems involving extension, torsion, and flexure; theories of failure.
Prereq: ME 341 or CE 342

ME 549 Finite Element Analysis (3 cr)
See CE 546.

ME 550 Computational Fluid Dynamics (3 cr)
See ME J450/J550.

with ME Department before start of coop; cannot be counted as a technical elective. Graded P/F.
Prereq: Permission

ME 399 (s) Engineering Cooperative Internship II (cr arr)
Supervised internship in professional engineering settings, integrating academic study with work experience; requires written report to be evaluated by a designated faculty member; details of coop to be arranged with ME Department before start of coop; cannot be counted as a technical elective. Graded P/F.
Prereq: Permission

ME 401 (s) Engineering Team Projects (2-3 cr, max arr)
See ME J201/J401.

ME 404 (s) Special Topics (cr arr)

ME 407 Group Mentoring III (1 cr)
Mentoring of student groups in engineering classes where a process education environment is used; students taking this course will improve their engineering skill in the area they are mentoring as well as improving their team, communication, and leadership skills. Student must attend all classes or labs where group activities in the process education environment are done (a minimum of 2 mentoring sessions per week).
Prereq: Permission

ME 410 Principles of Lean Manufacturing (3 cr)
Principles of lean manufacturing are introduced that provide a systematic process for identifying and eliminating non-value activities (waste) in production processes. Students learn these principles through a series of workshops, lectures, and hands-on simulations of lean principles. Three hours of lec and six hours of outside work per week.
Prereq: Sr standing in an engineering discipline or Permission

ME 412 Gas Dynamics (3 cr)
Compressible flow in ducts and nozzles, shock waves and expansion waves, and adiabatic two-dimensional compressible flow.
Prereq: Math 310, Engr 320, and Engr 335

ME J413/J513 Engineering Acoustics (3 cr)
ME 513 same as ECE 579. Fundamentals of acoustics including wave theory; transmission through layers, generation and reception; low frequency models; application to sound measurement, transducers, loudspeaker cabinet design, and nondestructive testing; acoustic design project reqd. Additional projects/assignments reqd for grad cr. ME 513 is a cooperative course available to WSU degree-seeking students.
Prereq: Engr 240 or ECE 212, and Math 310, or ME 313

ME J414/J514 HVAC Systems (3 cr)
Application of thermodynamics, heat transfer, and fluid flow to understanding the psychrometric performance of systems and equipment; evaluating the performance characteristics, advantages, and disadvantages of the various types of HVAC systems including large tonnage refrigeration/chiller equipment, cooling coils, cooling towers, ducts, fans, and heat pump systems; economics of system and equipment selection. Recommended Preparation: ME 345, ME 444.

ME J417/J517 Turbomachinery (3 cr)
Introduction to the basic principles of modern turbomachinery. Emphasis is placed on steam, gas (combustion), wind and hydraulic turbines. Applications of the principles of fluid mechanics, thermodynamics and aerodynamics to the design and analysis of turbines and compressors are incorporated. Additional technical research report and presentation reqd for grad cr. Recommended Preparation: Engr 320, Engr 335.

ME J420/J520 Fluid Dynamics (3 cr)
Same as CE J420/J520. Cr not granted for both ME 420 and ME 520. A second fluid dynamics course featuring vector calculus and integral and differential forms of the conservation laws. Topics include fluid properties, fluid statistics, inviscid flow; conservation of mass, momentum, and energy; and turbulence. Other topics may be covered. Additional projects/assignments reqd for grad cr.
Prereq: Engr 335, Math 310, or Permission

ME 421 (s) Advanced Computer Aided Design (3 cr)
Use of solid modeling software for advanced component design, creation of complex multi-component assemblies, animation studies, and rendering. Course concludes with one month-long final project.
Prereq: ME 301
Coreq: ME 341

ME 422 Applied Thermodynamics (3 cr)
Advanced topics in applied thermodynamics including availability (exergy) analysis of systems, advanced power and refrigeration cycles, combustion, and thermodynamic properties of real fluids.
Prereq: ME 322

ME J423/J523 Human Factors and Ergonomics in Product Design (3 cr)
Introduction to and application of Human Factors & Ergonomics Engineering principles in product design. Engineers design systems (e.g., work environments or products) where the human is an integral component. Human Factors & Ergonomics Engineering puts emphasis on how products should be designed so that they are safe, comfortable, and efficient for the human user. This course will focus on how body characteristics, physical and cognitive abilities, and the environment affect how products should be designed to accommodate the intended user(s). Additional projects/assignments are required for graduate credit.
Prereq: Senior standing in the College of Engineering; or Permission

ME 424 Mechanical Systems Design I (3 cr)
Study of production realization including project planning, concept design, detail design, and manufacturing processes with multiple realistic constraints. Concepts learned are applied to a two-semester, capstone design project. The project is continued in ME 426. (Fall only)
Prereq: ME 301, ME 313, ME 325, ME 330, ME 345, and Certification

ME 425 Machine Component Design II (3 cr)
A continuation of the analytical study of concepts in ME 325 Machine Component Design, by studying how these components are used in applications. In this context, material selection, machinability and strengthening is addressed. Special emphasis is placed on discussions of case studies and detailed design projects involving machine component elements. Significant use of solid modeling and use of equation solvers.
Prereq: ME 325

ME 426 Mechanical Systems Design II (3 cr)
Continuation of each two-semester, capstone design project that was started in ME 424. (Spring only)
Prereq: ME 424

ME 430 Senior Lab (3 cr)
Detailed lab investigation of engineering problem; statistical design of experiments; application of engineering principles to analyze experimental data; technical report writing; oral communication skills. One lec and four hrs of lab a wk.
Prereq: ME 313 and 330

ME 433 Combustion Engine Systems (3 cr)
Theory and characteristics of combustion engines; combustion process analysis; fuels, exhaust emissions and controls; system analysis and modeling.
Coreq: ME 345 or Permission

ME 435 Thermal Energy Systems Design (3 cr)
Application of fluid mechanics, thermodynamics and heat transfer in the design of thermal energy systems; topics include engineering economy. thermal energy system component analysis and selection, component and system simulation, and system optimization. (Fall only)
Prereq: ME 345

ME J443/J543 (s) Analysis of Thermal Energy Systems (3 cr, max arr)
Analysis of thermal energy systems; topics vary depending on instructor and may include one or more of the following thermal systems: solar energy, refrigeration, vapor power generation, gas power generation, geothermal energy, wind energy, fuel cells, nuclear energy, thermoelectric systems, and thermionic systems. Additional assignments and a technical research report required for graduate credit.
Prereq: Engr 335 and ME 345; permission required to repeat course for credit

ME 444 Air Conditioning Engineering (3 cr)
Requirements for air conditioned spaces for human comfort; thermodynamic properties of air-water vapor mixtures; heating and cooling loads; design of systems for heating, cooling, and ventilation. Cooperative: open to WSU degree-seeking students.
Prereq: ME 345

ME J450/J550 Computational Fluid Dynamics (3 cr)
Governing equations of fluid flow; fundamentals of turbulence modeling; accuracy and stability of discretization schemes; verification and validation; boundary and initial conditions; grid generation; CFD post-

Math 561 (s) Seminar in Algebra (1-3 cr, max arr)
Current literature.

Math 563 Mathematical Genetics (3 cr)
Same as Biol 563. Investigation of aspects of evolutionary biology with an emphasis on stochastic models and statistical methods; topics include: diffusion methods in molecular evolution, gene genealogies and the coalescent, inferring coalescent times from DNA sequences, population subdivision and F statistics, likelihood methods for phylogenic inference, statistical hypothesis testing, the parametric bootstrap. Cooperative: open to WSU degree-seeking students. (Fall, Alt/yrs)
Prereq: Math 160 or Math 170 and Stat 251 or Stat 301

Math 571 Functional Analysis I (3 cr)
Linear topological spaces and linear operators. (Fall, Alt/yrs)
Prereq: Math 535

Math 572 Functional Analysis II (3 cr)
Linear topological spaces and linear operators. (Spring, Alt/yrs)
Prereq: Math 571

Math 575 Graph Theory I (3 cr)
Basic concepts and theorems; topics include trees and connectivity, eulerian and hamiltonian graphs, graph colorings, matchings, graph decomposition, and extremal graph theory. (Fall, Alt/yrs)

Math 576 Graph Theory II (3 cr)
Basic concepts and theorems; topics include trees and connectivity, eulerian and hamiltonian graphs, graph colorings, matchings, graph decomposition, and extremal graph theory. (Spring, Alt/yrs)
Prereq: Instructor Permission

Math 578 Combinatorial Optimization (3 cr)
Optimization problems on graphs, network flow problems, complexity analysis of algorithmic solutions, and related topics. (Fall, Alt/yrs)

Math 579 Combinatorics (3 cr)
Topics from enumerative combinatorics, design theory, extremal combinatorics and algebraic combinatorics. (Fall, alt/yrs)

Math 581 (s) Seminar in Combinatorics (1-3 cr, max arr)

Math 583 Seminar in Applied Mathematics (3 cr, max arr)
Cooperative: open to WSU degree-seeking students.

Math 590 Seminar in Math Education (1-3 cr, max arr)
Topics in Mathematics Education. May be repeated for credit. Cooperative: open to WSU degree-seeking students.

Math 596 MAT Comp Exam (1 cr)
Supervised preparation for the Master of Arts in Teaching comprehensive exam. Graded Pass/Fail.

Math 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Math 600 Doctoral Research and Dissertation (cr arr)

Mechanical Engineering Courses

John C. Crepeau, Dept. Chair, Dept. of Mechanical Engineering (324I Engineering/Physics Bldg. 83844-0902; phone 208/885-4279).

Note: Pre-advising is required for all mechanical engineering courses; consult the department office to be assigned to an advisor.

ME 123 Introduction to Mechanical Design (3 cr)
Introduction to engineering design process and analysis techniques including problem solving skills, development of software learning skills, graphical analysis, data analysis, and documentation skills. Three lec and one open 2-hr lab a wk. (Fall only)
Coreq: Math 170

ME J201/J401 (s) Engineering Team Projects (1-2 cr, max arr)
Students will be introduced to a systems approach to designing, building and delivering an interdisciplinary engineering project, with an emphasis on learning how to realize a project in an organized team environment. Projects are chosen at the discretion of the department. Additional project duties/assignments required for 400-level credit.
Prereq for ME 401: ME Certification and Permission

ME 223 Mechanical Design Analysis (3 cr)
Use of design and problem solving methodology to model requirements, conduct project learning, develop concepts, and realize prototypes. Projects feature elements of electromechanical design, rapid prototyping, and experimentation.
Prereq: ME 123
Coreq: Math 175

ME 301 Computer Aided Design Methods (3 cr)
Engineering drawing literacy, pre-CAD planning, part modeling, assembly modeling, drawing package formulation, culminating team project involving virtual dissection and reassembly of a complex machine.
Prereq: ME 223

ME 307 Group Mentoring I (1 cr)
Mentoring of student groups in engineering classes where a process education environment is used; students taking this course will improve their engineering skill in the area they are mentoring as well as improving their team, communication, and leadership skills. Students must attend all classes or labs where group activities in the process education environment are done (a minimum of 2 mentoring sessions per week).
Prereq: Permission

ME 308 Group Mentoring II (1 cr)
Mentoring of student groups in engineering classes where a process education environment is used; students taking this course will improve their engineering skill in the area they are mentoring as well as improving their team, communication, and leadership skills. Students must attend all classes or labs where group activities in the process education environment are done (a minimum of 2 mentoring sessions per week).
Prereq: Permission

ME 313 Dynamic Modeling of Engineering Systems (3 cr)
Application of basic engineering principles to model and analyze the dynamic response of engineering systems; problem solutions will utilize transfer function methods, state variable techniques, and simulation software.
Prereq: ME 223, Engr 220, Engr 240, and Math 310
Coreq: Math 330

ME 322 Mechanical Engineering Thermodynamics (3 cr)
Thermodynamic properties of substances, first and second laws of thermodynamics, thermodynamic analysis of mechanical engineering thermal components and cycles, psychrometric process, and introduction to combustion systems.
Prereq: Chem 111 and Phys 211

ME 325 Machine Component Design I (3 cr)
Study of stress, deflection and stiffness, material properties, static and fatigue failure theory in the context of the analysis and design of machine components such as fasteners, welds, spring design and bearings. Significant use of solid modeling and use of equation solvers.
Prereq: ME 341 and MSE 201

ME 330 Experimental Methods for Engineers (3 cr)
Measurement systems and their application to engineering problems; topics include generalized performance of measurement systems, measuring and control devices, data acquisition and analysis, and report writing. Two lec and one 2-hr lab a wk.
Prereq: Engr 240

ME 341 Intermediate Mechanics of Materials (3 cr)
Mechanics of materials approach to: three-dimensional stress and strain, unsymmetrical bending, shear centers, curved beams, thick-walled pressure vessels, non-circular torsion; energy methods and advanced strength theories. Introduction to elementary kinematics. Significant use of solid modeling and use of equation solvers.
Prereq: ME 301 and Certification
Coreq: MSE 201

ME 345 Heat Transfer (3 cr)
Transmission by conduction of heat in steady and unsteady states, by free and forced convection, and by radiation; combined effects of conduction, convection, and radiation.
Prereq: ME 322 and Math 310
Coreq: Engr 335

ME 398 (s) Engineering Cooperative Internship I (cr arr)
Supervised internship in professional engineering settings, integrating academic study with work experience; requires written report to be evaluated by a designated faculty member; details of coop to be arranged

Math 455 Applied Actuarial Science (1 cr)
Risk problems on the actuarial exam. Graded P/F. (Spring only)
Prereq: Math 451

Math 461 Abstract Algebra I (3 cr)
Groups, rings, and fields. (Fall only)
Prereq: Math 215 and Math 330; or Permission

Math 462 Abstract Algebra II (3 cr)
Groups, rings, and fields. (Spring only)
Prereq: Math 461

Math 471 Introduction to Analysis I (3 cr)
Topology of Euclidean n-space, limit and continuity, differentiation, integration. (Fall only)
Prereq: Math 275, and Math 215; or Permission

Math 472 Introduction to Analysis II (3 cr)
Topology of Euclidean n-space, limit and continuity, differentiation, integration. (Spring only)
Prereq: Math 471 or Permission

Math 476 Combinatorics (3 cr)
Elementary counting methods, generating functions, recurrence relations, Polya's enumeration, enumeration of graphs, trees, searching, combinatorial algorithms. Recommended Preparation: Math 176, or 215, or 376. (Fall, Alt/yrs)
Prereq: Math 175 and 330

Math 480 Partial Differential Equations (3 cr)
Intro to Fourier analysis, application to solution of partial differential equations; classical partial differential equations of engineering and physics. (Spring, Alt/yrs)
Prereq: Math 310 or Permission

Math 494 Seminar in Mathematical Biology (1 cr)
Oral presentation of research approaches, research results and literature review of mathematical biology including mathematical modeling of biological systems. Cooperative: open to WSU degree-seeking students.

Math 499 (s) Directed Study (cr arr)

Math 500 Master's Research and Thesis (cr arr)

Math 501 (s) Seminar (cr arr)

Math 502 (s) Directed Study (cr arr)

Math 504 (s) Special Topics (cr arr)

Math 505 (s) Professional Development (cr arr)
Credit earned in this course will not be accepted toward grad degree programs.
Prereq: Permission

Math 510 Seminar on College Teaching of Mathematics (1 cr)
Development of skills in the teaching of college mathematics; includes structure of class time, test construction, and various methods of teaching mathematics; supervision of teaching assistants in their beginning teaching assignments. Graded P/F.
Prereq: Permission

Math 513 Problem Solving Through History (3 cr)
Historical study of approaches to solving problems in geometry, number theory, and set theory. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.

Math 514 Foundations of Calculus (3 cr)
Real numbers, sequences, topology of the real numbers, continuous functions, differentiation, and integration; emphasis on developing the conceptual understanding needed to teach calculus in secondary school. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.

Math 515 Problems in Geometry (3 cr)
Exploration of topics in geometry with emphasis on developing geometric reasoning and problem solving. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.

Math 516 Groups and Symmetry (3 cr)
Exploration of groups, symmetry, and permutations. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.

Math 519 (s) Special Topics (cr arr)
Special topics of interest to mathematics teachers. This course is specifically designed for the MAT program, and will not satisfy the requirements of other mathematics degree programs.
Prereq: Permission

Math 521 Topology I (3 cr)
Basic concepts of point set and algebraic topology. Cooperative: open to WSU degree-seeking students. (Fall, Alt/yrs)

Math 522 Topology II (3 cr)
Basic concepts of point set and algebraic topology. (Spring, Alt/yrs)

Math 523 Algebraic Topology I (3 cr)
Basic homotopy theory, covering spaces, homology theory, and applications. (Alt/yrs)

Math 528 Differentiable Manifolds (3 cr)
Fundamentals of smooth manifolds, tangent spaces, vector fields, Lie groups, integration on manifolds, and applications. Cooperative: open to WSU degree-seeking students.
Prereq: Math 521, and Math 471

Math 531 Complex Variables (3 cr)
Theory of functions of a complex variable. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)

Math 535 Real Variables (3 cr)
Measure and integration theory for functions of one or several variables. (Alt/yrs, fall only)

Math 536 Probability Theory (3 cr)
Random variables, characteristic functions, convergence theorems, central limit theorem, conditional probability, and stochastic processes as developed from a measure theoretic basis. (Spring, Alt/yrs)
Prereq: Math 535 or Permission

Math 538 Stochastic Models (3 cr)
See Math J453/J538.

Math 539 Theory of Ordinary Differential Equations (3 cr)
Existence, uniqueness, and stability of solutions of first-order systems; other topics. Cooperative: open to WSU degree-seeking students. (Fall, Alt/yrs)

Math 540 Partial Differential Equations (3 cr)
Existence and uniqueness theorems for the wave, heat, and Laplace's equations of physics; additional topics such as nonlinear models in mathematical biology, perturbation methods, etc. Cooperative: open to WSU degree-seeking students.
Prereq: Math 539 or Permission

Math 541 (s) Seminar in Analysis (1-3 cr, max arr)
Current literature. Cooperative: open to WSU degree-seeking students.

Math 543 Approximation Theory (3 cr)
Cooperative: open to WSU degree-seeking students.

Math 555 Groups and Fields I (3 cr)
Groups, fields, polynomials, Galois theory, representation theory. Cooperative: open to WSU degree-seeking students. (Fall, alt/yrs)
Prereq: Math 461 and Math 462; or equivalent

Math 556 Groups and Fields II (3 cr)
Groups, fields, polynomials, Galois theory, representation theory. Cooperative: open to WSU degree-seeking students. (Spring, alt/yrs)
Prereq: Math 555 or Permission

Math 557 Ring Theory (3 cr)
Rings, ideals, modules, commutative algebra. Cooperative: open to WSU degree-seeking students. (Fall, alt/yrs)
Prereq: Math 461 and Math 462; or equivalent

Math 558 Introduction to Algebraic Geometry (3 cr)
Affine and projective varieties, morphisms, functions on varieties, birational maps, applications. Cooperative: open to WSU degree-seeking students. (Spring, alt/yrs)
Prereq: Math 557 or Permission

Emphasis will be placed on reasoning, representation, connections and communication. This course is restricted to students from either the School of Family and Consumer Sciences or the College of Education. This course will not count as a 300 - level mathematics course in any major or minor in the College of Science. Recommended preparation: Stat 150. (Fall Only)
Prereq: *One general education math course*

Math 303 Early Childhood Math I (2 cr)
Focus on the mathematics of early childhood: numbers and operations. Emphasis is placed on reasoning, representation, connections and communication. This course is restricted to students from either the School of Family and Consumer Sciences or the College of Education. This course will not count as a 300-level mathematics course in any major or minor in the College of Science. Recommended preparation: general education math course.

Math 304 Early Childhood Math II (2 cr)
Focus on the mathematics of early childhood: algebraic reasoning, geometry, measurement, probability and statistics. Emphasis is placed on reasoning, representation, connections and communication. This course is restricted to students from either the School of Family and Consumer Sciences or the College of Education. This course will not count as a 300-level mathematics course in any major or minor in the College of Science. Recommended preparation: general education math cores.

Math 310 Ordinary Differential Equations (3 cr)
Classification, initial and boundary value problems of one variable, exact equations, methods of solving higher-order linear equations, second-order equations with constant coefficient, series solutions, systems of linear equations, Laplace transforms, and existence theorems. Recommended preparation: Math 275.
Prereq: *Math 175*

Math H315 Topics in Pure Mathematics (3 cr)
A topic selected each yr that develops skill and appreciation for theoretical nature of mathematics. (Fall only)
Prereq: *Permission of director of University Honors Program*

Math 326 Linear Optimization (3 cr)
Geometric solutions, simplex method, duality and revised simplex method, sensitivity, integer programming, applications. Recommended Preparation: Math 175. (Spring, Alt/yrs)
Prereq: *Math 160 or 170*

Math 330 Linear Algebra (3 cr)
Linear equations, matrices, linear transformations, eigenvalues, diagonalization; applications. Recommended Preparation: Math 175.
Prereq: *Math 160 or 170*

Math 371 Mathematical Physics (3 cr)
See Phys 371.

Math 376 Discrete Mathematics II (3 cr)
Selected topics from discrete mathematics such as graph theory, modeling, and optimization. Recommended for computer science majors. (Spring, Alt/yrs)
Prereq: *Math 176 or Permission*

Math 385 Theory of Computation (3 cr)
Same as CS 385. Mathematical models of computation, including finite automata and Turing machines. (Fall only)
Prereq: *Permission*

Math 386 Theory of Numbers (3 cr)
Elementary number theory, including divisibility properties, congruences, and Diophantine equations. (Spring only)
Prereq: *Math 175 or Permission*

Math 388 History of Mathematics (3 cr)
Same as Hist 388. History of the development of mathematical ideas from ancient cultures to the present, including the relationship of those ideas to the cultures that produced them as well as an understanding of the mathematics involved. Cooperative: open to WSU degree-seeking students.
Prereq: *Math 175 and 330; or Permission*

Math 390 Axiomatic Geometry (3 cr)
Development of Euclidean and hyperbolic geometry using the axiomatic approach. Recommended Preparation: Math 215. (Spring, Alt/yrs)
Prereq: *High school geometry and Math 330, or Permission*

Math 391 Modern Geometry (3 cr)
Euclidean and non-Euclidean geometries, plus topics chosen from projective, transformational, and computational geometry. Recommended Preparation: Math 215. Spring, Alt/yrs)
Prereq: *High School Geometry and Math 330, or Permission*

Math 395 Analysis of Algorithms (3 cr)
Same as CS 395. Measures of efficiency; standard methods and examples in the design and analysis of algorithms. (Spring only)
Prereq: *Math 175*

Math 400 (s) Seminar (cr arr)

Math 404 (s) Special Topics (cr arr)

Math 415 Cryptography (3 cr)
Congruences, modular arithmetic, private-key cryptosystems, public-key cryptosystems, and applications. The role of modern mathematics in information age society.
Prereq: *Math 330*

Math 420 Complex Variables (3 cr)
Complex numbers, elementary functions, derivatives, the residue theorem, conformal mappings, contour integration, infinite series, applications. (Alt/yrs, Spring only)
Prereq: *Math 275*

Math 426 Discrete Optimization (3 cr)
Optimization on graphs, networks and flows, and related topics. Recommended Preparation: Math 175. (Fall, Alt/yrs)

Math 428 Numerical Methods (3 cr)
See Phys J428/J528.

Math 430 Advanced Linear Algebra (3 cr)
Vector spaces, linear transformations, characteristic polynomial, eigenvectors, Hermitian and unitary operators, inner products, quadratic forms, Jordan canonical form, applications. Recommended Preparation: Math 215.
Prereq: *Math 330 or Permission*

Math 432 Numerical Linear Algebra (3 cr)
Analysis of efficiency and accuracy of large linear algebra problems; special emphasis on solving linear equations and finding eigenvalues. (Fall, Alt/yrs)
Prereq: *Math 275, 330, and knowledge of a computer language*

Math 435 (s) Topics in Applied Mathematics (cr arr)
Topics chosen from fields of current interest in applied mathematics; inquire at the Department of Mathematics for a description of topics for future semesters.
Prereq: *Permission*

Math 437 Mathematical Biology (3 cr)
Modeling biological phenomena, mostly through differential equations; mathematical topics include stability analysis and limit cycles for nonlinear ODE's, spatial diffusion and traveling waves for PDE's; biological topics include models of predator-prey systems, infectious diseases, and competition. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)
Prereq: *Math 310 or Permission*

Math 451 Probability Theory (3 cr)
Same as Stat 451. Random variables, expectation, special distributions (normal, binomial, exponential, etc.), moment generating functions, law of large numbers, central limit theorem. Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq or Coreq: *Math 275 or Permission*

Math 452 Mathematical Statistics (3 cr)
Same as Stat 452. Estimation of parameters, confidence intervals, hypothesis testing, likelihood ratio test, sufficient statistics. Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq: *Math 451 or Permission*

Math J453/J538 Stochastic Models (3 cr)
Markov chains, stochastic processes, and other stochastic models; applications. Additional projects/assignments reqd for grad cr. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)
Prereq: *Math 451 or Permission*

MSE 525 Electronic Materials (3 cr)
Study of major chemical and physical principles affecting properties of solid state engineering materials. Topics include bonding, carrier statistics, band-gap engineering, optical and transport properties, novel materials systems, characterization, magnetism, and comprehensive introduction to physics of solid state devices.
Prereq: Materials Science Engineering graduate student or Permission

MSE 527 Ceramic Materials (3 cr)
See MSE J427/J527.

MSE 537 Radiation Effects on Materials (3 cr)
See MSE J437/J537.

MSE 538 Fundamentals of Nuclear Materials (3 cr)
See MSE J438/J538.

MSE 539 Advanced Mechanics of Materials (3 cr)
See ME 539.

MSE R550 Nuclear Reactor Fuels (3 cr)
Selection of materials and design of nuclear fuels, light water reactor fuels, metal and oxide dispersed fuels, high temperature ceramic fuels.
Prereq: Permission

MSE 564 Materials Physics and Engineering (3 cr)
See MSE J464/J564.

MSE 598 (s) Internship (cr arr)

MSE 599 (s) Non-thesis Master's Research (cr arr)

MSE 600 Doctoral Research and Dissertation (cr arr)

Mathematics Courses

Monte Boisen, Dept. Chair, Dept. of Mathematics (300 Carol Ryrie Brink Hall 83844-1103; phone 208/885-6742).

Vertically-related courses in this subject field are: Math 170-Math 175-Math 275-Math 471-Math 472.

Credit Limitations: Math 108 carries no credit after Math 137 or Math 143; Math 137 carries no credit after Math 143; Math 143 carries no credit after Math 160 or Math 170; Math 170 carries 2 credits after Math 160; Math 160 carries no credit after Math 170, Math 215 carries no credit after Math 461or Math 471.

Math 108 Intermediate Algebra (3 cr)
Carries no credit after Math 137 or 143. Review of algebra including factoring, rational expressions, exponents, radicals, quadratic equations, equations of lines. Taught using the Polya Math Center, a studio environment featuring group study, one-to-one interaction with instructors, computer-mediated modules, and lectures. Does not satisfy general education requirement.

Math 123 Mathematics Applied To The Modern World (3 cr)
Discussion of some aspects of mathematical thought through the study of problems taken from areas such as logic, political science, management science, geometry, probability, and combinatorics; discussion of historical development and topics discovered in the past 100 years.

Math 130 Finite Mathematics (3 cr)
Systems of linear equations and inequalities, matrices, linear programming, and probability.
Prereq: Sufficient score on SAT, ACT, or COMPASS Math Test; or Math 108 with a C or better. Required test scores can be found here: www.uidaho.edu/registrar/registration/placement/math.

Math 137 Algebra with Applications (3 cr)
Carries no credit after Math 143. Algebraic, exponential, logarithmic functions, systems of equations, applications.
Prereq: A grade of C or better in Math 108 or sufficiently high score on SAT, ACT, or COMPASS Math Test. It is recommended that Math 137 be taken within two years of passing Math 108 or its equivalent. Math 137 is not sufficient preparation for Math 170. Students intending to take Math 170 should enroll in Math 143 instead.

Math 143 Pre-calculus Algebra and Analytic Geometry (3 cr)
Carries no credit after Math 160 or 170; carries 2 credits after Math 137. Algebraic, exponential, logarithmic functions; graphs of conics; zeros of polynomials; systems of equations, induction. Taught using the Polya Math Center, a studio environment featuring group study, one-to-one interaction with instructors, computer-mediated modules, and lectures.
Prereq: Sufficient score on SAT, ACT, or COMPASS Math Test; or Math 108 with grade of C or better. It is recommended that Math 143 be taken within two years of passing Math 108 or its equivalent.

Math 144 Analytic Trigonometry (1 cr)
Not open for cr to students who have previous high school or college cr in trigonometry. Trigonometric functions, inverse functions, applications. Taught using the Polya Math Center, a studio environment featuring group study, one-to-one interaction with instructors, computer-mediated modules, and lectures.
Prereq: Sufficient score on SAT, ACT, or COMPASS Math Test. Students may qualify by enrolling concurrently in Math 143 or Math 170. Required test scores can be found here: www.uidaho.edu/registrar/registration/placement/math.

Math 160 Survey of Calculus (4 cr)
Carries no credit after Math 170. Functions, graphing, derivative, integral, exponential and logarithmic functions, functions of several variables. Primarily for students in business, life sciences or architecture who need only one semester of calculus.
Prereq: Sufficient score on SAT, ACT, or COMPASS Math Test, or Math 137 with a C or better, or Math 143 with a C or better. Required test scores can be found here: www.uidaho.edu/registrar/registration/placement/math.

Math 170 Analytic Geometry and Calculus I (4 cr)
Carries 2 credits after Math 160. Functions, limits, continuity, differentiation, integration, applications, differentiation and integration of transcendental functions. Primarily for students in engineering, mathematics, science or computer science.
Prereq: Math 143 (with a grade of C or better) and Math 144 (concurrent enrollment in Math 144 is allowed although it is recommended that students complete Math 144 before enrolling in Math 170); or demonstrated proficiency through a sufficiently high score on the ACT, SAT, or COMPASS tests.

Math 175 Analytic Geometry and Calculus II (4 cr)
Differentiation and integration of transcendental functions, integration techniques, general mean value theorem, numerical techniques, and series.
Prereq: Math 170 with a grade of C or better

Math 176 Discrete Mathematics (3 cr)
Induction, set theory, graph theory, number systems, Boolean algebra, and elementary counting.
Prereq: Math 143 or sufficiently high score on SAT, ACT, or COMPASS Math Test.

Math 204 (s) Special Topics (cr arr)

Math 215 Introduction to Higher Mathematics (3 cr)
Carries no credit after Math 461 or Math 471. The primary goal of this course is to teach students how to read and write mathematical proofs. Topics include logic and proof techniques, as well as fundamental mathematical structures such as sets, relations, functions, and number systems.
Prereq: Math 175 and permission

Math 235 Mathematics for Elementary Teachers I (3 cr)
Mathematical development of arithmetic and problem solving as those subjects are currently taught in elementary schools. Three lec and one 1-hr lab a wk.
Prereq: Math 137 or Math 143 or sufficient score on SAT, ACT, or COMPASS Math Test.

Math 236 Mathematics for Elementary Teachers II (3 cr)
Mathematical development of informal geometry, problem solving, and probability and statistics as those subjects are currently taught in elementary schools. Three lec and one 1-hr lab a wk.
Prereq: Math 235

Math 275 Analytic Geometry and Calculus III (3 cr)
Vectors, functions of several variables, and multiple integration.
Prereq: Math 175

Math 299 (s) Directed Study (cr arr)

Math 301 Early Childhood Mathematics (4 cr)
Focus on the mathematics for early childhood: numbers and operations, algebraic thinking, geometry, measurement, probability and statistics.

relevant testing methods, failure processes and theories, fracture mechanics. Coordinated lecture-lab periods.
Prereq: MSE 201 and Junior Standing; or Permission

MSE J413/J513 Phase Transformation and Kinetics (3 cr)
Free energy minimization algorithms. Construction of phase diagrams for liquid and solid systems. Reaction kinetics in liquid and solid systems. Determination of reaction kinetics parameters (reaction order, activation energy, reaction rate constants, etc.). Coordinated lec-lab periods. Additional projects/assignments reqd for grad cr.
Prereq: Chem 112

MSE 415 Materials Selection and Design (3 cr)
Selection of materials for use in structural applications; consideration of environment, stress conditions, cost, and performance as guide to properties; optimization of choice of materials and fabrication methods; open-ended problems of real applications in various industries. Recommended Preparation: MSE 313 and MSE 456. (Spring only)
Prereq: MSE 201 and Engr 350

MSE 417 Instrumental Analysis (3 cr)
Principles and laboratory experiments in x-ray diffraction, scanning electron microscopy, transmission electron microscopy, thermal analysis, etc. (Fall only)
Prereq: Junior/Senior standing in an engineering discipline

MSE J421/J521 Light Metals (3 cr) WSU MSE 421
Principles behind the physical metallurgy of the light metals Al, Mg, Ti, Be; discussion of characteristics and applications of alloys based on these metals. Additional projects/assignments reqd for grad cr. Recommended Preparation: MSE 313. (Spring, Alt/yrs)

MSE J423/J523 Corrosion (3 cr)
Engineering aspects of corrosion and its control presented in ways of importance to a practicing engineer. Topics include corrosion economics, detecting and monitoring corrosion, regulations, specifications, safety. Emphasis on corrosion monitoring and corrosion fundamentals: chemical and electrochemical reactions; chemical and electrochemical equilibria-including Pourbaix diagrams; electrochemical kinetics. Selection and use of materials, from stainless steels to plastics. Failure analysis. Additional projects/assignments reqd for graduate credit. Coordinated lecture-lab periods.
Prereq: Chem 112 and MSE 201 or ChE 223; or Permission

MSE J427/J527 Ceramics Materials (3 cr)
Crystallography, ceramic crystal structures, phase diagrams, phase transformation; mechanical properties, thermal properties, electrical and magnetic properties. Additional projects/assignments reqd for graduate credit. Recommended Preparation: MSE 313.

MSE 432 Fundamentals of Thin Film Fabrication (3 cr)
Physical deposition, chemical deposition, post deposition process, film characterization, and film properties. (Spring only)
Prereq: Senior standing or Permission

MSE 434 Fundamentals of Polymeric Materials (3 cr)
Polymer structure/property relationships and engineering applications. Topics include: overview of polymer chemistry and physics as they inform structure and properties for real-world applications, including sustainability considerations. Coordinated lecture-lab periods.
Prereq: Chem 111 and Chem 112

MSE J437/J537 Radiation Effects on Materials (3 cr)
Same as NE J437/J537. Interactions between radiation and solids.
Prereq: MSE 201 or Permission

MSE J438/J538 Fundamentals of Nuclear Materials (3 cr)
Same as NE J438/J538. This course is designed for students who wish to learn about nuclear materials and fuels from a materials science viewpoint. Topics to be covered include crystal structure, diffusion, radiation damage processes etc. Students who wish to receive credit for the 500 level course are required to do term-projects and advanced problems. (Spring only)
Prereq: MSE 201 or NE 450; or Permission

MSE 442 High Temperature Processing of Materials (3 cr)
High temperature processing methods and objectives. Sintering theory and practices. Heat treatment of materials (air, molten salts). Novel high temperature treatment methods including plasma processing. High temperature processing of materials of importance to electronic (production of ultrapure materials; ceramics) and nuclear energy (high temperature corrosion resistant materials) industries. Smelting of non-ferrous materials; smelting of ferrous materials; furnaces; flowsheet design and analysis.
Prereq: Chem 112 and MSE 201 or ChE 223; or Permission

MSE 453 Process Analysis and Design I (3 cr)
See ChE 453.

MSE 454 Process Analysis and Design II (3 cr)
See ChE 454.

MSE 456 Metallic Materials (3 cr)
Processes for extracting metals; various classes of metallic alloys; casting, powder metallurgy, mechanical working, and joining of metals. Emphasis on understanding relationship of processing, structure and properties. Some lab demonstration of metal fabrication processes included.
Prereq: MSE 313 or Permission

MSE J464/J564 Materials Physics and Engineering (3 cr)
Same as Phys J464/J564. Materials for circuits, Magnetism and magnetic materials, Ferroelectric and piezoelectric materials, Semiconductors, Optical properties of semiconductor for optoelectronics, thermal properties, electron band theory, superconductivity. Additional projects/assignments required for graduate credit. (Spring only)
Prereq: Senior standing in an Engineering or Physics major, or Phys 305 and Phys 321;or Permission

MSE 498 (s) Internship (cr arr)

MSE 499 (s) Directed Study (cr arr)

MSE 500 Master's Research and Thesis (cr arr)

MSE 501 (s) Seminar (cr arr)

MSE 502 (s) Directed Study (cr arr)

MSE 504 (s) Special Topics (cr arr)

MSE 507 Microstructures and Defects (3 cr)
This course correlates microstructure and defects with mechanical, physical and chemical properties of engineering materials. The fundamental characteristics of point, line, surface and volume defects in crystals will be elucidated on an advanced level. The essential elements of microstructure and their role in engineering materials will be discussed.
Prereq: Graduate standing or Permission

MSE 511 Nuclear Degradation Mechanisms (3 cr)
Topics include various degradation mechanisms as applicable to nuclear structural components, including corrosion, creep, radiation damage etc.
Prereq: Graduate standing or Permission

MSE 512 Nuclear Components Inspection (3 cr)
This course will cover various non-destructive testing techniques to evaluate the environmental degradation of the nuclear structural components. Remnant life estimation of structural components exposed to fatigue, creep and stress corrosion cracking service conditions will be discussed.
Prereq: Graduate standing or Permission

MSE 513 Phase Transformation and Kinetics (3 cr)
See MSE J413/J513.

MSE 516 Magnetic Materials (3 cr)
Study of paramagnetic, superparamagnetic, diamagnetic, ferrimagnetic, ferromagnetic, antiferromagnetic, magnetic anistropy, magnetostriction and the effect of stress, magnetic domain and magnetization process, induced magnetic anisotropy, magnetic fine particles, magnetic thin film, magnetization dynamics, hard magnet, soft magnet, magnetic recording, magnetic head, magnetic media, magneto-optical recording. (Spring, Alt/yrs)

MSE 517 Reaction Kinetics (3 cr)
Application of absolute reaction rate theory; time and temperature dependence; kinetics of gas-solid reactions; kinetics of solid-solid reactions; corrosion, diffusion, and recrystallization.
Prereq: Materials Science Engineering graduate student or Permission

MSE 521 Light Metals (3 cr)
See MSE J421/J521.

MSE 523 Corrosion (3 cr)
See MSE J423/J523.

Law 999 (s) Study Abroad or Off Campus (cr arr)
Graded P/F.
Prereq: Permission of Associate Dean for Students and Administration, College of Law

Library Science Courses

Paul H. Gathercoal, Dept. Chair, Dept. of Curriculum and Instruction (405B Educ. Bldg. 83844-3082; phone 208/885-6587).

Note: All LibS courses are administered through Independent Study of Idaho: (PO Box 443081, Moscow ID 83844-3081; phone 208/885-6641 or 877/464-3246; fax 208/885-5738; indepst@uidaho.edu; www.uidaho.edu/isi).

LibS C415 Technical Services for Small Libraries (1 cr)
Examine library technical services of the small or one-person public or school library. Explore techniques for finding sources for material, using cataloging systems to provide access, and processing materials to get them ready for use. Print, multimedia, and electronic formats, automatic systems and networking will be discussed. Recommended Preparation: LibS 425.

LibS C419 Computer Applications in Libraries (3 cr)
Trends and developments in library automation; practical applications of microcomputers to library work and administration. **Note:** This is an academic course intended to teach fundamental terms and concepts. It is not a course on automating a library.

LibS C-J420/C-J520 Classification and Cataloging (4 cr)
Organization of library materials, principles of cataloging, subject analysis, classification, bibliographic methods, Dewey decimal system. Research project and paper required for graduate credit.
Prereq for LibS 520: Permission

LibS C-J421/C-J521 Acquisitions and Collection Development in Libraries (3 cr)
Evaluation and selection of books and other materials for libraries; analysis of community library needs and interests. Research project and paper required for graduate credit.
Prereq for LibS 521: Permission

LibS C422 Use of the School Library (2 cr)
Methods of interesting students in the library and using it to best advantage.

LibS C423 Introduction to Reference Work (3 cr)
Reference books in school and public libraries; selecting reference collections. Research project and paper required for graduate credit.

LibS C424 Information Sources on the Internet for Libraries (3 cr)
Principles of development and trends in Internet information resources that libraries access and use; emphasis on searching, evaluating, and providing to patrons needed reference material.

LibS C-J425/C-J525 Organization and Management of Small Libraries (4 cr)
Organization and management of school libraries. Research project and paper required for graduate credit.
Prereq for LibS 525: Permission

LibS C426 Information Literacy for the Library Media Specialist (3 cr)
Explores the role of the Library Media Specialist (LMS) in providing information literacy instruction. Defines information literacy, as well as places it in a national, state and local framework. Research process as it correlates with information literacy is covered in great detail.

LibS C427 Library and Media Center Practicum (1-3 cr)
Experience in a library or other information center under professional supervision. Ninety hours of supervised experience per credit. Recommended Preparation: 6 cr in library and information science.

LibS C428 Children's Literature for Librarians (3 cr)
This course will develop students' basic knowledge and understanding of the field of children's literature, particularly as it pertains to librarians, with a focus on children ages 2-12. This course will emphasize skills, tools, and insights necessary for effective professional librarianship in the area of services to children.

LibS C429 Adolescent Literature for Librarians (3 cr)
This course will develop students' knowledge of adolescent literature as it pertains to librarians, with a focus on youth grades 6-12. It emphasizes the skills and discernment necessary by the librarian to effectively serve adolescents. Evaluation tools for selecting literature and electronic resources will be covered, and issues relating to materials selection and promotion for the secondary school library will be explored.

LibS C520 Classification and Cataloging (4 cr)
See LibS J420/J520.

LibS C521 Acquisitions and Collection Development in Libraries (3 cr)
See LibS J421/J521.

LibS C525 Organization and Management of Small Libraries (4 cr)
See LibS J425/J525.

Martin School of International Studies Courses

Brian Ellison, Director, Martin School of International Studies (338 Admin. Bldg. 83844-3177; phone 208/885-6527).

Mrtn 404 (s) Special Topics (cr arr)

Materials Science and Engineering Courses

Wudneh Admassu, Dept. Chair, Dept. of Chemical and Materials Engineering (203B McClure Hall. 83844-3024; phone 208/885-6376).

MSE 101 Introduction to Metallurgy and Materials Science (2 cr)
Earth resources, metallurgy, materials science, and manufacturing. (Fall only)

MSE 201 Elements of Materials Science (3 cr)
Principles relating properties of metals, ceramics, polymers, and composites to their structures.
Prereq: Chem 111

MSE 308 Thermodynamics of Materials (3 cr)
First, second, and third laws of thermodynamics. Reaction equilibria. Phase diagrams. Thermodynamics of metallic and ceramic materials.
Prereq: MSE 201 and Chem 112
Coreq: Math 310

MSE 313 Physical Metallurgy (4 cr)
Theory, structure, and properties of materials. (Fall only)
Prereq: MSE 201

MSE 340 Transport and Rate Processes I (4 cr)
See ChE 340.

MSE 341 Particulate Materials Processing (4 cr)
Engineering science of particulates; powder production, powder properties, separation; design of systems applied to metals, ores, and concentrates. Three lec and one hr of lab a wk; two 1-day field trips. Recommended Preparation: Phys 212, and Engr 240.
Prereq: Chem 112
Coreq: Math 310

MSE 344 Low Temperature Processing of Materials (3 cr)
Low temperature processing methods and objectives. Aqueous and non-aqueous (ionic liquids) processing systems. Solution thermodynamics. Solution purification and concentration methods. Synthesis of ceramic materials: electrolytic, precipitation, sol-gel methods. Thin film and bulk deposition methods. Surface preparation and deposition of discrete functional features (pillars, discs, dots). Electrochemistry in electronic chip interconnect technologies. Process design and analysis.
Prereq: Chem 112 and MSE 201 or ChE 223; or Permission

MSE 393 Materials Engineering Projects (1-3 cr, max 9)
Problems of a research exploratory nature.
Prereq: Permission

MSE 400 (s) Seminar (cr arr)

MSE 404 (s) Special Topics (cr arr)

MSE 412 Mechanical Behavior of Materials (3 cr)
Theories of elasticity and plasticity, dislocation based plastic deformation, strengthening mechanisms, mechanical properties of solids and

Law 977 Clinical Lab (1 cr, max 4)
One-credit lab courses providing clinical experience for interested upper-division students. The labs, designed to allow students to obtain practical experience in conjunction with upper-division substantive courses, labs are supervised by experienced practitioners. Graded P/F.
Prereq: Permission

Law 978 Small Business Legal Clinic (1-3 cr, max 6)
Real-life experience handling transactional legal problems and assisting businesses and not-for-profits.
Prereq: Law 919 and Law 962; and Law 966, Law 967, or Law 971; and permission; and qualification for limited license as legal intern in Idaho

Law 979 Native American Natural Resource Law (3 cr)
Same as AIST 421. Study of the natural resources over which Tribal Nations assert stewardship or seek to influence others regarding protection of resources including sacred sites, land use and environmental protection, natural resource development, taxation, water rights, rights associated with hunting, fishing and gathering, and international approaches to indigenous lands and resources. Recommended Preparation: Law 949. Law 979 is a law class and will be graded based on the norms and expectations to which law students are normally held. AIST 421 is an undergraduate course that will be assessed on a P/F basis according to the general norms and expectations for an upper division undergraduate course.

Law 980 Copyrights (2-3 cr)
A survey of U.S. domestic copyright law, focusing on current provisions of the Copyright Act of 1976, as amended, and leading cases interpreting those provisions. Particular attention is paid to policy challenges created by the Internet and by the increasing internationalization of copyright law. Two-credit course covers fewer areas of study.

Law 981 Critical Legal Studies Journal (1-4 cr, max 4)
Participation in the student edited *Crit Law Journal.* Credit awarded upon approval of the editor-in-chief and faculty advisor. Graded pass-fail; credits earned are not classroom credit hours.
Prereq: Acceptance to the Crit Journal

Law 982 Law Review (1-4 cr, max 4)
Graded P/F; credits earned are not class hours. The awarding of credit is subject to approval by the editor-in-chief and faculty advisor.

Law 983 Directed Study (1-2 cr, max 4)
Individual research on a significant legal problem and the writing of a paper thereon that must be approved by the faculty member under whose direction the work is done. Graded P/F; credits earned are not class hours.
Prereq: Permission

Law 984 Real Estate Transactions (2-3 cr)
Aspects of the standard commercial real estate purchase transaction, including real estate contracts, title issues, construction, default, financing, leasing, and structuring real estate development transactions. Two-credit course covers fewer areas of study.

Law 985 Immigration Law and Policy (3 cr)
The rights and limitations relating to various types of immigration status, different kinds of visas, admission and removal procedures, grounds of inadmissibility and deportation, and defenses.

Law 986 Judicial Clerkship Seminar (1 cr)
Seminar focusing on advanced writing concepts within the judicial context, with instruction on common types of legal writing practiced by judicial clerks.

Law 987 Law Practice Management (1-2 cr)
Topics in the business of law practice, including accepting and billing clients, managing case files and client trust accounts, making business arrangements, and managing human, physical, and financial resources. Graded Pass/No Pass. Two-credit course covers more areas of study.

Law 988 Writing the Environment (1 cr)
Intensive writing course limited to 3L students completing the Natural Resources and Environmental Law Emphasis. Students will develop critical legal writing and analytical skills through public presentations and defenses of their own written work, and the review and editing of their colleagues' works. Permission required. Graded Pass/No Pass. (Fall only)

Law 989 Mass Media Law (2 cr)
Seminar addressing legal issues in new technologies and the rapidly changing mass-media environment. Topics are generally organized around a single theme, such as First Amendment law and theory, privacy or Freedom of Information Act issues, commercial speech regulation, and media and the electoral process.

Law 990 Consumer Law (3 cr)
Survey of consumer law from a transactional perspective, examining statutory, regulatory, and common law governance of consumer transactions. Topics include deception and questionable acts related to consumer purchases; credit issues including discrimination, overpriced credit, and deceptive practices; and policing and enforcing the bargain from both the creditor/seller and consumer perspectives.

Law 991 Skills Practicum (cr arr)
From time to time, specific skills courses are arranged and made available for a semester. The exact content of each skills course is announced in advance of the semester in which it is offered.

Law 992 White Collar Crime (3 cr)
Federal law prohibiting financial, non-violent crime, including fraud, racketeering, and bribery. The course examines principles of statutory interpretation, grand jury investigations, parallel civil proceedings, corporate and individual responsibility, sentencing guidelines, and federal-state coordination.

Law 993 Appellate Clinic (1-3 cr, max 6)
Representation of clients in civil and criminal appeals before the Ninth Circuit Court of Appeals and Idaho appellate courts. Recommended Preparation: Law 953.
Prereq: Law 950, Law 962, and Law 971; and permission; and qualification for limited license as legal intern in Idaho
Coreq: Law 958

Law 994 Economic Development Clinic (1-3 cr, max 6)
Legal aid clinic in which legal interns assist Idaho counties, cities, tribes, and non-governmental agencies with economic development issues and legal problems. Recommended Preparation: Law 934.
Prereq: Law 962; and permission; and qualification for limited license as legal intern in Idaho

Law 995 General Practice/Domestic Violence & Sexual Assault Clinic (1-3 cr, max 6)
Representation of clients in civil proceedings involving victims of domestic, sexual assault, dating violence or stalking. Student interns also represent clients in general practice matters including misdemeanor defense, family law, consumer protection, landlord-tenant disputes, probate and civil rights. Recommended Preparation: Law 953.
Prereq: Law 950, Law 962, and Law 971; and permission; and qualification for limited license as legal intern in Idaho
Coreq: Law 958

Law 996 Immigration Law Clinic (1-3 cr, max 6)
Representation of immigrant clients from a variety of countries under the supervision of clinical faculty. Cases may include asylum, permanent residence, citizenship, and relief from deportation. Students may represent clients in administrative, trial, and appellate courts.
Prereq: Law 950, Law 962, and Law 971; and permission; and qualification for limited license as legal intern in Idaho
Coreq: Law 958 and Law 985

Law 997 Mediation Clinic (1-3 cr, max 6)
Legal aid clinic in which legal interns provide mediation services and hone their skills in communication, facilitation, negotiation, organization, and ethics.
Prereq: Law 912 or Law 913; and Law 950, Law 962, and Law 971; and permission; and qualification for limited license as legal intern in Idaho

Law 998 Tax Clinic (2-3 cr, max 6)
Representation of low-income taxpayers in disputes with the IRS at the audit, appeals, collection, and Tax Court levels. Students are exposed to the Boise tax community through frequent practitioner guest lecturers, an IRS field trip, and by attending Tax Court calendars, and they are required to complete a community outreach project. Recommended Preparation: Law 927, Law 950, and Law 958.
Prereq: Law 930, Law 962, and Law 971; and permission; and qualification for limited license as legal intern in Idaho

and expectations to which law students are normally held. AIST 420 is an undergraduate course that will be assessed on a P/F basis according to the general norms and expectations for an upper division undergraduate course.

Law 950 Evidence (3 cr)
The law governing the presentation of proof in Idaho and federal courts.

Law 951 Environmental Policy (3 cr)
An examination of advanced topics in environmental law and policy. Recommended Preparation: Law 947. Limited enrollment. (Spring, alt/yrs)

Law 952 Remedies (3 cr)
Consideration of legal and equitable relief available to aggrieved parties in contractual or other relationships.

Law 953 Criminal Procedure (3 cr)
Search and seizure, arrest, interrogation, identification, right to counsel, and guilty pleas, with special attention to constitutional law and pre-trial procedures.

Law 954 Trial Skills (3 cr)
Credit cannot be earned in both Law 954 and Law 958. Instruction in the skills fundamental to litigation and the techniques of persuasive witness examination and argument, combining classroom instruction and individually critiqued student exercises. Limited enrollment.
Prereq: *Law 950 and Permission*

Law 955 Appellate Advocacy Program (2 cr)
A brief-writing and oral advocacy course run as the McNichols Moot Court competition. Students attend class once a week for the first six weeks of the semester, write a two-issue appellate brief, and make a minimum of two oral arguments. Accelerated course. Graded P/NP; credits earned are not class hours.
Prereq: *Law 815*

Law 956 Moot Court (1-2 cr)
Preparation of appellate briefs and argument of cases orally in regional or national competition; grading and evaluating briefs of students participating in second-year appellate advocacy program (with approval of the faculty advisor of the second-year appellate advocacy program); the faculty supervisor of each competition is the final arbiter of the number of credits awarded within the guidelines. Graded P/F; credits earned are not class hours. Only those students who will complete all the activities for their appellate moot court program (including attending the competition) by the end of fall semester may register for credits in the fall semester; all other students eligible for credits under this course register in the spring. Graded P/F; credits earned are not class hours. Limited enrollment.

Law 957 Mock Trial (2 cr)
Participation as an attorney on a mock trial team in regional or national competition; the faculty supervisor of each competition is the final arbiter of the credits awarded within the guidelines.

Law 958 Trial Advocacy (2 cr)
Credit cannot be earned in both Law 954 and Law 958. An intensive seven-day course offered the week before classes regularly begin in the fall. The course follows the National Institute of Trial Advocacy Training format of faculty demonstration, discussion, student performance, and critique, culminating in a mock jury trial on the last day of the training. Limited enrollment. Graded P/F.
Prereq: *Law 950 and Permission; Limited to third-year law students unless waived by the Director of Clinical Programs*

Law 959 Critical Legal Studies (2-3 cr, max 3)
Critical Studies focuses on deconstructing traditional hierarchies within the law and legal institutions and looks to foster change by critically analyzing the law and these institutions. This course will cover one or more of the following subjects: Femi

Law 960 Conflict of Laws (2 cr)
A study of the principles for deciding which law applies to incidents and transactions crossing state lines and of the constitutional limitations on a state's rights to impose its own law in suits arising out of such incidents and transactions; enforcement of foreign judgments, the jurisdiction of courts, and the special jurisdictional problems in domestic relations cases.

Law 962 Professional Responsibility (3 cr)
Status and function of the legal profession, responsibility to clients, the profession, the public, and the administration of justice. This course must be taken no later than the summer following the second year of law studies.

Law 963 Family Law (3 cr)
Legal problems of the family, including marriage, annulment, adoption, and divorce.

Law 964 Children and the Law (3 cr)
Examines the legal status of children, including topics such as the parent-child relationship, guardianship, representation of children, neglect, and adoption.

Law 965 Elder Law (2 cr)
An overview of the legal regimes and practical issues that face lawyers representing older clients. (Alt/yrs).

Law 966 Legal Drafting (2 cr)
This course will familiarize students with transactional and litigation documents, writing for different audiences, and the effective and appropriate use of forms. Students will focus on strategic use of language, avoiding ambiguity, and writing with clarity. General topics covered will include client letters, contracts, and a complaint and answer. Limited enrollment.

Law 967 Advanced Legal Writing (2 cr)
This course will focus on advanced writing concepts, including advanced study of standards of review, development of policy arguments and legislative intent analysis, writing jury instructions, drafting statutes, and drafting judicial opinions; additionally, there will be a heavy emphasis on style. As such, it is assumed that students have mastered the skills learned in Legal Research & Writing. This course does not satisfy the upper division writing requirement. Limited enrollment.
Prereq: *Law 815 with a minimum grade of 'C' or Permission of instructor*

Law 969 Water Law II (2 cr)
In-depth study of topics necessary for the modern practice of water law including case studies on adjudication, ground water management and conjunctive management, as well as topics such as federal and Native American reserved water rights, transboundary water allocation, endangered aquatic species, and water quality. (Fall only)
Prereq: *Permission of instructor*

Law 970 Advanced Legal Research (2 cr)
An advanced course covering all forms of materials, in all formats (print, microformat, electronic), available for conducting legal research.
Prereq: *First year legal, research and writing*

Law 971 Lawyering Process Seminar (2 cr)
Client representation skills, with an emphasis on pre-trial civil litigation; classroom and simulation instruction in interviewing, counseling and negotiating skills, pleading, discovery, and motion practice. Limited enrollment.

Law 973 Non-Classroom Credit Public Service Externship (1-10 cr, max 10)
Students perform legal work in selected public service positions under the supervision of experienced judges and lawyers. Graded P/F. Credits earned are not classroom credits. Note: a maximum of 5 credits may be taken during the summer semester.
Prereq: *Permission*

Law 974 Legal Aid Clinic (1-3 cr, max 6)
From time to time, specific legal aid clinics may be offered. The content of such clinics is announced in advance of the semester in which they are offered.
Prereq: *Law 962; and permission; and qualification for limited license as legal intern in Idaho*

Law 975 Classroom Credit Public Service Externship (1-5 cr, max 10)
Students perform legal work in selected public service positions under the supervision of experienced judges and lawyers. Students must attend periodic classes. Graded P/F.
Prereq: *Permission*

Law 976 Semester in Practice (1-12 cr, max 12)
Students attend periodic classes and perform legal work in the public or private sector under the supervision of a faculty supervisor. Open only to students in their last year of law school. Graded P/F.
Prereq: *Permission*

Law 916 Public International Law (3 cr)
Survey of major areas of the law of nations and international organizations.

Law 917 Negotiation and Appropriate Dispute Resolution (3 cr)
Simulation and seminar style instruction in negotiation techniques, mediation and arbitration, focusing on skill development and legal and ethical issues frequently faced by lawyers.

Law 918 Cyberlaw (2-3 cr)
Introduction to the legal and policy challenges presented by commerce and communication on the Internet. Topics include Internet governance, sovereignty and jurisdiction, free speech, privacy and surveillance, and the protection of intellectual property. Two-credit course covers fewer areas of study.

Law 919 Business Associations (4 cr)
Agency, partnerships, corporations, and other types of business organizations; limitations on powers and authority of partners, corporate officers, and directors.

Law 920 Securities Regulation (3 cr)
The law of corporate finance under the Securities Act of 1933 and the Securities Exchange Act of 1934.

Law 921 Accounting for Law Students (2 cr)
Examination of basic accounting principles designed as background for the tax and business law courses for those students without accounting and business experience and intended to make the lawyer conversant with accountants. Accelerated course.

Law 922 Trademarks and Trade Dress (2 cr)
Trademarks and trade dress include words, symbols, colors, pictures, packaging and product design by which businesses identify themselves and their products and services. This course examines the validity of rights claimed in trademarks and trade dress and what conduct infringes these rights.

Law 923 Negotiable Instruments, Bank Collections and Deposits, and Other Payment Systems (3 cr)
The study of paper-based and other methods of payment under state and federal law with primary focus on the law of negotiable instruments under Article 3 of the Uniform Commercial Code, Bank Deposits and Collections, and Electronic Funds Transfers under Articles 4 and 4A of the UCC and Federal Reserve Board Regulations J and CC and related federal statutes.

Law 924 Sales (3 cr)
The study of the law relating to the sale of goods under Article 2 of the Uniform Commercial Code and related statutes and treaties, including introduction to the structure, purposes, and policies of the Uniform Commercial Code.

Law 925 Property Security (3 cr)
Overview of the law relating to secured credit including the mechanisms for creating enforceable security and mortgage interests in real and personal property.

Law 926 Bankruptcy (3 cr)
Federal bankruptcy law, the collective forum for resolving the rights of financially distressed debtors and their creditors, emphasizing basic principles applicable to all filings, liquidation, or rehabilitation of consumer debtors, and the pervasive effect of bankruptcy on everything from family law to business transactions and relationships.

Law 927 Business Entities Taxation (4 cr)
Examination of the federal taxation of pass-through entities and corporations; topics include formation, operations, allocation, distributions, and liquidation; the opportunity to study the concepts of business enterprise taxation as an integrated unit.

Law 928 Tribal Nation Economics and Law (3 cr)
Same as AIST 478. Survey of economic development strategies by various Tribal Nations, including an overview of federal incentive programs and disincentives for the growth of strong tribal economies. Tribal legal codes, commercial projects, and federal Indian law parameters will be discussed. Topics will include: the tribal government-owned corporate model, gaming enterprises, economic diversification, the federal 8(a) program, limitations on tribal tax-exempt bond offerings, and value-added on-reservation products. Law 928 is a law class and will be graded based on the norms and expectations to which law students are normally held. AIST 478 is an undergraduate course that will be assessed on a P/F basis according to the general norms and expectations for an upper division undergraduate course. (Spring, alt/yrs)

Law 930 Taxation (3-4 cr)
Income and deductions, accounting methods, transactions resulting in capital gain, deferral of tax, and choice of the taxable person; introduction to tax procedure and to income taxation of trusts, estates, and partnerships.

Law 931 Patents (2 cr)
This course will examine the law and policy underlying the U.S. patent system, with a focus on the legal means for obtaining, challenging, and enforcing patent rights. A technical background is not required, but a willingness to engage with some technical aspects of patentable subject matter is.

Law 932 Estate Planning (3 cr)
Inter vivos, testate, and intestate disposition of property with emphasis upon estate and gift tax impact and consideration of the law of future interests.
Prereq or Coreq: Law 941

Law 934 Land-Use Law and Planning (3 cr)
This course addresses the regulation of private lands by state and local governments; will investigate social and cultural agreements about land as influenced by and institutionalized in Constitutional protections, state statutory regimes and local programs; and will develop a working knowledge of the general legal principles, and policy and planning issues relevant to private land management. Enrollment limited to 25 students.

Law 937 Wildlife Law and Policy (3 cr)
An examination of state and federal law applicable to wildlife. (Spring, alt/yrs)

Law 938 International Environmental and Water Law (3 cr)
An examination of international environmental law and the law of international water courses.

Law 939 Law, Science, and the Environment (2 cr)
The use of science in the courtroom and in agency decision making, with emphasis on natural resources and environmental law. This course will explore both the process and substantive areas of selected areas of science and the law. Recommended Preparation: Law 907. (Spring, alt/yrs)

Law 940 International Human Rights (3 cr)
An overview of international rights and humanitarian law and advocacy, including a focus on particular topics of timely interest determined by the instructor and students.

Law 941 Wills, Estates, and Trusts (3 cr)
Intestate succession, wills, and administration of estates in probate.

Law 942 Water Law I (1 cr)
This course will focus on Idaho specific law on prior appropriation, the permit system, adjudication, and conjunctive management.

Law 945 Community Property (2 cr)
Special problems that arise in connection with the community property system in the western states.

Law 946 Water and Energy Policy Seminar (2 cr)
An examination of advanced topics in water and energy law. Recommended Preparation: Law 942. (Spring, alt/yrs)

Law 947 Environmental Law (3 cr)
Environmental planning and protection, regulation of air and water pollution, waste disposal, use of pesticides and other toxic chemicals, and remedies for environmental injury. Cooperative: open to WSU degree-seeking students.

Law 948 Natural Resource Law and Policy (3 cr)
An introduction to natural resource law examining resource allocation and management systems, including ESA, FLPMA, NEPA, NFMA, Wilderness Act, WSRA, and other federal statutes applicable to the public lands. (Fall only)

Law 949 Native American Law (3 cr)
Same as AIST 420. Study of Tribal Sovereignty and interaction with the U.S. government at various levels with an emphasis on treaty rights, jurisdictional issues, the trust relationship, protection of lands, the eras of U.S. Indian policy, and the continued assertion of tribal rights and interests. Law 949 is a law class and will be graded based on the norms

LAS 462 Human Issues in International Development (3 cr)
See Anth 462.

LAS 493 International Land Preservation and Conservation Systems (3 cr)
See CSS 493.

LAS 499 (s) Directed Study (cr arr)

Law Courses

Donald L. Burnett, Jr., Dean, College of Law (101 Law Bldg. 83844-2321; phone 208/885-4977).

Note: Registration by non-law students in any course offered by the College of Law requires permission in advance by the associate dean and the instructor of the course.

Law 805 Civil Procedure and Introduction to Law (3 cr)
Overview of U.S. legal systems, providing basics on civil litigation and legal principles. Covers litigation topics including pleadings, pretrial management, discovery, summary judgment, trial, post-trial motions, judgment, personal jurisdiction, subject matter jurisdiction and related topics with a focus on the Federal Rules of Civil Procedure.

Law 806 Civil Procedure II (3 cr)
Continuation of Law 805 on the process and principles of civil litigation in the U.S.
Prereq: Law 805

Law 807 Property (4 cr)
Future interests, landlord and tenant, bailment, easements, covenants respecting the use and enjoyment of land, rights incident to land ownership and fixtures, adverse possession, gifts of personal property, conveyance of land, recording acts, land title assurance, and public control of land use.

Law 809 Torts (4 cr)
The common law providing private redress for injuries primarily to person or property. The course examines the three basic theories of tort liability: intent, negligence, and strict liability.

Law 812 Criminal Law (3 cr)
The sources and purposes of the criminal law; the meaning of criminal responsibility, the elements of crimes, and the administration of criminal justice.

Law 813 Contracts (4 cr)
Basic elements of private, consensual agreements enforced by law: formation, principles of bargain or reliance, methods to police the bargain, interpretation, performance/breach and remedies for breach, defenses to liability, and the rights and liabilities of third parties upon assignment and delegation. (Spring only)

Law 815 Legal Research and Writing (0 or 5 cr, max 5)
Year-long course. An introduction to traditional and computer-assisted legal research, objective and persuasive legal writing, and oral argument.

Law 816 Constitutional Law I (4 cr)
An examination of the institution of judicial review and of the constitutional divisions of government power in the United States; the principles of separation of powers and federalism; and the constitutional protection of certain individual rights and liberties, particularly under the 14th Amendment.

Law 820 Statutory Reading and Interpretation (3 cr)
Introduction to the process and techniques of statutory and regulatory interpretation, including how to read a statute or regulation, identify interpretive issues, and employ the accepted canons of statutory construction as part of the theory and practice of interpretation. (Fall only)

Law 850 Freedom of Speech and the Press (3 cr)
Exploration of the First Amendment protections for freedom of speech and press by examining First Amendment jurisprudence regarding the history, philosophy, and scope of an individual or group's right to public and private speech or other types of expressive communication.
Prereq: Law 816 and Law 905

Law 851 Advanced Torts (2-3 cr)
Selected topics in tort law, including products liability, traditional strict liability, defamation, and business torts. Two-credit course covers fewer areas of study.
Prereq: Law 809

Law 852 Natural Resource and Environmental Law Field Course (2 cr)
Summer field course exploring the implementation of natural resource and environmental law on the ground in Idaho, focusing on the effects of state and federal resource management and protection statutes on public and private landscapes. Accelerated course.
Prereq: Permission

Law 901 (s) Seminar (cr arr)
See the *Class Schedule* for specific topics.

Law 903 Introduction to Intellectual Property (3 cr)
Introduction to the four substantive areas of intellectual property: trade secrets, trademarks, copyrights, and patents, with an emphasis on the tension in each body of law between private rights and the public's interest.

Law 904 Federal Courts (3 cr)
The constitutional structure and the practical role of the federal court system, with great emphasis on the working relationship between federal and state courts.

Law 905 Constitutional Law II (3 cr)
Study of individual rights and liberties protected by the Constitution.

Law 906 Natural Resources Law Seminar (3 cr)
Selected topics in natural resources law and policy. Topics vary with the interest of the instructor and students. (Spring, alt/yrs)

Law 907 Administrative Law (3 cr)
An examination of the constitutional limits on administrative agencies, the procedural requirements for agency decision making, and judicial review of agency actions. The focus is on federal administrative law.

Law 908 Workplace Law (4 cr)
Survey course covering state common law exceptions to the employment at will doctrine, federal anti-discrimination statutes, federal statutory protection of collective activity, and other state and federal law governing the employment relationship; exploration of the processes of hiring, firing, and setting the terms and conditions of employment.

Law 910 Antitrust (3 cr)
Study of the application of the antitrust law to cooperation among competitors, agreements between suppliers and customers regarding the resale of products, exclusive dealing arrangements, monopolization, and mergers.

Law 911 Principles of Suretyship (2 cr)
Overview of principles of suretyship and guaranty including rights of the obligee, guarantor, and principal obligor. Study of unique applications of suretyship doctrine including counseling and drafting issues to this tripartite arrangement.
Prereq: Law 925 or Permission

Law 912 Civil Mediation (2 cr)
Credit may not be earned in both Law 912 and Law 913. A study of conflict resolution, negotiation, and mediation theory, process, and skills. Exploration of each stage of the mediation process and attendant strategies and skills. Offered through the Northwest Institute for Dispute Resolution. Accelerated course. Graded P/F.
Prereq: Permission

Law 913 Family Mediation (2 cr)
Credit may not be earned in both Law 912 and Law 913. A skills-based study of family mediation designed for those wishing to mediate or represent clients in the mediation process. Topics covered include structuring the mediation process, guidelines for division of assets, construction of parenting plans, and ethical concerns. Offered through the Northwest Institute for Dispute Resolution. Accelerated course. Graded P/F.
Prereq: Permission

Law 914 (s) Dispute Resolution (1 cr, max 4)
Specialty course in dispute resolution offered through the Northwest Institute for Dispute Resolution. Course topic and content will be announced in advance. Accelerated course. Graded P/F.
Prereq: Permission

LArc 495 GIS Applications in Land Planning 2 (3 cr)
Advanced methods for regional-scale landscape planning using geographic information system (GIS) technology to apply ecological principles and land use analysis and planning. Required of Landscape Architecture majors with a land planning focus.
Prereq: LArc 395 or Geog 385 or Permission

LArc 497 Teaching Assistantship, Undergraduate (3 cr, max 6)
Teaching assistant services performed by advanced undergraduate students with faculty supervision. By permission only.

LArc 499 (s) Directed Study (cr arr)

LArc 500 Master's Research and Thesis (cr arr)

LArc 501 (s) Seminar (cr arr)

LArc 502 (s) Directed Study (cr arr)

LArc 503 (s) Workshop (cr arr)

LArc 504 (s) Special Topics (cr arr)

LArc 510 Landscape Architecture Representation and Media 3 (2 cr)
See LArc J310/J510.

LArc 550 Landscape Architecture Studio 1 (3 cr)
See LArc J353/J550.

LArc 551 Landscape Architecture Studio 6 (3 cr)
See LArc J455/J551.

LArc 552 Landscape Architecture Studio 3 (3 cr)
See LArc J363/J552.

LArc 553 Landscape Architecture Studio 8 (3 cr)
See LArc J465/J553.

LArc 554 Landscape Architecture Graduate Studio 1 (6 cr)
The professional landscape architecture comprehensive studio with options to study on campus or elsewhere in collaboration with students from allied professions. Attendance at outside events, lectures, symposiums, films may be required. (Fall only)
Prereq: Graduate standing, LArc 368, LArc 369, and LArc 465; or Permission

LArc 556 Landscape Architecture Graduate Studio 2 (6 cr)
The professional landscape architecture comprehensive studio with options to study on campus or elsewhere in collaboration with students from allied professions. Attendance at outside events, lectures, symposiums, films may be required. (Spring only)
Prereq: Graduate standing, LArc 368, LArc 369, LArc 465, and LArc 554; or Permission

LArc 558 Landscape Architecture Graduate Studio 3 (6 cr)
Graduate final project with faculty advisor.
Prereq: Graduate standing and LArc 556; or Permission

LArc 559 The Northern Rocky Regional Landscapes (4 cr)
Biophysical characteristics of the Northern Rocky Mountain regional landscape. Cooperative: open to WSU degree-seeking students.
Prereq: Graduate standing

LArc 560 Cultural Interpretation of Regional Landscapes (4 cr)
Cultural characteristics of the Northern Rocky Mountain regional landscape.
Prereq: Graduate standing

LArc 597 Teaching Assistant, Graduate (3 cr, max 6)
Teaching assistant services performed by advanced graduate students with faculty supervision. By permission only.

LArc 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Graduate standing and Permission

LArc 562 Landscape Architecture Graduate Studio 4 (6 cr)
Graduate final project with faculty advisor.
Prereq: Graduate standing and LArc 558; or Permission

Latin Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Latn 101 Elementary Latin I (3 cr)
Pronunciation, vocabulary, reading, composition, and functional grammar.

Latn 102 Elementary Latin II (3 cr)
Pronunciation, vocabulary, reading, composition, and functional grammar.

Latn 204 (s) Special Topics (cr arr)

Latn 299 (s) Directed Study (cr arr)

Latn 404 (s) Special Topics (cr arr)

Latn 449 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission of department

Latn 499 (s) Directed Study (cr arr)

Latin American Studies Courses

Guadalupe Perez-Anzaldo, Coordinator, Program in Latin American Studies (308 Admin. Bldg. 83844-3174; phone 208/885-7876; gperezan@uidaho.edu).

LAS 200 (s) Seminar (cr arr)

LAS 203 (s) Workshop (cr arr)

LAS 204 (s) Special Topics (cr arr)

LAS 299 (s) Directed Study (cr arr)

LAS 301 Intro to Latin American Studies (3 cr)
This course provides a foundation for understanding the cultures, societies and, geography of the region. It also covers diverse themes such as the indigenous realities, literature, art, colonial and recent histories, and interactions among Latin American countries and the rest of the world. (Fall only)

LAS 306 Culture and Institution of Latin America (3 cr)
See Span 306.

LAS 315 Comparative African-American Cultures (3 cr)
See Hist 315.

LAS 391 Hispanic Film (3 cr)
See FLEN 391.

LAS 394 Latin American Literature in Translation (3 cr)
See FLEN 394.

LAS 400 (s) Seminar (cr arr)

LAS 401 Readings: Spanish Literature (3 cr)
See Span 401.

LAS 402 Reading: Spanish American Literature (3 cr)
See Span 402.

LAS 403 (s) Workshop (cr arr)

LAS 404 (s) Special Topics (cr arr)

LAS 435 Latin America: The Colonial Era (3 cr)
Indian civilization, European colonization, Spanish Imperial System, wars of independence.

LAS 438 Modern Mexico and the Americas (3 cr)
See Hist 438.

LAS 439 Modern Latin America (3 cr)
See Hist 439.

LAS 440 Social Revolution in Latin America (3 cr)
See Hist 440.

LAS 441 Slavery and Freedom in the Americas (3 cr)
See Hist 441.

LAS 447 International Development Economics (3 cr)
See Econ 447.

LArc J353/J550 Landscape Architecture Studio 1 (3 cr)
Studies and applications in landscape architecture site design process at the small-site scale with an emphasis on critical thinking within the bio-regional context; includes readings, lectures and field trips. Course offered in the first half of fall semester. Additional project required for graduate credit. Recommended Preparation: Art 100, Art 121, LArc 151, and LArc 154. (Fall only)
Prereq: Engl 102, LArc 251, LArc 254, LArc 288, and LArc 289

LArc 355 Landscape Architecture Studio 2 (3 cr)
Continued application and exploration of design process with a focus on the significance of site inventory and analysis, design programming and the creation of a conceptual framework to guide the design process. Course offered in the second half of fall semester. (Fall only)
Prereq: LArc 251, LArc 254, LArc 288, and LArc 289
Coreq: LArc 353 or Permission

LArc 358 Professional Office Practice in Landscape Architecture (2 cr)
Office organization, fees, contracts, bonding, bidding specifications, insurance, and relationships with subcontractors. Cooperative: open to WSU degree-seeking students. (Fall only)

LArc J363/J552 Landscape Architecture Studio 3 (3 cr)
Exploration of design principles, process, conceptualization, spatial understanding, and craft via narrative; within a cultural, social, and environmental context; and application to creative thinking and decision-making required of site-specific projects. Required field trips and attendance at outside events (lectures, symposiums, films). Course offered first half of semester. Additional project required for graduate credit. Recommended Preparation: LArc 154, LArc 210, and LArc 288 (Spring only)
Prereq: LArc 355 or Permission
Coreq: LArc 365 or Permission

LArc 364 Summer Study Abroad Design Studio (6 cr)
Intermediate site scale planning and design with an emphasis on bioregional context, sustainable development and the cultural landscape as influencing site design factors. A summer abroad studio that may be substituted for LArc 353 and LArc 355, or LArc 363 and LArc 365. Recommended Preparation: Art 110 and Art 121. (Summer only)
Prereq: LArc 151, LArc 154, LArc 210 and LArc 288
Coreq: LArc 382 and LArc 390

LArc 365 Landscape Architecture Studio 4 (3 cr)
Further integration and application of design process explored in LArc 363 via outreach project(s). Focus on sustainable design development. Required field trips and attendance at outside events (lectures, symposiums, films). Course offered second half of semester. Recommended Preparation: LArc 154, LArc 210, and LArc 288. (Spring only)
Prereq: LArc 355 or Permission
Coreq: LArc 363 or Permission

LArc 368 Landscape Architecture Construction 3 (2 cr)
Introduction to the art and technology of designing and detailing materials in the landscape. Examines the content and purpose of construction documents, the construction sequence, the properties of common landscape construction materials (concrete, masonry, timber, metals, others) as they relate to aesthetics, the articulation of place, durability, and performance in outdoor environments. Students apply this knowledge in developing construction document detail design drawings.
Prereq: Landscape Architecture major, Landscape Architecture minor, or Permission (Spring only)

LArc 369 Landscape Architecture Construction 4 (2 cr)
Extension of LARC 368 with a focus on building a unified set of construction detail design drawings for a range of materials applied to a small scale site. Drawings are presented in professional format as a small construction document package which includes work from LARC 368. Sustainable approaches, practices, and research reports support the work in detailing the materials and completion of the construction document package. Recommended Preparation: LArc 210, LArc 268, and LArc 269. (Spring only)
Prereq: Landscape Architecture major, Landscape Architecture minor, or Permission

LArc 380 Water Conservation Technologies (3 cr)
Sustainable irrigation best practices; principles of water conservation and water harvesting in landscape architecture site design with the production of a number of drawings and projects at different scales. Recommended Preparation: LArc 210. (Spring only)

LArc 382 Landscape, Language and Culture (2 cr)
Students study the Italian language, utilizing the regional, historic landscape of southern Piedmont and the markets, museums, and cultural events of Cremolino, Ovada and Aqui Termi as a resource for enhancing language skills. (Summer only)
Coreq: LArc 364 and LArc 390

LArc 389 History of Landscape Architecture (3 cr)
An overview of the history of landscape design with a focus on pre-Egyptian civilization through Ancient Greece and Rome, the Middle Ages, the Renaissance, the influence of Asian culture, the birth of landscape architecture, modernism, and a contemporary focus of practice. Cooperative: open to WSU degree-seeking students. (Spring only)

LArc 390 Italian Hill Towns and Urban Centers (3 cr)
A summer lecture and field experience course exploring the historical foundations of community and urban pattern utilizing Italian hill towns and urban centers as a resource. Students study the organic and formal relationships between landscape and human settlement as well as the relationship between urban form and political and historical context. Recommended Preparation: Art 100, Art 111, and LArc 389. (Summer only)
Prereq: LArc 154
Coreq: LArc 364 and LArc 382

LArc 395 GIS Applications in Land Planning 1 (3 cr)
A primer on geographic information systems (GIS) applied to landscape architecture and land planning with lab exercises exploring the site suitability analysis process at the landscape level. Three hrs of lec-lab a wk. (Fall only)
Prereq: LArc 210 or Permission

LArc 400 (s) Seminar (cr arr)

LArc 403 (s) Workshop (cr arr)

LArc 404 (s) Special Topics (cr arr)

LArc 453 Landscape Architecture Studio 5 (3 cr)
Intermediate scale site planning through integrated studio engagement at the community and urban scale of landscape architecture with a focus on the integration of open space systems in community design. Opportunity to collaborate with students and faculty from allied professional programs. Course offered first half of fall semester. Recommended Preparation: LArc 288, LArc 289, and LArc 389. (Fall only)
Prereq: LArc 365 or Permission
Coreq: LArc 455 or Permission

LArc J455/J551 Landscape Architecture Studio 6 (3 cr)
Continued emphasis on community design with a focus on master planning and design development that explores different models of human settlement and patterns of cultural, environmental and social elements. Selected field trips at student expense. Course offered second half of fall semester. Additional project required for graduate credit. Recommended Preparation: LArc 288, LArc 289, and LArc 389. (Fall only)
Coreq: LArc 453 or Permission

LArc 463 Landscape Architecture Studio 7 (3 cr)
Intermediate scale sustainable land planning and design for the urban and rural environment with a focus on the integration of wetland ecology planning, storm water management and wildlife habitat. Course offered first half of spring semester. Selected field trips at student expense. Recommended Preparation: LArc 288 and LArc 289. (Spring only)
Prereq: LArc 395, LArc 455, or Permission
Coreq: LArc 465 or Permission

LArc J465/J553 Landscape Architecture Studio 8 (3 cr)
Intermediate scale land planning and design that emphasizes sustainable development with a focus on landscape restoration and regeneration, visual analysis of the landscape matrix using GIS digital technologies and the use of indigenous plant materials for restoration and rehabilitation. Required Field Trip at student expense. Course offered second half of spring semester. Additional project required for graduate credit. Recommended Preparation: LArc 288 and LArc 289. (Spring only)
Prereq or Coreq: LArc 463, or Permission

LArc 480 The Emerging Landscape (3 cr)
A capstone course exploring the emerging scholarship of landscape architecture and land planning. Writing, projects and attendance at activities outside of class time required. Includes a service learning option. Recommended Preparation: Comm 101. (Spring only)
Prereq: Engl 102 and Junior standing

JAMM 472 Photojournalism (1 cr)
In a workshop environment, students learn techniques for creating documentary still images and gain experience shooting and editing digitally. Criticism, revision, troubleshooting and journalistic ethics are emphasized.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and Instructor Permission

JAMM 473 Lighting for Digital Media Production (1 cr)
In a workshop environment, students learn various lighting styles and techniques through hands-on experience, practical application and analysis. Students will create digital media images with natural and artificial light sources. Criticism, revision, problem solving and troubleshooting are emphasized.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 275 and Instructor Permission

JAMM 474 Video Editing (1 cr)
Exploration of post-production processes, roles, aesthetics, and techniques. Students learn to effectively manipulate video and audio into creative and cohesive works.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 275 and Instructor Permission

JAMM 475 Advanced Digital Media Production (3 cr)
Advanced production and content development for short narrative cinema. Emphasis on schedule adherence and aesthetic realization. Projects will screen publicly at the annual student digital media festival.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and either JAMM 275 and JAMM 374; or JAMM 275 and JAMM 375; or Permission

JAMM 477 Documentary Film (3 cr)
Same as Engl 477. An examination of the historical development of nonfiction film and television. Study of documentary style and form, a consideration of social issues raised by documentary and a survey of significant practitioners and theorists of documentary film and television. Recommended preparation: Engl 230.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 478 Broadcast/Cable/Web Programming (3 cr)
Program development, theory, and scheduling, with emphasis on the regulations and strategies involved in radio, television, cable, and web programming at both the national and local levels.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 490 Global Media (3 cr)
Technologies and concepts of international media; models of international content flow; cross-cultural mass media.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 497 Practicum in Teaching (1-3 cr, max 3)
Supervised experience in assisting in teaching of JAMM courses.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and Upper-class standing and permission of instructor

JAMM 498 (s) Internship (0-3 cr, max 6)
Supervised experience in professional media outlet, non-profit organization, government agency, or educational institution. Graded P/F.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and Junior Standing; and JAMM 225, JAMM 252, JAMM 265, or JAMM 275; or Permission of Instructor

JAMM 499 (s) Directed Study (cr arr., max 6)
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

Landscape Architecture Courses

Stephen R. Drown, Coordinator of Landscape Architecture (207 Art and Architecture 83844-2481; phone 208/885-7448; larch@uidaho.edu; www.caa.uidaho.edu/larch).

LArc 151 Introduction to the Built Environment (2 cr)
An introduction to the profession of landscape architecture and related design professions engaged in the planning and design of the built environment with an emphasis on the value and benefit of interdisciplinary professional education, and creative practice. (Fall only)

LArc 154 Landscape Architecture Representation and Media 1 (3 cr)
Drawing and graphic techniques traditional to the practice of landscape architecture and design thinking; emphasis on conceptual and analytical graphics, plan section/elevation, perspective illustration and color rendering; introduction to digital technology presentation tools. (Spring only)

LArc 200 (s) Seminar (cr arr)

LArc 203 (s) Workshop (cr arr)

LArc 204 (s) Special Topics (cr arr)

LArc 210 Landscape Architecture Representation and Media 2 (2 cr)
Exploration of the digital technology tools used by design professionals throughout the design process; emphasis on digital tools that assist with the conceptualization and implementation of site design with an introduction to related landscape architecture specific tools. Open to landscape architecture majors only; non-majors by permission as space permits. (Fall only)
Prereq: LArc 154 and major in Landscape Architecture; non-majors by permission as space permits

LArc 251 Introduction to Principles of Site Design (3 cr)
An overview of site analysis, design, and planning principles addressing the theoretical foundations, emerging cultural practices as well as the technical and functional standards for sustainable landscape architectural site design. Includes a lab section for discussion, critique and presentation of additional technical issues and site-related design projects; field trips and special sessions may be required. (Fall only)

LArc 254 Origins of Landscape Form (2 cr)
An overview of the principles and theory of form generation demonstrating the relationship between world-view, historic epoch, science and technology and the creation of form relevant to landscape architecture and other design professions. Summer reading list provided. (Spring only)
Prereq: Art 121

LArc 268 Landscape Construction 1 (2 cr)
Site grading and drainage with a focus on siting building elevations and grading open space, , roads, parking, walkways, paved public spaces, cut and fill and horizontal road layout. Recommended Preparation: Math 143. (Spring only)
Prereq: Landscape Architecture major, Landscape Architecture minor, or Permission

LArc 269 Landscape Construction 2 (2 cr)
Sustainable storm water design, grading of swales, calculating runoff and the sizing conveyance and detention basins. Recommended preparation: LArc 268 and Math 143. (Spring only)
Prereq: Landscape Architecture major, Landscape Architecture minor or Permission

LArc 288 Planting Design Studio 1 (3 cr)
Plant identification and selection; the sustainable use of plant materials in relation to soils, topography, and climate; introduction to the principles in relation to planting design. Selected field trips at student expense. (Fall only)

LArc 289 Planting Design Studio 2 (3 cr)
Continuation of plant material identification with emphasis on planting design at different scales of the landscape. Exploration of sustainable principles and practices of planting design. Two lec and 4 hrs of lab a wk; selected field trips at student expense. (Spring only)
Prereq: LArc 288

LArc 299 (s) Directed Study (cr arr)

LArc J310/J510 Landscape Architecture Representation and Media 3 (2 cr)
Advanced digital technology tools used by landscape architects throughout the design process; emphasis on digital modeling tools that assist with the conceptualization and development of site design and design detail. Further exploration of digital media to assist with the communication and presentation of design process and concepts. Open to landscape architecture majors only. Additional project required for graduate credit. (Fall only)
Prereq: LArc 154, LArc 210, and major in Landscape Architecture; non-majors by permission as space permits

JAMM 403 (s) Workshop (cr arr)
May be graded P/F.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and Permission

JAMM 404 (s) Special Topics (cr arr)
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 405 Professional Development for Secondary Teachers (1-3 cr)
Exposure to current developments in mass media, including technology, law and ethics; supervised experience in writing, editing, publication design, video production and Internet publication; work with high school, college students and professional journalists in a workshop setting. (Summer only)
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 420 Public Radio Journalism (3 cr)
History and development of news in public radio style; writing and production of news documentaries, features, and enterprise stories; use of advanced audio production techniques in story telling. Recommended Preparation: JAMM 322 and JAMM 370.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 225

JAMM 422 Advanced Broadcast News (3 cr)
Advanced news reporting for radio, television and the Internet, emphasizing writing, editing, producing, and on-air performance skills; analysis of broadcast news judgments and decision making.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 322

JAMM 425 Feature Article Writing (3 cr)
Strategies and approaches for writing and producing human-interest stories for print and online media; introduction to a variety of feature-writing styles, including columns, reviews, and arts and culture coverage. Topics vary.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 225 or Permission

JAMM 426 Narrative Journalism (3 cr)
Tradition and conceptual foundations of narrative journalism, with emphasis on structure, storytelling, style and narrative voice. Students will be expected to write or produce several enterprise stories suitable for publication or broadcast.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 225 or Permission

JAMM 428 Environmental Journalism (3 cr)
Reporting on natural resources issues and the environment. Recommended Preparation: JAMM 225.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 440 Critical Issues in Mass Media (3 cr)
Examination of critical approaches to mass media, including interdisciplinary interpretations of media forms and content. Addresses how new media technologies are changing how media users acquire, distribute and use information. Analyzes media impact on American culture from a variety of critical perspectives.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 443 Media Management and Economics (3 cr)
Management principles as they apply to mass media; emphasis on personnel management, budgeting, programming, sales, marketing and promotion, legal constraints, new technologies, and strategic planning; study of media ownership.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 444 Mass Media and Public Opinion (3 cr)
Role of media in the formation of public opinion; overview of survey methodology and interpretation.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 445 History of Mass Media (3 cr)
Develops core historical understanding of significant social, political, economic, and technological developments in the mass media. Focuses primarily on developments and trends in the United States between 1900 and the present. Topics include the media as independent witnesses to human events, the role of audiences, contributions made by underrepresented groups and the importance of a free press to democracy.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 448 Law of Mass Media (3 cr)
An examination of the legal framework governing the gathering, preparation, and dissemination of information, advertising and entertainment in the United States and globally. Topics include First Amendment, defamation, invasion of privacy, intellectual property, copyright, access to governmental proceedings and records, and regulation of broadcasting, satellite, and cable television.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and Senior standing and a major in the School of Journalism and Mass Media.

JAMM 452 Public Relations Campaign Design (3 cr)
Examination of public relations programs; practice in developing and executing campaigns with emphasis on problem/issue identification, design of campaign elements, presentations skills and equipment.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 350

JAMM 456 Nonprofit Fundraising (3 cr)
See Comm 456.

JAMM 458 Public Relations Case Studies and Issues Management (3 cr)
Basic research techniques used by the public relations practitioners, including philosophy and ethics of research, content analysis, focus groups and surveys. Analysis of public relations case studies and reasons for their success or failure.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 252

JAMM 462 Creative Thinking for Mass Media (3 cr)
This course is designed to help students develop and apply a variety of conceptual and creative skills to mass media challenges; it provides techniques to develop, evaluate and implement strategies to define and resolve existing or emerging problems in a rapidly changing media environment.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and Permission

JAMM 465 Political Advertising (3 cr)
Using presidential and congressional campaigns as the foundation, this course will examine how political organizations and politicians use marketing, advertising and public relations principles, strategies and media and tactics to reinforce, change or justify public perceptions to gain public support, votes, money or credibility. Recommended preparation: JAMM 265.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 466 Advertising Campaign Strategy (3 cr)
Advanced advertising strategies in creative approaches and media usage; current ad campaigns and development of a complete advertising campaign for a client.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 265, JAMM 361 and JAMM 364

JAMM 468 The Advertising Agency (3 cr)
Functioning of an advertising agency, including management, accounting, creative and media buying systems, government regulation, account management, and creative strategies in the marketplace. Field trips. Recommended Preparation: JAMM 466.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 469 Advertising Competition Team (3 cr, max 6)
This course provides students with an opportunity to participate in the annual National Student Advertising Competition (NSAC) sponsored by the American Advertising Federation, as well as other student competitions in advertising or integrated marketing communication.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and Junior/Senior standing and Permission

JAMM 225 Reporting I (3 cr)
Writing news for print, broadcast and online media. Introduction to newsroom structures and processes, news judgment and decision making. Two 2-hr lectures/labs a wk.
Prereq: JAMM 121

JAMM 252 Introduction to Public Relations (3 cr)
Overview of issues and methods used by public relations practitioners, including strategies, practices and basic products produced. Multiple writing assignments address basic skills needed for successful PR activities.
Prereq: JAMM 100 and JAMM 121

JAMM 265 Principles of Advertising (3 cr)
Overview of the role of advertising in American society. Explores the socioeconomic growth and impact of advertising on U.S. consumer culture. Writing assignments include critiques of advertisements and analyses of their intended effects.
Prereq: JAMM 100 and JAMM 121

JAMM 275 Introduction to Broadcasting and Digital Media Production (4 cr)
Principles of digital audio and video production and writing; concentration on skills such as writing, producing, directing, sound recording and mixing, lighting, camera work, and editing for narrative and non-narrative storytelling. Work with digital and high-definition equipment for field and studio production. Hands-on experience, criticism and revision are emphasized. Two 75-minute lectures and one 2-hr lab per week.
Prereq: JAMM 100 and JAMM 121; or Permission

JAMM 299 Directed Study (cr arr)

JAMM 322 Broadcast News (3 cr)
News reporting for radio, television and the Internet, emphasizing writing, editing, producing, and on-air performance skills; analysis of broadcast news practices. Recommended preparation: JAMM 275.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 225 or Permission

JAMM 323 Broadcast Sports Reporting (3 cr, max 6)
Sports reporting for television, radio and the Internet; emphasizes writing, editing, producing, camera work and on-air performance skills. Focus on interviews, team coverage, game highlights. Recommended Preparation: JAMM 322. (Fall only)
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 225, and JAMM 275; or Permission

JAMM 324 News Editing and Production (3 cr)
News selection, evaluation, editing, display, pagination and design for print and online media. Two 2-hr lectures/labs a wk. (Spring only)
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 225 or Permission

JAMM 325 Publications Editing (3 cr)
Introduction to the development, management, editing, design and distribution of print and Web publications; focuses on periodicals, such as magazines and student-originated projects.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 327 Reporting II (3 cr)
Interviewing, database research, access to public records and meetings, and development of in-depth news story structure. Includes coverage of government, politics and other public issues. Recommended Preparation: PolS 275.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 225 or Permission

JAMM 339 Crime and the Media (3 cr)
See Soc 339.

JAMM 340 Cultural Diversity and the Media (3 cr)
An examination of media studies scholarship related to aging, class, disabilities, gender, race and sexual orientation.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 341 Mass Media Ethics (3 cr)
A critical examination of ethical issues confronting journalists and other media practitioners. Includes moral analysis, argument and decision-making by media organizations. Case studies drawn from journalism, broadcasting, advertising, public relations and digital media.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 350 Public Relations Writing and Production (3 cr)
Public relations writing, publication and design processes for print, broadcast and online media. Two 2-hr lectures/labs a wk.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 225 and JAMM 252

JAMM 351 Alumni Newsletter Production (1-3 cr)
Concept development, interviewing, writing and editing for the School of Journalism and Mass Media's twice-yearly newsletter for students, alumni and other audiences; emphasis on multi-media content, including photographs, audio and video.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 350 or Permission

JAMM 361 Advertising Creativity (3 cr)
Advertising creative process in print, broadcast and online media, including copywriting and production processes and techniques. Recommended preparation: Art 110.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 265

JAMM 364 Advertising Media Planning (3 cr)
Advertising media planning for broadcast, print and online media; includes interpretation of ratings and market data, media strategies and concepts, and specific buying process in each advertising medium.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 265

JAMM 370 Digital Audio Production (3 cr)
Audio production principles and techniques, with an emphasis on sound design, writing and announcing skills; digital technologies for radio, television, Internet, and music recording.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 374 Digital Media Field Production (3 cr)
Single-camera field production techniques and aesthetics. Students will write, produce, direct and revise video projects. Includes pre-production planning, aesthetics and post-production realizations.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 275

JAMM 375 Broadcast Television and Studio Program Production (3 cr)
Development and breakdown of broadcast television and series proposals. Live studio production of news and television magazine formatted programming aired on cable channel UITV- 8. Studio/field production, writing, producing, directing, and editing of story feature packages primarily on digital based equipment. Perform all aspects of studio operation and techniques.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better; and JAMM 275

JAMM 378 American Television Genres (3 cr)
Historic development of dominant television genres, discussion of characteristics unique to each genre; examination of the cultural context of television programming.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 379 Hollywood Portrayals of Journalists (3 cr)
Addresses the evolving relationship between the American people and their media. It examines the conflicting images of journalists in movies and television and discusses the influence of these images on the American public's perception of news gatherers in the 20th and 21st centuries.
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

JAMM 400 (s) Seminar (cr arr)
Prereq: JAMM 100 with a grade of 'C' or better and JAMM 121 with a grade of 'C' or better

IS 325 The Contemporary Muslim World (3 cr)
Focus on the states in the Organization of the Islamic Conference, with an emphasis on framing the region, social and popular questions, economic issues, and the global stage.

IS 326 Africa Today (3 cr)
Focus on the states in Africa, with an emphasis on politics, economy and development, culture and society, and current issues.

IS 327 The Francophone World (3 cr, max 6)
Focus on important issues in Francophone history, colonization, culture, and international relations. Special attention will be paid to the role of the Organization of the Francophone World (OIF) in linking contemporary relations between member states.

IS 328 Canada Today (3 cr)
Focus on the contemporary Canada, with an emphasis on politics, economy and development, environmental issues, culture and society, and current issues.

IS 350 Sport and International Affairs (3 cr)
Exploration of the relationship between sports and politics, nationalism, economics, society and culture as they play out in the international arena.

IS 370 African Community, Culture, and Music (1-3 cr)
Focus on regional and/or national communities and cultures in Africa with an emphasis on musical traditions. Experience based including preparation in the US, field work in one or more African countries, and substantive evaluation after return.

IS 400 (s) Seminar (cr arr)

IS 403 (s) Workshop (cr arr)

IS 404 (s) Special Topics (cr arr)

IS 410 NGOs in the International System (3 cr)
A comparative analysis of nongovernmental organization types, functions, strategies, funding mechanisms, accountability, challenges, and collaborations with other international organizations.

IS 440 (s) International Organizations and International Law (3 cr)
Same as PolS 440.

IS 485 (s) Martin Scholars (3 cr)
The Martin Scholars program considers a topic related to international conflict and the resolution thereof in a broad context, with specific topics mutually selected by a designated faculty member and the director of the Martin Institute. It serves a small group of students each fall term, with additional work carried out over the course of the ensuing spring term while the Martin Scholars produce masters-level research on that year's specific topics.
Prereq: *Departmental Permission*

IS 495 International Studies Senior Seminar (3 cr)
Capstone course required of all International Studies majors in their senior year. Focuses on incorporating interdisciplinary training in global, regional, and issue emphases through oral and written presentations. (Spring only)
Prereq: *Senior standing, International Studies major or Permission*

IS 497 Practicum in Instruction (2 cr)
Tutoring and/or instructional services performed by advanced students under faculty supervision. (Spring only)
Prereq: *IS 310, IS 320, and Permission*

IS 499 (s) Directed Study (cr arr)

Japanese Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Vertically-related courses in this subject field are: Japn 101/101L-Japn 102/102L-Japn 201/201L-Japn 202. A maximum of 16 credits may be earned for vertical credit in any language, in the Department of Modern Languages & Cultures.

Japn 101 Elementary Japanese I (4 cr)
Cooperative: open to WSU degree-seeking students.
Coreq: *Japn 101L*

Japn 101L Elementary Japanese I Lab (1 cr)
Writing system, pronunciation, vocabulary, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: *Japn 101*

Japn 102 Elementary Japanese II (4 cr)
Cooperative: open to WSU degree-seeking students.
Coreq: *Japn 102L*

Japn 102L Elementary Japanese II Lab (1 cr)
Writing system, pronunciation, vocabulary, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: *Japn 102*

Japn 201 Intermediate Japanese I (4 cr)
Cooperative: open to WSU degree-seeking students.
Coreq: *Japn 201L*

Japn 201L Intermediate Japanese I Lab (1 cr)
A beginning intermediate course; review and practice of basic language skills; increased emphasis on reading and free discussion. Four lec and one 1-hr lab a wk.
Coreq: *Japn 201*

Japn 202 Intermediate Japanese II (4 cr)
Cooperative: open to WSU degree-seeking students.

Japn 204 (s) Special Topics (cr arr)

Japn 299 (s) Directed Study (cr arr)

Japn 301 Japanese Reading (3 cr)
Emphasis on the development of reading skills at the advanced intermediate level; some emphasis on grammar, vocabulary and kanji character acquisition. For students who have completed four semesters of elementary and intermediate Japanese or have an equivalent background. Recommended Preparation: Japn 202 or equivalent.

Japn 302 Japanese Writing (3 cr)
Emphasis on the development of writing skills at the advanced intermediate level; emphasis on grammar, sentence structure, style, tone, and vocabulary usage. For students who have completed four semesters of elementary and intermediate Japanese or have an equivalent background. Recommended Preparation: Japn 202 or equivalent.

Japn 303 Japanese Speaking (3 cr)
Emphasis on the development of speaking skills at the advanced intermediate level; focus on utilizing honorific, modest, and respect expressions. For students who have completed four semesters of elementary and intermediate Japanese or have an equivalent background. Recommended preparation: Japn 202 or equivalent.

Japn 404 (s) Special Topics (cr arr)

Japn 499 (s) Directed Study (cr arr)

Journalism and Mass Media Courses

R. Kenton Bird, Director, School of Journalism and Mass Media (347 Admin. Bldg. 83844-3178; phone 208/885-6458).

Note: See School of Journalism and Mass Media requirements for eligibility requirements for registration in upper-division courses.

Prerequisite: JAMM 100 and JAMM 121 must be completed with a grade of C or better before enrolling in any other Journalism and Mass Media courses.

JAMM 100 Media and Society (3 cr)
Overview of mass communication: history and structure of media organizations; the political, economic and social context of media; legal and ethical considerations; media literacy; cultural approaches to mass communication research.

JAMM 121 Media Writing (3 cr)
Basic principles of writing for print, broadcast and online media; skills in identifying and evaluating credible information. Two 2-hr lec-labs a wk. Recommended Preparation: Ability to type.
Prereq: *Engl 102 and JAMM 100 with a grade of 'C' or better*

JAMM 201 Practicum (1 cr, max 3)
Graded P/F.

ID 152 Interior Design I (3 cr)
Study of the relationship of design theories to the interior environment; exploration, through a variety of media, of the elements and principles of design, with emphasis on spatial relationships and color theory. Focus of design problems is residential design and small-scale contract design. Attendance at outside events; some class critique sessions outside of scheduled hours at student expense.
Prereq: ID 151 or Permission
Coreq: Arch 154

ID 200 (s) Seminar (cr arr)

ID 203 (s) Workshop (cr arr)

ID 204 (s) Special Topics (cr arr)

ID 254 Basic Architectural Design II (4 cr)
See Arch 254.

ID 281 History of Interiors I (3 cr)
Survey of historical interiors and furnishings from antiquity to the industrial revolution.

ID 282 History of Interiors II (3 cr)
Survey of historical interiors and furnishings form the industrial revolution to the present.
Prereq: ID 281 or Permission

ID 299 (s) Directed Study (cr arr)

ID 332 Furniture Design and Construction (3 cr)
Theory and application of furniture design and construction emphasizing the continuing development of three-dimensional design skills and attention to physical detail; aspects of structure, ergonomics, and aesthetics are addressed in process of designing and constructing furniture pieces. One and one-half hrs of lec and 3 hrs of lab a wk. Recommended Preparation: ID 281, 282.
Prereq or Coreq: ID 351 or Permission

ID 351 Interior Design III (6 cr)
Sequence of advanced residential and small scale contract design projects requiring integration of design theories and process in relationship to critical problem solving. Emphasis on formation of interior spaces to correspond to function and flow patterns. Nine hours of studio a week; field trips reqd at student expense; some class jury sessions outside of scheduled hours.
Prereq: ID 152 and 254 or Permission

ID 352 Interior Design IV (6 cr)
Sequence of large scale contact and other design problems requiring application of expanded design process including problem identification, analysis, program development, conceptual and design development and solution presentation. Implementation of lighting, codes, systems furniture, and interior specifications in the design process. Nine hours of studio a week; field trips required at student expense; some class jury sessions outside of scheduled hours.
Prereq: ID 351

ID 368 Materials and Specifications (3 cr)
In-depth study of interior finishes, materials, and products; emphasis on performance characteristics, manufacturing methods, testing, codes, specifications, and professional liability. Field trips required at student expense. Recommended Preparation: FCS 123.

ID 400 (s) Seminar (cr arr)

ID 403 (s) Workshop (cr arr)

ID 404 (s) Special Topics (cr arr)

ID 410 Capstone Proposal Development (1 cr)
Capstone Studio proposal development requiring systematic approach to the development of project proposal in preparation for ID 452. 8 week course/1 credit hour course.
Coreq: ID 451

ID 443 Universal Design (3 cr)
Introduction to and application of universal design and accessible design concepts, principles, products, standards, laws, regulations, and guidelines to the design and adaptation of the built environment. Attendance at outside events (such as lectures, simulations, and completion of a service learning component) is required. One and a half hours lecture and 3 hours arranged. Recommended Preparation: ID 254 or Arch 254.

ID 451 Interior Design V (6 cr)
Advanced problems in mixed use contract interior design requiring synthesis of related course work into comprehensive design resolution that communicates design impact on sense of place and place making; projects will seek to refine the design decision making process by requiring in-depth programming, client participation, and development beyond schematic phases, e.g., integration of building systems, lighting design, interdisciplinary investigation, and understanding of cultural/environmental context. Nine hrs of studio a wk and assigned work; field trips reqd at student expense; some class jury sessions will meet outside of scheduled hours. Recommended Preparation: Arch 244 and ID 443.
Prereq: ID 352

ID 452 Interior Design VI (6 cr)
Capstone studio course featuring advanced applications of design theories and processes focusing on complex design issues, synthesis and implementation of previous course work in appropriate student selected project, from the initial programming through the final complete design documentation and presentation. Nine hrs of studio a wk and assigned work; field trips required at student expense; some class jury sessions will meet outside of scheduled hours.
Prereq: ID 410 and ID 451

ID 498 (s) Internship (cr arr)

ID 499 (s) Directed Study (cr arr)

International Studies Courses

Brian Ellison, Director, Martin School of International Studies (338 Admin. Bldg. 83844-3177; phone 208/885-6527).

IS 195 International Studies Freshman Seminar (3 cr)
Introductory course recommended of all International Studies majors in their freshman year. Focuses on introducing interdisciplinary training in global, regional, and issue emphases through oral and written presentations. (Spring only)

IS 200 (s) Seminar (cr arr)

IS 203 (s) Workshop (cr arr)

IS 204 (s) Special Topics (cr arr)

IS 210 Researching International Issues (3 cr)
This course permits students to further hone their disciplinary knowledge through a combination of directed study and roundtable discussions.
Prereq: IS 195

IS 299 (s) Directed Study (cr arr)

IS 310 The United Nations (3 cr)
Overview of principle UN agencies and current UN activities; emphasis on written and oral presentations through resolution and position paper writing, negotiations, and small group discussions. (Fall only)

IS 320 Model United Nations (2 cr)
Advanced preparation for IS 310 members selected to attend the National MUN Conference in New York; emphasis on a particular country and region through study of political, social, and economic indicators, policy goals, and bloc negotiations. (Spring only)
Prereq: IS 310

IS 321 UN and Related Agencies (1 cr)
Companion course to IS 320, this course permits students to further hone their knowledge of a particular UN or related agency through a combination of directed study and roundtable discussions.
Coreq: IS 320

IS 322 International Environmental Organizations (3 cr)
Overview of principle international environmental agencies and their current activities, with an emphasis on the UN Environment Programme and the organizations which oversee major environmental treaties.

IS 323 International Monetary and Trade Organizations (3 cr)
Explores the interaction of countries and international economic/financial institutions, with focus on the political questions that arise from said interaction and organizational policies, the effect of and the conditions for cooperation in international trade and finance, and related legal questions from the treaties that govern this type of cooperation. Recommended Preparation: Econ 201 and PolS 237 or IS 310.

ISem 301 (s) Great Issues Seminar (1 cr)
Open only to students who have earned at least 26 credits (sophomore status), the Great Issues Seminars are interdisciplinary courses typically linked with an annual signature event of the university (e.g., Bellwood Lecture, Borah Symposium, Runstad Lecture, Jazz Festival) that integrate the university learning outcomes and general education goals with a critical examination of the great issues topic. Attendance at an event may be required. See www.webs.uidaho.edu/core for specific course titles and descriptions.
Prereq: Engl 102 and Sophomore Standing

Interdisciplinary Studies Courses

Debbie Storrs, Undergraduate Program Coordinator (112 Admin. Bldg. 83844-3154; phone 208/885-4561); Margrit von Braun, Graduate Program Coordinator (104 Morrill Hall 83844-3017; phone 208/885-6243).

Intr 101 (s) Focus on Success (1-3 cr, max 6)
Develop strategies to help you meet the demands of college-level course work. Includes goal setting, study skills, learning strategies, time management, effective communication skills. This course will introduce you to University requirements and resources, and help you integrate into the academic and social environment at the UI.

Intr 200 (s) Seminar (cr arr)

Intr 201 Major/Career Exploration & Decision Making (1 cr)
Students are taken through the career decision-making process. Through career assessments, occupation & industry research, and informational interviews, students will learn about themselves and explore possible careers in order to narrow down their options and make informed major and career decisions.

Intr 204 (s) Special Topics (cr arr)

Intr 210 Life Skills for Student Athletes (2 cr)
This course supports the development of a well-balanced lifestyle for student-athletes, encouraging emotional well-being, leadership, personal growth and decision-making skills. Upon completion of the course the student-athlete will: 1. Understand the guidelines and resources available for academic success; 2. Take personal responsibility for actions, behaviors and pursuing goals; 3. Effectively manage your time within the constraints of a busy academic schedule; 4. Consistently demonstrate successful classroom behavior, study habits, and test taking skills; 5. Make informed and educated decisions regarding health issues; 6. Learn to prepare nutritious and inexpensive meals; 7. Appreciate the meaning of diversity and culture; 8. Understand how to manage your personal finances; 9. Choose the correct major and identify possible career choices; and 10. Demonstrate the understanding of a service learning experience.

Intr 299 (s) Directed Study (cr arr)

Intr 316 Explore Mentoring & Leadership (3 cr)
Same as OrgS 317, Psyc 317 and Soc 316. Through the study of both mentoring as well as leadership, this course will prepare students to become effective mentors, citizens and members of the larger community. The course will cover a broad range of topics including: mentoring skills; leadership language, theory and style; communication and conflict; social justice and multiculturalism; values and ethics; and social change.

Intr 400 (s) Seminar (cr arr)

Intr 401 Career and Leadership Development (2 cr)
Provides students with information, resources and tools to help them explore careers, set goals, and make informed educational and career choices. Students will enhance their leadership skills, explore abilities, interests, and values in preparation to excel in the post-graduation world. A main focus of the class will be identifying and assessing strengths, direct and transferable skills students possess, and how to market and effectively communicate the value such skills bring to an organization, graduate program or employer post-graduation. Senior experience seminar for students in general studies and interdisciplinary studies.
Prereq: Junior standing or higher

Intr 404 (s) Special Topics (cr arr)

Intr J410/J510 Responsible Research Conduct (1 cr)
Responsible conduct of research training is required for all undergraduate, graduate and post-doctoral scholars funded on NIH or NSF grants. This course meets the NIH and NSF requirements and reviews regulations, policies, resources related to research misconduct, conflict of interest, ethics, human participants, animal welfare, biosafety, export control, data acquisition (ownership, sharing, management), mentor/mentee relationships, collaborations, and publication practices and responsible authorship.

Intr 450 Interdisciplinary Colloquium (1 cr, max 6)
This course meets in conjunction with the Malcolm Renfrew Interdisciplinary Colloquium, a campus-wide speaker series that meets weekly on Tuesdays during the Fall and Spring semesters. The presentations concern various aspects of teaching and research on campus, and are delivered by faculty and staff from across the university. Attendance at the presentations is required, and students are expected to submit their class notes and reaction essays for each presentation at the end of the semester. Graded Pass/Fail.

Intr 491 College of Letters, Arts, and Social Sciences Ambassadors (1 cr, max 2)
Student ambassadors are selected through an application and interview process. Students will learn skills in leadership, communication, networking, public speaking and time management. Students will be responsible for representing the College of Letters, Arts and Social Sciences in various recruiting activities and events.

Intr 494 (s) Service Practicum (1-9 cr, max 9)
This practicum provides students with an extended, hands-on, service learning experience followed by a significant reflection activity. Graded Pass/Fail.
Prereq: Permission of Instructor

Intr 495 Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision.
Prereq: Permission

Intr 499 (s) Directed Study (cr arr)

Intr 500 Master's Research and Thesis (cr arr)

Intr 501 (s) Seminar (cr arr)

Intr 502 (s) Directed Study (cr arr)

Intr 503 (s) Workshop (cr arr)

Intr 504 (s) Special Topics (cr arr)

Intr 508 Teaching and Learning Strategies for International Teaching Assistants (1 cr)
This course is designed to help International Teaching Assistants become better teachers and facilitators of student learning . The course will include mentoring through classroom teaching and observation sessions. Graded Pass/Fail.

Intr 510 Responsible Research Conduct (1 cr)
See Intr J410/J510.

Engl 522 Communication for Science Professionals (3 cr)
See Engl 522.

Intr 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Interior Design Courses

Shauna J. Corry, Interior Design Program Chair (207 Art and Arch. South 83844-2451; phone 208/885-6781).

Note: On registering for a studio course offered in this department, the student agrees that the department may retain work completed by the student. The department will make retained work available to the student for photographing.

ID 151 Introduction to Interior Design (3 cr)
Introduction to interior design theory and process. Explores transdisciplinary design issues and relationships; emphasis areas include basic design theories, vocabulary, and sustainability of the built environment. Attendance at outside events (such as lectures and symposiums) is required.

IndT 442 Systems Integration (3 cr)
This course is designed to provide students with an understanding of Systems Integration (SI) processes, approaches, drivers, tools and techniques required for successful SI, critical success factors, and best practices. The objective of the course is to provide the students an understanding of the technical and business process issues involved in systems integration. Systems integration process is illustrated over the life cycle concept of projects - during design, development, implementation, testing and production. Recommended preparation: completed general education requirements.
Prereq: IndT 310

IndT 444 Quality Assurance Organization and Management (3 cr)
Industrial management principles applied to effective economic control of quality assurance activities. Recommended preparation: completed general education requirements.
Prereq: IndT 310; and Stat 251 or Stat 301

IndT 443 Government Contract Law (3 cr)
Contract formation, and contract administration pertaining to government contracts. Recommended preparation: completed general education requirements and IndT 310.

IndT 446 Labor Law (3 cr)
Practical legal considerations in employer/employee relationships, including union contracts. Recommended preparation: completed general education requirements and IndT 310.

IndT 448 Project and Program Management (3 cr)
This course addresses the project/program life-cycle. It defines projects and programs, and the roles and responsibilities of project and program managers. Students are introduced to the related, but differing, techniques for project/program planning (work structuring, budgeting, scheduling, resource allocation), and execution (monitoring, control, auditing, closure).
Prereq: Stat 251 or Stat 301

IndT 453 Computer Integrated and Robotics Manufacturing Technology (3 cr)
In-depth examination and implementation of advanced computer aided drafting, 3D solids modeling, computer numerical control, basic and advanced toolpath generation, virtual machining environments, and robotics applications. Enrollment per section limited to lab stations available. Recommended preparation: completed general education requirements.
Prereq: IndT 353 or Permission

IndT 457 Lean to Green Sustainable Technology (3 cr)
Lean production and lean manufacturing refer to the use of systematic methods to reduce costs by eliminating wastes and nonvalue-added activities, while delivering what the customer wants, on time. Even without explicitly targeting environmental outcomes, lean efforts can yield substantial environmental benefits. Recommended preparation: completed general education requirements.
Prereq: IndT 353 or Permission

IndT 462 Industrial Safety (3 cr)
Overview of industrial safety and health in business and industry. Includes Program Organization, Hazard Information, and Program Implementation. Recommended preparation: completed general education requirements.
Prereq: IndT 362

IndT 463 Industrial Transportation Safety (3 cr)
Principles of safety in all aspects of industrial transportation; roads, railroads, air, water, pipeline.

IndT 464 Human Performance Fundamentals (3 cr)
Introduction to the factors that control and influence human performance. Explore the basis of individual and leader behaviors as well as organizational processes and values that either lead to or prevent error. Fundamental knowledge of human and organizational behavior is emphasized so that the manager, supervisor, and worker can better handle error-provoking work situations to prevent human error and work-place events. Recommended preparation: completed general education requirements.
Prereq: IndT 362

IndT 465 Construction Safety (3 cr)
Major components of construction health and safety, including hazards, law, written programs, implementation, control and behavior.

IndT 466 Human Performance Field Investigation (3 cr)
Provides education in the area of participating in an investigation of an incident that has a significant human contribution. Principles of the old view of human error - the problems it holds, the traps it represents, and the temptations that can make one fall into them. The new view of human error in which human error is the starting point for an investigation. Reconstruct the human contribution to system failure and "reverse engineer" the evolving mindset of personnel who were caught up in an event. Investigate the biases and difficulties in understanding past behavior associated with system failure. Recommended preparation: completed general education requirements.
Prereq: IndT 464

IndT 468 Applied Research in Human Performance (3 cr)
Course will provide students the opportunity to apply Human Performance principles in a research setting. Recommended preparation: completed general education requirements.
Prereq: IndT 466

IndT 469 Safety Management through LEAN Engineering Methods (3 cr)
LEAN engineering is the relentless pursuit of eliminating waste. This course incorporates a lean strategy applied to safety. The course provide student with management skills to find and correct work place hazards through the integration of LEAN principles and ergonomic solutions. Recommended preparation: completed general education requirements.
Prereq: IndT 353 and IndT 462; or Permission

IndT 470 Homeland Security (3 cr)
This course will provide students with a basic understanding of terrorism involving Weapons of Mass Destruction (WMD) (e.g. biological, nuclear, incendiary, chemical, radiological, and explosive devices). The history of WMD/Terrorism and how it relates to modern day devices and concepts will be discussed. The students will gain an understanding of International terrorism and homegrown terrorists. Recommended preparation: completed general education requirements.

IndT 472 National Incident Management Systems (3 cr)
This course is designed to increase the participants' knowledge and understanding of the inherent flexibility of the Incident Command System to manage major or complex incidents. Utilizing lectures and small group activities, participants will acquire an in-depth knowledge of the National Incident Management System (NIMS), terminology, players, and management philosophy. Participants will also acquire the ability to organize and manage major or complex incidents. The material covered during the course includes command and general staff duties and responsibilities, unified command, major incident management and area command structures. Recommended preparation: completed general education requirements.

IndT 484 Industrial Technology Capstone I (2 cr)
This course is the first of two capstone courses. The students will select and develop a project that applies technology to a problem. Students are encouraged to incorporate service learning into the project and work in teams. Course will have 1 lecture hours and 2, 3 hour labs each week. Recommended preparation: senior standing.
Prereq: IndT 442, and IndT 444

IndT 485 Industrial Technology Capstone II (2 cr)
This course is second of the two capstone courses. The students will develop their project that applies technology to a problem. Students are encouraged to incorporate service learning into the project and to work in teams. Course will have 1 lecture hours and 2, 3 hour labs each week. Recommended preparation: senior standing.
Prereq: IndT 442, and IndT 444

Integrated Seminar Courses

Rodney Frey, Director of General Education (Phinney Hall 116; phone 885-6268; rfrey@uidaho.edu).

ISem 101 (s) Integrated Seminar (3 cr)
An interdisciplinary, thematically based course, intended to introduce students beginning their university experience to a variety of humanities and social science disciplines and perspectives on topics of broad interest; all themes/sections emphasize discussion and frequent student-faculty and student-student interactions; each includes attention to issues of critical thinking, diversity, and methods of inquiry. Open to first year students only.

Hydr 496 Hydrogeology Senior Thesis (3 cr)
Completion of original research and report. Course is taken over two semesters; first semester is graded IP until completion of second semester.
Prereq: Geol 309 or Hydr 409/509 and Geol 410

Hydr 500 Master's Research and Thesis (cr arr)

Hydr 501 (s) Seminar (cr arr)
Graded P/F.
Prereq: Permission

Hydr 502 (s) Directed Study (cr arr)

Hydr 503 (s) Workshop (cr arr)

Hydr 509 Quantitative Hydrogeology (3 cr)
See Hydr J409/J509.

Hydr 512 Environmental Hydrogeology (3 cr)
See Hydr J412/J512.

Hydr 514 Ground Water-Surface Water Interaction (3 cr)
See Hydr J414/J514.

Hydr 564 The Geochemistry of Natural Waters (3 cr)
See Geol J464/J564.

Hydr 568 Aquifer Test Design and Analysis (3 cr)
Analysis of single and multiple well aquifer tests in a range of hydrogeologic environments. Additional projects/assignments required for graduate credit.

Hydr 576 Fundamentals of Modeling Hydrogeologic Systems (3 cr)
Development and application of models representing physical systems, with particular emphasis on ground water flow. Development and solution of the basic equations of potential flow will be covered, along with their assumptions and limitations. Properties assignment, parameter sensitivity, and dimensional analysis will also be discussed. The course will emphasize when modeling is appropriate, how to design a model, and how properties should be selected to achieve meaningful results.
Prereq: Math 275 or Permission

Hydr 598 (s) Internship (cr arr)

Hydr 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Industrial Technology Courses

Lee Ostrom, Program Coordinator (1776 Science Center Drive, Ste 306, Idaho Falls, ID. 83402; 208-282-7903; ostrom@uidaho.edu).

IndT 200 (s) Seminar (cr arr)

IndT 310 Introduction to Industrial Technology (3 cr)
This course presents an overview of the careers that comprise the field of industrial technology and the courses and curriculum for the degree. Topical areas include; the concept of technology, overview of materials and manufacturing, safety science, network technology, electricity and electronics, automation and robotics, energy technologies, and nuclear technology. Recommended preparation: completed general education requirements.
Prereq: Math 160 or Math 170

IndT 311 Problems in Industrial Technology (1 cr)
Students will develop a project applying technology to a National Academy of Engineering Challenge Problem. Recommended preparation: completed general education requirements.
Prereq: IndT 310

IndT 332 Introduction to Analog and Digital Electronics (4 cr)
Introduction to the fundamental laws of electrical engineering, circuit analysis - D.C. and A.C. circuits-R-L and C elements - series and parallel circuits; D.C. and A.C. machines, Transformers, and Electrical measurements. Digital electronics: number system and codes; logic gates; Boolean algebra; ALU; introduction to CMOS.
Prereq: IndT 310 or Permission

IndT 333 Industrial Electronics and Control Systems (3 cr)
Introduction to Control Systems: Fundamentals of programmable logic controllers. Logic concepts, Processing unit, input/output systems, peripheral devices, programming techniques, applications and interfacing. Recommended preparation: completed general education requirements.
Prereq: IndT 332 or Permission

IndT 350 Introduction to Materials Science (3 cr)
Introduction to the fundamentals and applications of materials engineering. Atomic, molecular, and crystalline structures and properties of materials with their relevance to engineering. Topics will include: diffusion, defects, phase diagrams, heat treatment, mechanical behavior, and will cover the different materials classes, i.e., metals, ceramics, polymers, composites, and semiconductors.
Prereq: IndT 310 or Permission

IndT 353 Manufacturing Systems (3 cr)
Introduction to manufacturing processes, mechanical and physical properties of materials, and solidification processes. Metal forming, materials removal processes, property enhancing, Joining and Assembly processes, and surface processing operations. Manufacturing systems, automation, and integrated manufacturing systems. Recommended preparation: completed general education requirements.
Prereq: IndT 350 or Permission

IndT 362 Behavior Based Safety (3 cr)
Principles of paradigm shifts required for total safety, human barriers to safety, the basic principles of behavior-based psychology and behavioral safety analysis and behavior-based interventions.
Prereq: Psyc 101

IndT 364 Hazardous Materials (3 cr)
Handling, transportation, and storage of hazardous materials; how to protect and suppress fires that occur in hazardous materials. Recommended preparation: completed general education requirements and INDT 310.
Prereq: Chem 112; and Math 160 or Math 170

IndT 407 Technical Competency Credits (1-24 cr, max 24)
Technical competence is gained from occupational credentials or passing of competency exams related to the bachelor of science degree in Industrial Technology. Grades for successful completion of IndT 407 will be recorded as P (pass) normally during the student's last semester and completion of all degree requirements.
Prereq: IndT 485

IndT 415 Impact of Technology on Society (3 cr)
In-depth examination of the impact technology has had and will continue to have on society. Recommended preparation: completed general education requirements.
Prereq: IndT 310 or Permission

IndT 434 Power Generation and Distribution (3 cr)
Conventional & Non-Conventional methods - comparison of sources of energy. Growth & future trends in power systems; Hydroelectric, Nuclear, and Gas Turbine power plants - merits & demerits; selection of site. Effect of system voltage on transmission efficiency, circuit breakers, kelvin's Law; radial, ring main systems - different types of DC & AC distributors with concentrated loads. Recommended preparation: completed general education requirements.
Prereq: IndT 332 or Permission

IndT 435 Network Administration (3 cr)
This course provides students with the instruction necessary to install, configure, and troubleshoot a computer network. This course introduces current networking standards, the OSI Model, various protocols and topologies, the interconnections between various hardware components, network operating systems, DNS, DHCP, TCP/ IP, Ethernet, wired and wireless transmission, and security.
Prereq: Math 160 or Math 170; and IndT 310

Hist J484/J584 Modern China, 1840s to Present (3 cr)
Last century of Qing dynasty, 1911 Revolution and Republican experiment, Revolution of 1949, and People's Republic of China.

Hist J485/J585 Chinese Social and Cultural History (3 cr)
Survey of Chinese culture and traditions during the first millennium. Additional assignment/projects required for graduate credit.

Hist 495 History Senior Seminar (3 cr)
Directed research in primary and secondary sources, culminating in substantial research paper. Course themes and instructor will vary semester to semester.
Prereq: Hist 290 or equivalent

Hist 499 (s) Directed Study (cr arr)

Hist 500 Master's Research and Thesis (cr arr)

Hist 501 (s) Seminar (cr arr)
See Hist J401/J501.

Hist 502 (s) Directed Study (cr arr)

Hist 504 (s) Special Topics (cr arr)

Hist 511 Colonial North America, 1492-1763 (3 cr)
See Hist J411/J511.

Hist 512 Revolutionary North America and Early National Period, 1763-1828 (3 cr)
See Hist J412/J512.

Hist 516 Rise of Modern America, 1877-1919 (3 cr)
See Hist J416/J516.

Hist 517 United States, 1919-1960 (3 cr)
See Hist J417/J517.

Hist 518 Recent America, 1960-Present (3 cr)
See Hist J418/J518.

Hist 519 (s) Topics in the American West (3 cr)
See Hist J419/J519.

Hist 520 History of Women in American Society (3 cr)
See Hist J420/J520.

Hist 523 Idaho and the Pacific Northwest (3 cr)
See Hist J423/J523.

Hist 524 American Environmental History (3 cr)
See Hist J424/J524.

Hist 528 History of the American West (3 cr)
See Hist J428/J528.

Hist 530 U.S. Diplomatic History (3 cr)
See Hist J430/J530.

Hist 531 Stolen Continents, The Indian Story: Indian History to 1840 (3 cr)
See Hist J431/J531.

Hist 539 Modern Latin America (3 cr)
See Hist J439/J539.

Hist 541 Slavery and Freedom in the Americas (3 cr)
See Hist J441/J541.

Hist 542 The Medieval Church: Europe in the Early and High Middle Ages (3 cr)
See Hist J442/J542.

Hist 543 The Medieval State: Europe in the High and Late Middle Ages (3 cr)
See Hist J543/J543.

Hist J445/J545 Medieval English Constitutional and Legal History: 1066-1485 (3 cr)
See Hist J445/J545.

Hist 547 The Renaissance (3 cr)
See Hist J447/J547.

Hist 548 The Reformation (3 cr)
See Hist J448/J548.

Hist 549 Tudor-Stuart Britain 1485-1660 (3 cr)
See Hist J449/J549.

Hist 552 Europe in the Age of the Revolution, 1770-1880 (3 cr)
See Hist J452/J552.

Hist 555 Modern Europe (3 cr)
See Hist J455/J555.

Hist 557 History of the Middle East (3 cr)
See Hist J457/J557.

Hist 558 Military History (3 cr)
See Hist J458/J558.

Hist 560 Conspiracies and Secret Societies in History (3 cr)
See Hist J460/J560.

Hist 566 Eastern Europe Since 1774 (3 cr)
See Hist J466/J566.

Hist 567 Russia to 1894 (3 cr)
See Hist J467/J567.

Hist 568 Russia and Soviet Union Since 1894 (3 cr)
See Hist J468/J568.

Hist 581 America's Wars in Asia (3 cr)
See Hist J481/J581.

Hist 582 Japan, 1600 to Present (3 cr)
See Hist J482/J582.

Hist 584 Modern China, 1840s to Present (3 cr)
See Hist J484/J584.

Hist 585 Chinese Social and Cultural History (3 cr)
See Hist J485/J585.

Hist 597 Practicum: Teaching College History (1 cr, max 4)
Required for graduate students assigned to survey course sections. Does not satisfy 78-cr requirement for doctorate. Graded P/F.
Prereq: Permission of department chair

Hist 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Hist 600 Doctoral Research and Dissertation (cr arr)

Hydrology Courses

Mickey E. Gunter, Dept. Chair of Geological Sciences (322 Mines Bldg. 83844-3022; phone 208/885-6192).

Hydr 404 (s) Special Topics (cr arr)

Hydr J409/J509 Quantitative Hydrogeology (3 cr)
A rigorous introduction to the description of flow in porous media; the basic equations of potential flow theory as they relate to ground water problems, with application to common engineering problems encountered by hydrogeologists and engineers; dimensional analysis, properties assignment, and heterogeneous systems. For graduate credit additional reading, presentations, and/or written reports of assigned literature required.
Prereq: Math 275, Stat 251 or 301

Hydr J412/J512 Environmental Hydrogeology (3 cr)
Methods of hydrogeologic site characterization for the delineation of environmental problems such as contaminated ground water plumes, and ground water dewatering for landslide remediation. For grad credit, students are required to complete an additional independent research paper/project.
Prereq: Geol 309

Hydr J414/J514 Ground Water-Surface Water Interaction (3 cr)
Physical and chemical ramifications of interactions between ground water flow systems and surface water bodies. Particular emphasis will be placed on water supply and surface water/ground water contamination issues. Graduate credit requires completion of an additional, separate research paper on a selected topic. (Alt/yrs)
Prereq: Geol 309 or Hydr 409

ly, the examination of the popular representations of piracy across a similar period. Additional work required for graduate credit.

Hist J423/J523 Idaho and the Pacific Northwest (3 cr)
Political, economic, social development; earliest times to the present.

Hist J424/J524 American Environmental History (3 cr)
History of changing American attitudes and actions toward the environment over three centuries.

Hist 425 Immigration and Ethnicity in the United States (3 cr)
Survey of the history of American immigration from the era of colonization to the present. Course will investigate the process of immigration and adaptation to life in the United States, as well as the reaction to immigrants by native-born Americans. Course will consider how immigrants fit within the larger framework of American identity and help define what it means to be "American." Recommended preparation: Hist 111 and Hist 112. (Alt/yrs)

Hist J426/J526 Red Earth White Lies: American Indian History 1840-Present (3 cr)
Hist 426 same as AIST 426. Survey 1840 to present; dynamics and themes of Indian history with emphasis on Indian-White relations in the U.S. Additional work required for graduate credit.

Hist J428/J528 History of the American West (3 cr)
Spanish beginnings, Anglo-French expansion, the American occupancy, 1540 to present.

Hist J430/J530 U.S. Diplomatic History (3 cr)
World power through war and the quest for peace, 1898 to present.

Hist J431/J531 Stolen Continents, The Indian Story: Indian History to 1840 (3 cr)
Hist 431 same as AIST 431. Survey 1400 to 1840; dynamics and themes of Indian history with emphasis on Indian-White relations in the U.S. Additional work required for graduate credit.

Hist 438 Modern Mexico and the Americas (3 cr)
Hist 438 same as LAS 438. Survey and analysis of political, economic, social, and cultural aspects from independence to present; emphasis on Iberian and Amerindian legacies, economic development, relations with U.S., and social revolution of 1910-1920.

Hist J439/J539 Modern Latin America (3 cr)
Hist 439 same as LAS 439. Political, economic, social, and cultural development; search for stability; growth of nationalism.

Hist 440 Social Revolution in Latin America (3 cr)
Hist 440 same as LAS 440. Analysis and comparison of 20th-century social revolution in selected Latin American countries: Cuba and two others; emphasis on origins of movements for social change, economic development issues, impact of the revolutions, and relations between new governments and the U.S.

Hist J441/J541 Slavery and Freedom in the Americas (3 cr)
Hist 441 same as LAS 441. Analysis of the way in which African slavery became the predominant labor force in the Americas from 16th century to 19th century. Emphasis on slave resistance and the international abolitionist movement. (1760s to 1888). Additional assignment/projects required for graduate credit.

Hist J442/J542 The Medieval Church: Europe in the Early and High Middle Ages (3 cr)
Evolution of medieval Christian society from reign of Constantine (c. 300) to pontificate of Innocent III (1215), as expressed in monastic and mendicant orders, crusades, 12th-century Renaissance, and heresy.

Hist J443/J543 The Medieval State: Europe in the High and Late Middle Ages (3 cr)
Hist 443 same as RelS 443. Analysis of how the vitality of particular medieval princes, of the commercial revolution, and of such movements as development of common law was harnessed in the evolution of medieval government from feudalism to the modern state.

Hist J445/J545 Medieval English Constitutional and Legal History: 1066-1485 (3 cr)
The study of the origins and development of English law and the English constitution during the Middle Ages. Additional projects/assignments required for graduate credit.

Hist J447/J547 The Renaissance (3 cr)
Hist 447 same as RelS 447. Explores the transformative movement known as the European Renaissance. Examines how humanism not only shaped and formed art, music, literature and philosophy but also informed one's relationship to the state. Additional projects/assignments required for graduate credit.

Hist J448/J548 The Reformation (3 cr)
Hist 448 same as RelS 448. This course examines the social and economic as well as the theological dynamic of the Reformation. The course begins by examining the thought of Erasmus and More, continuing through that of Luther, Calvin, and Loyola, to the Anabaptists. Religious upheaval lead not only to the political and military upheaval of the Religious Wars, but also to religious debate, the echoes of which resound through to the present. Additional projects/assignments required for graduate credit.

Hist J449/J549 Tudor-Stuart Britain 1485-1660 (3 cr)
This course examines the brilliance of the 1485-1660 period in British history. It is organized around three themes: the religious revolution and its consequences; the transformation of personal government of dynasties into Parliamentary government; and the cultural, social and economic ramifications that both drove and was driven by these movements. Recommended Preparation: Hist 371. Additional assignment/projects required for graduate credit.

Hist J452/J552 Europe in the Age of the Revolution, 1770-1880 (3 cr)
The social, political, and cultural dimensions of revolutions of 1789, 1830, 1848, and 1870; impact of industrial revolution upon daily life; process of European nation-building; new ideologies of liberalism, socialism, conservatism, and romanticism. Additional work required for graduate credit.

Hist J455/J555 Modern Europe (3 cr)
The political, social and economic evolution of Europe, from the Atlantic to the Urals, since the beginning of the 20th century.

Hist 456 Anti-Semitism and the Holocaust (3 cr)
The roots and character of European anti-Semitism from the Roman Empire to the Nazis and beyond; special focus on the Third Reich and World War II.

Hist J457/J557 History of the Middle East (3 cr)
Survey of the Middle East from the beginning of the Islamic period to the present.

Hist J458/J558 Military History (3 cr)
Survey of military history from ancient times to present; emphasis on interrelationship of war, society, and technology.

Hist J460/J560 Conspiracies and Secret Societies in History (3 cr)
The notion that human affairs are shaped by conspiratorial and occult forces bent on the achievement of secret agendas has attained wide currency. The idea that the world is governed by powerful, unseen forces has a long history that this course will explore. Additional work required for graduate credit. Recommended preparation: Hist 101 and 102. (Alt/yrs)

Hist J466/J566 Eastern Europe Since 1774 (3 cr)
Nationality, nation-building, and dissolution; emphasis on Poland, the Habsburg Empire, and the Balkans.

Hist J467/J567 Russia to 1894 (3 cr)
Russia from medieval origins to 1894; development of Tsarist autocracy and serfdom; reaction, reform, and rise of the revolutionary movements.

Hist J468/J568 Russia and Soviet Union Since 1894 (3 cr)
The last years of Tsarism; revolutions of 1905 and 1917; development of the Soviet Union under Lenin, Stalin, and their successors.

Hist J481/J581 America's Wars in Asia (3 cr)
Focus on the three wars the United States fought in Asia between 1941 and 1975—the Pacific Theatre of World War II, the Korean War, and the Vietnam War. Emphasis on military, diplomatic, political, and cultural developments. Perspectives from all sides explored. Additional work required for graduate credit. Recommended preparation: Hist 111 and Hist 112. (Alt/yrs)

Hist J482/J582 Japan, 1600 to Present (3 cr)
Western impact on the political, cultural, and economic fabric of Japanese society.

H&S 501 (s) Seminar (cr arr)

H&S 502 (s) Directed Study (cr arr)

H&S 503 (s) Workshop (cr arr)

H&S 504 (s) Special Topics (cr arr)

H&S 505 (s) Professional Development (cr arr)
Credit earned in this course will not be accepted toward grad degree programs.
Prereq: Permission

H&S 523 School Health Education Methods and Administration (3 cr)
See H&S J423/J523.

History Courses

Sean M. Quinlan, Dept. Chair, Dept. of History (315 Admin. Bldg. 83844-3175; phone 208/885-6253).

Note: In jointly numbered courses, additional projects/assignments are required for graduate credit.

Prerequisite: Two-semester courses in this field may be taken in either order. Students may enroll in second-semester courses without having had the first. Ordinarily six lower-division credits in history are advised for registration in upper-division courses.

Hist 101 History of Civilization (3 cr)
Contributions to the modern world. Hist 101: to 1650.

Hist 102 History of Civilization (3 cr)
Contributions to the modern world. Hist 102: 1650 to present.

Hist 111 Introduction to U.S. History (3 cr)
Political, diplomatic, economic, social, and cultural history; earliest times to the present. Hist 111: to 1877.

Hist 112 Introduction to U.S. History (3 cr)
Political, diplomatic, economic, social, and cultural history; earliest times to the present. Hist 112: 1877 to present.

Hist 180 Introduction to East Asian History (3 cr)
Survey of traditional and modern Chinese and Japanese history.

Hist 200 (s) Seminar (cr arr)

Hist 270 Introduction to Greek and Roman Civilization (3 cr)
Same as FLEN 270. Survey of the development of Greek and Roman Civilization, 2000 BC-500 AD.

Hist 290 The Historian's Craft (3 cr)
Introduction to the discipline of history, basic skills for course work and research, and major schools of historical writing.

Hist 315 Comparative African-American Cultures (3 cr)
Same as LAS 315. An overview of African American history in the U.S. from the late 19th century to the present; comparisons with the experience of African Americans in other parts of the Americas; study of important personalities and historical forces that have influenced African Americans and the societies in which they live.

Hist 331 The Age of African Empires (3 cr)
Survey of the history of Africa south of the Sahara to 1800.

Hist 350 The Age of Enlightenment: European Culture & Ideas, 1680-1800 (3 cr)
History of thought, material culture, and mentalities in Enlightenment society; focus upon intersection between science and enlightenment values; new ideas about individualism, democracy, race, and gender.

Hist 357 Women in Pre-Modern European History (3 cr)
Survey of historical experience of women from the Greeks through the 17th century.

Hist 366 Modern European Cultural and Intellectual History, 1880-1980 (3 cr)
Evolution of major cultural attitudes and values in modern European society; relation between modernity and cultural modernism; the impact of war and revolution; key ideas and intellectual movements associated with Nietzsche, Freudianism, the avant-garde, existentialism, structuralism, and postmodernism.

Hist 371 History of England (3 cr)
Political, social, economic, and religious development of the British Isles. Hist 371: to 1688.

Hist 372 History of England (3 cr)
Political, social, economic, and religious development of the British Isles. Hist 372: 1688 to present.

Hist 380 Disease and Culture: History of Western Medicine (3 cr)
Survey of Western medicine from Antiquity to the present. Examination of changing theories of disease, the scientific study of the human body, evolution of medical practices and treatment, the institutionalization of medical practice, and the evolution of public health policy. (Alt/yrs)
Prereq: Junior standing or Permission

Hist 382 History of Biology: Conflicts and Controversies (3 cr)
Explores the social and intellectual development of the life sciences as a discipline in Europe and North America, with focus on biology in the 18th, 19th, and 20th centuries. Emphasis on evolutionary thought, heredity, development, social uses of biology, and women and gender. (Alt/yrs)
Prereq: Junior standing or Permission

Hist 388 History of Mathematics (3 cr)
See Math 388.

Hist 395 (s) Themes and Issues in History (3 cr, max 6)
Examines changing themes and issues in the historical discipline; emphasis on approaches and problems in historical research; key focus on research, reading, and writing in the historical field; content will vary according to instructor.
Prereq: Hist 290 or Instructor Permission

Hist J401/J501 (s) Seminar (cr arr)
Research papers in U.S., Latin American, ancient, English, or European history.
Prereq: Permission of department

Hist 404 (s) Special Topics (cr arr)

Hist J411/J511 Colonial North America, 1492-1763 (3 cr)
Native American societies; Spanish, French, and English colonization; international rivalries, 1492-1763.

Hist J412/J512 Revolutionary North America and Early National Period, 1763-1828 (3 cr)
Era of the American War of Independence; Confederation; Early Nationhood, 1763-1828.

Hist 414 (s) History and Film (3 cr, max 6)
The course focuses on the history of the Americas since 1900. Through readings, discussion and film, historical events and individuals are analyzed. Emphasis is placed on themes related to culture, race, gender, and historical memory.

Hist 415 Civil War and Reconstruction, 1828-1877 (3 cr)
Sectionalism, westward expansion, slavery, the Civil War and Reconstruction.

Hist J416/J516 Rise of Modern America, 1877-1919 (3 cr)
Industrial and economic development, political reform, populism, the progressive era, and World War I. Additional work required for graduate credit.

Hist J417/J517 United States, 1919-1960 (3 cr)
The Twenties, the Depression, the New Deal, World War II, becoming a world power, and the Cold War. Additional work required for graduate credit.

Hist J418/J518 Recent America, 1960-Present (3 cr)
America since 1960. Additional work required for graduate credit..

Hist J419/J519 (s) Topics in the American West (3 cr)
Special Topics in the American West. Additional work required for graduate credit.

Hist J420/J520 History of Women in American Society (3 cr)
Examination of the roles of women (social, economic, and political) in U.S. history from colonial times to the present.

Hist J421/J521 Pirates of the Caribbean and Beyond (3 cr)
The course will use the study of pirates and privateers to examine two main questions. Firstly, the role of pirates in the construction and collapse of empires from the Roman period to the present day and second-

H&S 200 (s) Seminar (cr arr)

H&S 203 (s) Workshop (cr arr)

H&S 204 (s) Special Topics (cr arr)

H&S 232 Medical Terminology (2 cr)
Intro to basic concepts of medical terminology and symbols related to medical and allied health professionals.

H&S 245 Introduction to Athletic Injuries (3 cr)
Special fee course. Athletic training; recognition, evaluation, general care of athletic injuries; adhesive strapping. Two lec and one lab a wk.

H&S 288 First Aid: Emergency Response (2 cr)
Emergency care of injuries resulting from accidents or illness; administration of oxygen and blood pressure measurements. Qualified students will be awarded two certificates: American Red Cross Emergency Response and American Red Cross CPR for the Professional Rescuer. Certification/lab fee reqd. Two lec and 1 hr of lab a wk.

H&S 289 Drugs in Society (2 cr)
Legal implications, values, and physical, social, and emotional factors involved in the use and abuse of drugs in society.

H&S 299 (s) Directed Study (cr arr)

H&S 350 Stress Management and Mental Health (2 cr)
Application of behavioral stress management techniques that have the potential to relieve mental and physical stress; emphasis on development of skills related to mental and physical health.

H&S 390 Athletic Training High School Clinical Experience (1 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in high school athletic training setting. Emphasis is on supervised clinical orthopedic/general medical conditions and disabilities, injuries and illnesses. Students receive supervised clinical experience in Athletic Training under the supervision of NATA Certified Athletic Trainers.
Prereq: Permission

H&S 391 Athletic Training Sports Medicine Clinical Experience (1 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in a sports medicine clinical setting. Emphasis is on evaluation and rehabilitation of clinical orthopedic conditions (injuries and disabilities). Students receive supervised clinical experience in Athletic Training under the supervision of NATA Certified Athletic Trainers, Physical Therapists and Exercise Physiologists.
Prereq: Permission

H&S 392 Athletic Training General Medical & Orthopedic Clinical Experience (1 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in a medical practice setting. Emphasis is on supervised clinical orthopedic/general medical conditions and disabilities, injuries and illnesses. Students receive supervised clinical experience in Athletic Training under the supervision of NATA Certified Athletic Trainers, Physicians, Physician Assistants, and Nurses.
Prereq: Permission

H&S 400 (s) Seminar (cr arr)

H&S 403 (s) Workshop (cr arr)

H&S 404 (s) Special Topics (cr arr)

H&S J423/J523 School Health Education Methods and Administration (3 cr)
Curriculum design, organization and administration, methods and strategies, and resource materials for teaching health in school health settings. Team leadership project and activity required for graduate credit. (Fall only)
Prereq: H&S 150 or MvSc 201

H&S 450 Critical Health Issues (3 cr)
Provides a sampling of information that represents the current and projected trends in health; students will gain an understanding of broad public health issues and what strategies would be useful to address these problems.
Prereq: Biol 120 and Biol 121; or MvSc 201

H&S 451 Psychosocial Determinants of Health (3 cr)
Investigates the social, emotional, intellectual, social, and spiritual factors influencing health behaviors. Emphasis is placed on understanding and evaluating the biopsychosocial model and the interrelation between one's physical, psychological, and social well being.
Prereq: MvSc 201

H&S 455 Design & Analysis of Research in Movement Sciences (3 cr)
See PEP 455.

H&S 462 General Medicine for Physically Active Individuals (1 cr)
This course covers the understanding, recognition, and treatment along with the appropriate referral process for general medical conditions and disabilities that the entry-level athletic trainer may encounter in the physically active population that they serve. Conditions are presented for the integumentary, cardiovascular, respiratory, endocrine, digestive, urinary, musculoskeletal, reproductive, nervous, and lymphatic/immunity systems. Relevant medical diagnostic testing and referral are also included.

H&S 463 Pharmacology for Physically Active Individuals (1 cr)
This course covers the knowledge, skills, and ethical basis that entry-level certified athletic trainers must possess in pharmacological applications, including awareness of the indications, contraindications, precautions and interactions of medications and the governing of the regulations relevant to the treatment of injuries to and illnesses of physically active individuals.

H&S 464 Athletic Training Lower Extremity Evaluation (3 cr)
Advanced lower extremity injury evaluation theory and techniques in athletic training.
Prereq: H&S 245, Admission into clinical portion of ATEP; or Permission

H&S 466 Athletic Training Upper Extremity Evaluation (3 cr)
Advanced upper extremity injury evaluation theory and techniques in athletic training. (Spring only)
Prereq: H&S 245, 464 and admission to the clinical portion of ATEP; or Permission

H&S 467 Athletic Training Rehabilitation (3 cr)
Advanced injury rehabilitation theory and techniques in athletic training. (Spring only)
Prereq: H&S 245, 466 and admission to the clinical portion of ATEP; or Permission

H&S 468 Athletic Training Modalities (3 cr)
Advanced theory and techniques of modality use in athletic training. (Fall only)
Prereq: H&S 245 and admission to the clinical portion of ATEP; or Permission

H&S 469 Athletic Training Organization and Administration (3 cr)
The organization and administration of athletic training programs.
Prereq: H&S 245, and admission to the clinical portion of ATEP; or Permission

H&S 470 Seminar in Athletic Training (2 cr)
Capstone course designed to prepare students for entry into Athletic Training profession. Additional items include preparation for NATABOC national examination, career development, portfolio and resume completion, professionalism and other ethics, and various professional topics. (Spring, Alt/yrs)
Prereq: H&S 466, 467, 468, 469 and admission to the clinical portion of ATEP; or Permission

H&S 484 Internship in Health Teaching (1-15 cr)
Guided observation and mentoring, supervised instruction, and comprehensive team and independent teaching in a school setting for a total of one semester.
Prereq: EDCI 302 and Permission

H&S 490 Health Promotion (3 cr)
Examines the philosophical, ethical and theoretical foundations of the professional practice of health promotion in school, community, and work site settings, as well as in health promotion consultant activities. Emphasis will be placed on facilitating prepared units/lessons to respective target populations such as students, employees, patients, or community members. (Spring only)
Prereq: H&S 450 or Permission

H&S 498 Internship (1-9 cr)
Supervised field work.
Prereq: Senior standing

H&S 499 (s) Directed Study (cr arr)

Geol 548 Tectonics (3 cr)
Nature and origin of the Earth's major tectonic features. Two lec and 2 hrs of lab a wk; one or two 1- to 2-day field trips. Cooperative: open to WSU degree-seeking students.
Prereq: Geol 345 or Permission

Geol 549 Principles of Electron Microscopy (3 cr)
Theory and principles of scanning and transmission electron microscopy as an investigative tool; includes physical principles of electron microscopy, operation and maintenance of the electron microscope, specimen preparation, and digital image capture. Lab section involves hands-on use of SEM and TEM. Students registering are required to complete a research project. One 1.5-hr lec and one 2-hr lab a week. (Fall only)

Geol 550 Advanced Mineralogy (3 cr)
Advanced concepts in mineralogy not covered at the undergraduate level. Specifically the methods necessary to determine, examine, and represent the crystal structure of minerals and relate them to the mineral's physical properties. Cooperative: open to WSU degree-seeking students.
Prereq: Geol 249 or equivalent

Geol 554 Physical Petrology (3 cr)
Applications of continuum mechanics and fluid dynamics to generation, rise, storage, and eruption of magmas. Cooperative: open to WSU degree-seeking students.

Geol 564 The Geochemistry of Natural Waters (3 cr)
See Geol J464/J564.

Geol 567 Volcanology (3 cr)
See Geol J467/J567.

Geol 583 Radiogenic Isotopes and Geochronology (3 cr)
Nuclear structure, radioactive decay, isochrons, the age of meteorites, the earth, and the timing of various major differentiation events, applications of radiometric (including cosmogenic) dating in a wide range of fields, and the use of radiogenic isotopes as tracers of multi-reservoir evolution.

Geol 592 (s) Advanced Topics in Structural Geology (1-4 cr, max 6)
Classroom or field-based course focused on application of structural geology concepts to specific problems. Topical focus of class may vary from year to year. Cooperative: open to WSU degree-seeking students.

Geol 593 (s) Advanced Topics in Geomechanics (1-4 cr, max arr)
Advanced treatment of current topics in geomechanics and related disciplines such as structural geology, hydrogeology, engineering geology, and petroleum engineering.

Geol 597 (s) Practicum (cr arr)

Geol 598 (s) Internship (cr arr)

Geol 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Geol 600 Doctoral Research and Dissertation (cr arr)

German Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Vertically-related courses in this subject field are: Germ 101/101L-Germ 102/102L-Germ 201/201L-Germ 202. Any one of the following courses may be considered the terminal course for the related vertical sequence above: Germ 301 or Germ 302. A maximum of 16 credits may be earned for vertical credit in any language, in the Department of Modern Languages & Cultures.

Germ 101 Elementary German I (4 cr)
Pronunciation, vocabulary, reading, spoken German, and functional grammar.
Coreq: Germ 101L

Germ 101L Elementary German I Lab (1 cr)
Pronunciation, vocabulary, reading, spoken German, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: Germ 101

Germ 102 Elementary German II (4 cr)
Pronunciation, vocabulary, reading, spoken German, and functional grammar.
Coreq: Germ 102L

Germ 102L Elementary German II Lab (1 cr)
Pronunciation, vocabulary, reading, spoken German, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: Germ 102

Germ 201 Intermediate German I (4 cr)
Review and practice of basic language skills; increased emphasis on reading and free discussion. Appropriate starting point for students with two or three yrs of high school German. Recommended Preparation: Germ 102 or Equivalent.
Coreq: Germ 201L

Germ 201L Intermediate German I Lab (1 cr)
Review and practice of basic language skills; increased emphasis on reading and free discussion. Appropriate starting point for students with two or three yrs of high school German. Recommended Preparation: Germ 102 or Equivalent. Four lec and one 1-hr lab a wk.
Coreq: Germ 201

Germ 202 Intermediate German II (4 cr)
Review and practice of basic language skills; increased emphasis on reading and free discussion. Appropriate starting point for students with two or three yrs of high school German. Recommended Preparation: Germ 102 or Equivalent

Germ 204 (s) Special Topics (cr arr)

Germ 299 (s) Directed Study (cr arr)

Germ 301 Advanced German Grammar (3 cr)
Emphasis on writing skills and various kinds of writing; selective review of German grammar and usage. Recommended Preparation: Germ 202. Cooperative: open to WSU degree-seeking students. (Fall, Alt/yrs)

Germ 302 Advanced German Speaking and Writing (3 cr)
Emphasis on developing proficiency in speaking and writing; discussion on topics of cultural interest. Recommended Preparation: Germ 202. (Fall, Alt/yrs)

Germ 304 20th Century German Culture and Society (3 cr)
German society, political culture, and the arts in the 20th century. Recommended Preparation: Germ 202.

Germ 305 Germany in the New Europe (3 cr)
Contemporary social and political institutions in German-speaking Europe; reading and discussion on topics of current interest in Germany and the European Union. Recommended Preparation: Germ 202.

Germ 306 Introduction to German Literature (3 cr)
Introduction to the study of German literature; representative texts from various genres and periods. Recommended Preparation: Germ 202.

Germ 404 (s) Special Topics (cr arr)

Germ 420 (s) Topics in German Culture and Literature - Themes (3 cr, max 6)
For advanced students; important themes in German cultural/literary studies. Recommended Preparation: Germ 301 or 302, and Germ 306. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)

Germ 440 German Media through the Internet (3 cr)
For advanced Students. Reading and discussion from contemporary media in the German-language Internet; focus on topics of current cultural interest. Recommended Preparation: Germ 301 or 302 and Germ 306.

Germ 499 (s) Directed Study (cr arr)

Health and Safety Courses

Philip W. Scruggs, Dept. Chair (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

H&S 150 Wellness Lifestyles (3 cr)
Health concepts and strategies that affect one's wellness; emphasis on personal responsibility and life-style choices.

Geol 375 Geology of National Parks (3 cr)
Primarily for non-geology majors who want to acquire a better knowledge of geologic concepts and processes through study of geology of national parks. One 6-day field trip.
Prereq: Geol 101/101L, Geol 102/102L, Geol 111/111L, or Geog 100/100L; and Math 143 with a grade of 'C' or better

Geol 400 (s) Seminar (1 cr, max arr)
Participation in departmental colloquium.
Prereq: Math 143 with a grade of 'C' or better

Geol J407/J507 Basin Analysis (3 cr)
Characteristics of sedimentary basins and methods for studying them. For 500-level credit an additional research project is required. One 2-day field trip. Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq: Geol 324 and Math 143 with a grade of 'C' or better

Geol 410 Techniques of Ground Water Study (3 cr)
Collection and analysis of field data for reconnaissance ground water studies. Two weekend field trips.
Prereq: Math 143 with a grade of 'C' or better
Prereq or Coreq: Geol 309

Geol 417 Advanced Paleontology (3 cr)
Fossil assemblage analyses and report writing; marine faunal assemblage 1st half semester; nonmarine floral assemblage 2nd half semester. Three 2-hr labs a wk; one 1-day field trip.
Prereq: Math 143 with a grade of 'C' or better and Geol 212; or Permission

Geol 422 Principles of Geophysics (4 cr)
Outline of geophysical methods for geological investigations. One 1-day field trip.
Prereq: Math 143 with a grade of 'C' or better

Geol 423 Principles of Geochemistry (3 cr)
Physiochemical principles applied to geologic processes. Topics covered include atmospheric geochemistry, environmental geochemistry, aqueous geochemistry, crystal chemistry, radiogenic and stable isotopes. Two lec and one 2-hr lab a wk.
Prereq: Geol 101/101L or Geol 111/111L, and Chem 112; and Math 143 with a grade of 'C' or better

Geol 426 Principles of Forensic Mineralogy and Geology (3 cr)
Introduction to the use of geological and mineralogical materials and techniques within the criminal/civil justice system. Topics will include the origin and description of minerals, rocks, soils and sands, fossils, industrial materials, and pollen, the history of forensic science, instrumental & forensic laboratory techniques, and the legal aspects of scientific evidence. Two lec and one 2-hr labs a wk; one 1-day field trip.
Prereq: Geol 101/101L or Geol 111/111L, and Chem 111; and Math 143 with a grade of 'C' or better; or Permission

Geol J432/J532 Geologic Development of North America (3 cr)
Tectonic, magmatic, and sedimentary sequence studies of North American continent through time; concepts of metal and petroleum enrichment related to time and geological processes. Additional questions on two exams and written report of field trip reqd for grad cr. One 7-day field trip. Geol 532 is a cooperative course available to WSU degree-seeking students.
Prereq: Math 143 with a grade of 'C' or better

Geol J433/J533 Geodynamics (4 cr)
This class focuses on the processes and mechanisms that cause motions within and on the surface of the Earth and other planets. Topics to be covered include plate boundary deformation, plate flexure, planetary heat transfer, convection in the mantle and core, melting and melt transport, magma dynamics, and large-scale lithospheric deformation. For graduate credit students will be expected to complete a research project and report. Course includes 3 hours of lecture and one 3 hour lab per week. Offered fall semester. Recommended Preparation: Math 175 or equivalent. Cooperative: open to WSU degree-seeking students.
Prereq: Math 143 with a grade of 'C' or better; and Math 170 or equivalent

Geol J464/J564 The Geochemistry of Natural Waters (3 cr)
Geol 564 same as Hydr 564. Basic principles of aqueous geochemistry applied to natural waters (ground waters, lake and river waters, seawater), presented at an intermediate level; carbonate equilibria and alkalinity, solubility of minerals, sorption processes and surface reactions, redox reactions and Eh-pH diagrams, organic geochemistry, etc. For graduate credit, students are required to prepare two in-depth term papers and demonstrate through exam work and papers a more in-depth understanding of the material. One compressed video and one web-based lecture a wk. Recommended preparation: Geol 423.
Prereq: Chem 111-112; and Math 143 with a grade of 'C' or better

Geol J467/J567 Volcanology (3 cr)
Eruption mechanisms, volcanic processes and landforms, and volcanic deposits. Additional projects/assignments reqd for grad cr. Two lec and one 2-hr lab a wk; seven days of field trips. Geol 567 is a cooperative course available to WSU degree-seeking students.
Prereq: Math 143 with a grade of 'C' or better

Geol 471 Ore Deposits and Exploration (3 cr)
The geologic origin of metallic ore deposits, and the methods used to search for them. Taught in alternating years. 3-hr lec per week. One one-day and one three-day field trips.
Prereq: Geol 249 and Math 143 with a grade of 'C' or better

Geol 490 Field Geology II (3 cr)
Advanced field problems and methods; interpretation of field data, preparation of reports based on field observations and interpretations. Accident and health insurance required. Three week, off-campus. Cooperative: open to WSU degree-seeking students. (Summer only)
Prereq: Geol 290 and Geol 345; and Math 143 with a grade of 'C' or better

Geol 497 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Math 143 with a grade of 'C' or better and Permission of department

Geol 498 Senior Thesis (1-4 cr, max 4)
Completion of original research and report. Course is taken over two semesters; first semester is graded IP until completion of second semester.
Prereq: Math 143 with a grade of 'C' or better and Senior standing and Permission

Geol 499 (s) Directed Study (cr arr)
Prereq: Math 143 with a grade of 'C' or better

Geol 500 Master's Research and Thesis (cr arr)

Geol 501 (s) Seminar (1 cr, max arr)
Participation in departmental colloquium.

Geol 502 (s) Directed Study (cr arr)

Geol 503 (s) Workshop (cr arr)

Geol 507 Basin Analysis (3 cr)
See Geol J407/J507.

Geol 510 (s) Geosystems (3 cr, max 6)
Interdisciplinary core graduate course in earth sciences. Course will involve multiple instructors and modules framed around a common theme. Specific focus may vary from year to year. Cooperative: open to WSU degree-seeking students.

Geol 520 (s) Advanced Topics in Sedimentary Rocks (2-3 cr, max 6)
Modern aspects of sedimentary rocks.
Prereq: Geol 324

Geol 532 Geologic Development of North America (3 cr)
See Geol J432/J532.

Geol 533 Geodynamics (4 cr)
See Geol J433/J533.

Geol 541 Structural Analysis (3 cr)
Structural analysis of complexly deformed rocks in orogenic belts. Field trip required. Cooperative: open to WSU degree-seeking students.

Geol 542 Advanced Structural Geology (3 cr)
Concepts of linear elastic fracture mechanics as applied to the classification, origin and evolution of all types of rock fractures; continuum theory in rock mechanics; rock strength and failure criteria; stress tensors; elastic theory. Cooperative: open to WSU degree-seeking students.
Prereq: Geol 345

ior in rock masses; application of analytical tools such as the finite element method to design stable excavations and support systems in rock.
Prereq: Engr 350

GeoE 428 Geostatistics (3 cr)
Same as Stat 428. WSU Geol and Stat 428. Applications of random variables and probability in geologic and engineering studies; regression, regionalized variables, spatial correlation, variograms, kriging, and simulation. Recommended Preparation: Stat 301. Cooperative: open to WSU degree-seeking students.

GeoE 436 Geological Engineering Analysis and Design (3 cr)
Geological engineering analysis and design methods, including data collection, stability analysis, and ground reinforcement techniques; individual and teamwork approaches to formulation and solving geological engineering problems. One 1-day field trip.
Prereq: CE 360 or graduate standing

GeoE 465 Excavation and Materials Handling (3 cr)
Principles of excavation design and handling of earth materials related to construction projects, quarries, and mines; blasting, excavation planning and scheduling, equipment selection and replacement, cost estimating, geographic information and management information systems. Computerized design using Gemcom and/or other appropriate software.
Prereq: CE 211 or Permission

GeoE 499 (s) Directed Study (cr arr)

GeoE 500 Master's Research and Thesis (cr arr)

GeoE 501 (s) Seminar (cr arr)

GeoE 502 (s) Directed Study (cr arr)

GeoE 503 (s) Workshop (cr arr).

GeoE 517 Tunnel Design and Construction (3 cr)
Geotechnical considerations for tunneling, drilling and blasting, TBM, ground support, haulage, ventilation, water handling, and trenchless technology. Application of analytical techniques such as the finite element method to design stable underground structures and support systems.
Prereq: GeoE 407 or Permission

GeoE 535 Seepage and Slope Stability (3 cr)
See CE 563. (Alt/even yrs, Spring only)

GeoE 598 (s) Internship (cr arr)

GeoE 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Geology Courses

Mickey E. Gunter, Dept. Chair of Geological Sciences (322 Mines Bldg. 83844-3022; phone 208/885-6192).

Geol 101 Physical Geology (3 cr)
The earth, its composition, structure, and natural processes. Three lec and 2 hrs of lab a wk; one 1-day field trip.

Geol 101L Physical Geology Lab (1 cr)
The earth, its composition, structure, and natural processes. Three lec and 2 hrs of lab a wk; one 1-day field trip.

Geol 102 Historical Geology (3 cr)
Evolution of the physical earth, plants, and animals; techniques used in interpretation of geologic history. Three lec and 2 hrs of lab a wk; one 1-day field trip.

Geol 102L Historical Geology Lab (1 cr)
Evolution of the physical earth, plants, and animals; techniques used in interpretation of geologic history. Three lec and 2 hrs of lab a wk; one 1-day field trip.

Geol 111 Physical Geology for Science Majors (3 cr)
Introductory course in earth science for geology and other science majors. Three lec and one 2-hr lab a wk; two 1-day field trips.

Geol 111L Physical Geology for Science Majors Lab (1 cr)
Introductory course in earth science for geology and other science majors. Three lec and one 2-hr lab a wk; two 1-day field trips.

Geol 203 (s) Workshop (cr arr)

Geol 204 (s) Special Topics (cr arr)

Geol 212 Principles of Paleontology (4 cr)
Studies of morphology, classification of fossil groups, and utility of fossils in interpreting depositional environments and ages of sedimentary rocks. Three lec and one 2-hr lab a wk; one 1- to 2-day field trip. Recommended Preparation: Geol 102.

Geol 249 Mineralogy and Optical Mineralogy (4 cr)
Principles of crystallography, crystal chemistry, and crystal structure; mineral identification; principles of optical mineralogy and use of the polarized light microscope. Three lec and one 2-hr lab a wk; two 1-day field trips.
Prereq: Geol 111/111L or Geol 101/101L, and Chem 111

Geol 290 Field Geology I (3 cr)
Introduction to field mapping and field techniques; interpretation of sedimentary sequences; introduction to tectonic structures; preparation of reports based on field observations and interpretations. Accident and health insurance required. Three week, off-campus field course. (Summer only)
Prereq: Geol 101/101L or Geol 111/111L, and Geol 102/102L

Geol 299 (s) Directed Study (cr arr)

Geol 309 Ground Water Hydrology (3 cr)
Occurrence, movement, and properties of subsurface water; intro to ground water geology and hydrology.
Prereq: Geol 101,/101L or 111, and Math 130 or Math 143 with a grade of 'C' or better

Geol 324 Principles of Stratigraphy and Sedimentation (4 cr)
Description and identification of sedimentary rocks; organization and correlation of layered rocks in all scales, including factors controlling their distribution; cycles in sedimentation and stratigraphy; sequence stratigraphy and basin dynamics. Two lec and two 2-hr labs a wk; two 1-day field trips; optional 7-day field trip.
Prereq: Geol 102/102L and Math 143 with a grade of 'C' or better

Geol 326 Igneous and Metamorphic Petrology (4 cr)
Hard rock petrology plus megascopic and microscopic petrography of igneous and metamorphic rocks. Two lec and two 2-hr labs a wk; two 1-day or one 2-day field trips.
Prereq: Geol 249 and Math 143 with a grade of 'C' or better

Geol 335 Geomorphology (3 cr)
Classification, recognition, origin, and significance of land forms; land form analysis in interpretation of geologic structure and history. One 2-day field trip.
Prereq: Geol 101/101L, Geol 102/102L, Geol 111/111L, or Geog 100/100L; and Math 143 with a grade of 'C' or better; or Permission

Geol 344 Earthquakes and Seismic Hazards (3 cr)
The geology of earthquakes including the cause of fault rupture, seismic waves, focal mechanisms, and earthquakes associated with all fault types in a variety of tectonic settings; methods of identifying paleoearthquakes in the geologic record, and the assessment of seismic hazard and risk in active fault environments. One 3-day field trip.
Prereq: Geol 101/101L or Geol 111/111L; and Math 143 with a grade of 'C' or better

Geol 345 Structural Geology (4 cr)
Investigation of deformed rocks; mechanics of brittle and continuum failure, stress and strain relations, characterization, description, classification of folded and fractured rocks. Three hours of lecture and one 2-hr 45-min lab a wk; one week-long mandatory field trip. (Spring only)
Prereq: Math 143 with a grade of 'C' or better; One semester high-school trigonometry or Math 144; and Geol 101/101L or Geol 111/111L; and Phys 111/111L or Phys 211/211L

Geol 361 Geology and the Environment (3 cr)
Environmental consequences of development of geologic resources; including issues of waste disposal, pollution and human health; natural hazards and their impact on humans and the environment. Two 1-day field trips.
Prereq: Geol 101/101L or Geol 111/111L; and Math 143 with a grade of 'C' or better

Geog 455 Societal Resilience and Adaptation to Climate Change (3 cr)
Consequences of human causes, mitigation and adaptations, community resilience strategies, and policy implications to human impacts of global climate change. Concentration on social science issues including opportunities and constraints for resilience and adaptation to global climate change. Recommended Preparation: Geog 411.

Geog 475 Intermediate GIS (3 cr)
Course covers in-depth geographic information systems models and applications. Topics include network analysis, watershed analysis, spatial interpolation, terrain mapping and analysis, 3D visualization, and GIS modeling. Students develop spatial analysis and modeling skills to solve real-world problems.
Prereq: Geog 385 and Stat 251

Geog 479 GIS Programming (3 cr)
An introduction to the use of programming languages, such as Python with standard ArcGIS concepts.
Prereq: Geog 475 or Geog 390

Geog J483/J583 Remote Sensing/GIS Integration (3 cr)
Concepts and tools for the processing, analysis, and interpretation of digital images from satellite and aircraft-based sensors. The integration of remotely sensed date and the other spatial data types within Geographic Information Systems. Additional assignments and exams reqd for grad cr. Two lec and 2 hr of lab a wk. (Spring only)
Prereq: For 472 or Equivalent, and Stat 251
Coreq: Geog 385 or Equivalent

Geog J486/J586 Transportation, GIS and Planning (3 cr)
Interdisciplinary study of transportation and planning from a geographical perspective. Principles and methods of analysis in transportation geography, including accessibility and mobility, spatial interaction, network analysis, and GIS applications for sustainable transportation and land use planning; study of the cutting-edge approach to travel behavior analysis and modeling at various geographic scales (i.e., individual/household/community); activity-based field data collection and related survey design issues are discussed. Graduate students will have additional requirements. Two lec and one lab a wk. (Fall only)
Prereq: Geog 385 or Permission

Geog 491 (s) Field Techniques (3 cr, max 6)
Acquisition of data in the field, analysis, interpretation, and presentation of results of field investigations. May also be taken in conjunction with other geography courses.
Prereq: Permission

Geog 493 Senior Capstone in Geography (3 cr)
A capstone course in which students integrate their knowledge of human and physical geography, as well as geographic techniques, to propose solutions to real-world problems. Students gain experience in working in small groups and in written and oral presentation of project results, and will be evaluated with respect to the skills acquired in their degree program. Topics may include, but are not limited to, issues such as sustainable development in rural communities, global and regional food and energy distribution, quantifying and analyzing global or regional indicators of environmental and/or societal trends. Open to senior geography majors or to non-majors with instructor's permission.
Prereq: Department of Geography Majors or Permission

Geog 497 (s) Practicum (1-3 cr, max 3)
Practical on-the-job experience I n applied geography and cartography; oral and written reports are presented in which the student reviews and constructively criticizes the experience gained. Graded pass/fail.
Prereq: Permission

Geog 498 (s) Internship (cr arr)
Graded pass/fail

Geog 499 (s) Directed Study (cr arr)

Geog 500 Master's Research and Thesis (cr arr)

Geog 501 (s) Seminar (cr arr)

Geog 502 (s) Directed Study (cr arr)

Geog 503 (s) Workshop (cr arr)

Geog 504 (s) Special Topics (cr arr)

Geog 505 Climate and Water Resources Change (3 cr)
See Geog J405/J505.

Geog 507 Spatial Analysis and Modeling (3 cr)
See Geog J407/J507.

Geog 508 Rural Development (3 cr)
See Geog J409/J508.

Geog J412/J512 Applied Meteorology and Climatology (3 cr)
See Geog J412/J512.

Geog 513 Global Climate Change (3 cr)
See Geog J313/J513.

Geog 524 Hydrologic Applications of GIS and Remote Sensing (3 cr)
See Geog J424/J524.

Geog 535 Climate Change Mitigation (3 cr)
See Geog J435/J535.

Geog 540 Business Location Decisions (3 cr)
See Geog J340/J540.

Geog 550 Geography of Development (3-4 cr)
See Geog J350/J550.

Geog 560 Population Dynamics and Distribution (3-4 cr)
See Geog J360/J560.

Geog 583 Remote Sensing/GIS Integration (3 cr)
See Geog J483/J583.

Geog 587 Advanced Topics in Remote Sensing (3 cr)
Current topics and applications in remote sensing literature including radar, thermal and hyperspectral remote sensing, sensor advances, airborne platforms, advanced classification and segregation techniques, large area pattern analysis, time series and trends, and advances in both terrestrial and non-terrestrial approaches, models and applications.

Geog 591 History and Philosophy of Geography (3 cr)
Evolution of geography as a discipline, focusing on post-scientific revolution developments and identification of major themes in contemporary geographic thought. (Fall only)

Geog 592 Professional Development (2 cr)
Fundamental elements of professional development for graduate students bound toward both academic and non-academics careers. Course will include modules on proposal writing and acquisition of research funding, professional preparation and presentation, networking, research ethics, peer-review processes, and writing for publication.

Geog 596 Geography Department Seminar (1 cr)
Weekly or bi-weekly department seminar with talks given by visiting and local speakers on topics relevant to geography.

Geog 597 (s) Practicum (cr arr)
Graded pass/fail

Geog 598 (s) Internship (cr arr)
Practical, on-the-job experience with governmental agencies or commercial establishments; oral and written reports are presented in which the student reviews and constructively criticizes the experience gained; salary may be received for services performed. Graded pass/fail.
Prereq: Permission

Geog 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Geog 600 Doctoral Research and Dissertation (cr arr)

Geological Engineering Courses

Richard J. Nielsen, Dept. Chair, Dept. of Civil Engineering (104 Buchanan Engr. Lab. 83844-1022; phone 208/885-6782).

GeoE 403 (s) Workshop (cr arr)

GeoE 404 (s) Special Topics (cr arr)

GeoE 407 Rock Mechanics (3 cr)
Mechanical properties of rocks and rock masses; lab and insitu techniques to estimate strength, stress distribution, and deformation behav-

solve additional quantitative problem sets and synthesize journal articles. (Fall only)

Geog 330 Urban Geography (3 cr)
Theory and models of the functions, origin, development, structure, and distribution of cities; land-use classification; geographic aspects of city planning. One hour additional meeting per week or project for fourth credit. One 1-day field trip. (Fall only)

Geog J340/J540 Business Location Decisions (3 cr)
Locational decision making in primary, secondary, and tertiary industries; resulting patterns of industrial location; importance of location and impact of industries on other characteristics of communities as demonstrated by examples from each sector. One 1-day field trip. Additional assignments and exams reqd for grad cr.

Geog J350/J550 Geography of Development (3-4 cr)
Geographic appraisal of resource problems and development potentials of the Third World. One hour additional meeting per week or project for fourth credit. Additional assignments and exams required for graduate credit.

Geog J360/J560 Population Dynamics and Distribution (3-4 cr)
Effects of fertility, mortality, and migration on population size and distribution; demographic trends in U.S. and other societies and how these relate to economic, political, environmental, and other factors. One hour additional meeting per week or project for fourth credit. Additional assignments and exams required for graduate credit. (Spring only)

Geog 364 Idaho and the Pacific Northwest (3 cr)
Regional and systematic geography of the Northwest; emphasis on Idaho and contemporary problems.

Geog 365 Political Geography (3 cr)
A survey of the geographical framework of the State and its development over the last 400 years. An examination of the ideas of geopolitics and the role of hegemony in interstate relations as well as the geographical implications of globalization are emphasized. The creation of diverse political landscapes of actual and imagined communities and their impact on ideas of nationalism and electoral behavior are also discussed. (Alt/yrs)

Geog 385 GIS Primer (3 cr)
Intro to basic concepts and applications of geographic information systems (GIS), lab exercises on PC-based GIS packages. Two lec and 2 hrs of lab a wk.
Prereq: Basic knowledge of PC-based operating system

Geog 390 Cartographic Design & Geovisualization (3 cr)
Map projections, map generalization, cartographic design, map symbology, and typography; statistical, isarithmic and multivariate mapping; static versus dynamic mapping; interactive and internet mapping; cartographic animation; 2 hrs of lab/wk. (Spring only)
Prereq: Geog 385 and Stat 251

Geog 401 Climatology (3 cr)
Physical basis for climatic processes and patterns; mechanics of global atmospheric circulation; radiation balance and heat budget of the earth; models of weather patterns and climate. (Spring, alt/yrs)
Prereq: Geog 301, Geog 313, or Graduate Standing

Geog 402 GIS Skills Development (1 cr, max 6)
Hands-on skills development in GIS and related technologies. Primary topics vary by semester, but may include topics such as GPS/GIS integration, server GIS and cartographic design. May be taken for credit multiple times.

Geog 403 (s) Workshop (cr arr)

Geog 404 (s) Special Topics (cr arr)

Geog J405/J505 Climate and Water Resources Change (3 cr)
Physical processes that determine the climate of Earth and its past and future changes: greenhouse effect, radiative and heat feedback processes, orbital parameter theory. Climate and Environmental Periods. Atmospheric and water resources change within the instrumental period of records. Future climate and water resources: Paleo-perspectives on "greenhouse warming". Review of paleoclimate techniques: dendroclimatology, marine and lake sediments, polar and mountain ice core paleo-climatic records, paleo-climatic and historic data analysis. Additional assignments and exams reqd for grad cr.
Prereq: Geog 401 and Stat 251, or Permission

Geog J407/J507 Spatial Analysis and Modeling (3 cr)
Point Pattern Analysis, Nearest Neighbor, K-Functions, Quadrat Analysis, Spatial Autocorrelation (Moran's I, Geary's ratio, General G-statistics), Order Neighbor Analysis, Spatial Regression (creating prediction models, improving accuracy, validating and working with spatial weighted lags), Spatial Sampling Techniques/Methods, Spatial Dispersion, Spatial Diffusion, Gravity Models. Additional assignments and exams required for graduate credit. (Spring only)
Prereq: Geog 385 and Stat 431

Geog J409/J508 Rural Development (3 cr)
Readings and discussion seminar course on rural societies in various countries. Rural trends and development prospects. Reading and discussion of literature in rural development. Extra projects and literature required for graduate credit. (Fall only)

Geog 410 Biogeography (3 cr)
Geographic distributions of plant and animal species, and causes of patterns, including climate, geology, speciation, extinction, and migration. Additional assignments and exam are required for 3 credits.
Prereq: Geog 100/Geog 100L or Permission

Geog 411 Natural Hazards and Society (3 cr)
Overview of the geophysical conditions associated with the development of natural hazards including social science principles and methodologies for addressing critical questions relating to managing the vulnerability and risks associated with various natural hazards.

Geog J412/J512 Applied Meteorology and Climatology (3 cr)
Practice of meteorology and climatology to solve a wide range of real-world problems in water resources, wildfire, agriculture and societal hazards. Course will introduce scientific means of interpreting weather and climate information for weather forecasting and build analytical skills using models and tools that facilitate decision-making and adaptation for practical problems. Additional projects/assignments required for graduate credit. Includes lecture and hands-on laboratory and field-based exercises. (Spring, alt/yrs)
Prereq: Geog 301 or Geog 401; or Permission

Geog 415 Scientific Data Analysis with Computer Programming (3 cr)
Manipulation, visualization, and analysis of geographic and environmental data. Analysis methods applicable in Python IDL, Matlab, or similar environments; review of programming and concepts relevant to analysis of spatial data and/or time series; uncertainty and sensitivity analysis; appropriate presentation of data in figures.
Prereq: Math 143 and Stat 251

Geog 420 Land, Resources, and Environment (3 cr)
Social, legal, cultural, political, and economic aspects of land-use control both in the United States and worldwide. Contrasts are made between indigenous and contemporary cultures within a sustainable geography-of-limits and political ecology framework. (Spring only)

Geog J424/J524 Hydrologic Applications of GIS and Remote Sensing (3 cr)
Concepts of area-based hydrologic modeling and assessment and the various types of spatially distributed information commonly used in these activities, such as topographic data, vegetation cover, soils and meteorologic data. Hands-on experience in manipulating these types of data sets for hydrologic applications. Recommended Preparation: For 462, BAE 355, or CE 325; or Equivalent.
Prereq: Geog 385 or equivalent work experience

Geog J435/J535 Climate Change Mitigation (3 cr)
Overview of methodologies for calculating greenhouse gas (GHG) emissions at the national, state and local level. Cost/benefit analysis of emission reduction strategies. Students utilize the UI campus operations as a learning laboratory for evaluating emission reduction strategies at the local level. Idaho is used as a case study for emission reduction strategies at the state level. For graduate credit, additional literature review and evaluation of new, advanced technologies are required.

Geog 440 The New Global Economy (3 cr)
The course will explore the structures of globalization from convergence and labor migration to trade bloc formation and regional specialization. An understanding of the role of location in the creation and modification of global, national and regional economic landscapes will be emphasized. (Alt/yrs)

Fren 102L Elementary French II Lab (1 cr)
Pronunciation, vocabulary, reading, spoken French, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: Fren 102

Fren 201 Intermediate French I (4 cr)
Reading, grammar review, speaking, and writing. Recommended Preparation: Fren 102.
Coreq: Fren 201L

Fren 201L Intermediate French I Lab (1 cr)
Reading, grammar review, speaking, and writing. Recommended Preparation: Fren 102.Four lec and one 1-hr lab a wk.
Coreq: Fren 201

Fren 202 Intermediate French II (4 cr)
Reading, grammar review, speaking, and writing. Recommended Preparation: Fren 201.

Fren 204 (s) Special Topics (cr arr)

Fren 299 (s) Directed Study (cr arr)

Fren 301 Advanced French Grammar (3 cr)
Comprehensive review of French grammar. Recommended for students who wish to continue in upper-division French courses and for prospective teachers of French. Recommended Preparation: Fren 202. (Fall, alt/yrs.)

Fren 302 Advanced French Writing Skills (3 cr)
Further development of writing skills in various kinds of writing. Recommended for students who wish to continue in upper-division French courses and for prospective teachers of French. Recommended Preparation: Fren 202. (Fall, alt/yrs.)

Fren 304 Connecting French Language and Culture (4 cr)
Practice of linguistic proficiencies within simulated cultural frames. Recommended Preparation: Fren 202. (Spring, alt/yrs.)

Fren 307 French Phonetics (4 cr)
Contrastive analysis; acquisition and corrective practice of sounds and intonation patterns; phonetic description and transcription. Recommended Preparation: Fren 202. (Spring, alt/yrs)

Fren 308 Advanced French Conversation (3 cr)
Further development of speaking skills; discussion on topics of cultural interest and current events. Recommended Preparation: Fren 202. (Fall, alt/yrs.)

Fren 309 Practicum in Advanced Language Skills I (1 cr)
Coreq: Fren 304

Fren 310 Practicum in Advanced Language Skills II (1 cr)
Coreq: Fren 307

Fren 404 (s) Special Topics (cr arr)

Fren 407 French & Francophone Literatures (3 cr, max 9)
For advanced students; representative works from various genres of French and Francophone literature. Recommended Preparation: Two 300-level French courses. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)

Fren 408 (s) French and Francophone Culture and Institutions (3 cr, max 9)
For advanced students; contemporary social and political institutions in France and the Francophone world, with discussion on topics of current interest. Recommended Preparation: Two 300-level French courses. (Fall, alt/yrs.)

Fren 410 French and Francophone Arts (3 cr)
For advanced students; representative works, styles, and movements in visual arts, architecture, and music of France and the Francophone world. Recommended Preparation: Two 300-level French courses. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)

Fren 449 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission of department

Fren 496 (s) Proseminar (1-3 cr, max 12)
May be graded P/F when grading system is uniform for all students in the class.
Prereq: Permission

Fren 499 (s) Directed Study (cr arr)

Genetics Courses

Though there is no genetics degree at the University of Idaho, many degrees emphasize genetics. Information about research programs, specifics of courses, and academic advising is available from any member of the genetics faculty.

Gene 200 (s) Seminar (cr arr)

Gene 299 (s) Directed Study (cr arr)

Gene 314 General Genetics (3 cr)
Principles of molecular genetics, microbial genetics, cytogenetics, qualitative genetics, quantitative genetics, and population genetics. (Spring only)
Prereq: Biol 115 or MMBB 154 or perm

Gene 400 (s) Seminar (cr arr)

Gene 499 (s) Directed Study (cr arr)

Gene 501 (s) Seminar (cr arr)

Gene 502 (s) Directed Study (cr arr)

Geography Courses

Karen S. Humes, Dept. Head, Dept. of Geography (203 McClure Bldg. 83844-3021; phone 208/885-6216; geog@uidaho.edu).

Geog 100 Physical Geography (3 cr)
Natural environment; nature, distribution, and relationships of climate, landforms, oceans, vegetation, hydrography, and soils. Three lec and one 2-hr lab a wk; may involve evening classes.

Geog 100L Physical Geography Lab (1 cr)
Natural environment; nature, distribution, and relationships of climate, landforms, oceans, vegetation, hydrography, and soils. Three lec and one 2-hr lab a wk; may involve evening classes.

Geog 165 Human Geography (3 cr)
Intro to geographical dimension in human behavior and how this is evident in population distribution, rural and urban land use, and social, economic, and political attributes of societies. (Fall only)

Geog 200 World Regional Geography (3 cr)
Countries, regions, and peoples of the world; interrelationships between humans and their physical and cultural environments.

Geog 203 (s) Workshop (cr arr)

Geog 204 (s) Special Topics (cr arr)

Geog 240 Economic Geography (3 cr)
Reciprocal relations between people and the earth environment within an economic framework; resource distribution, developmental alternatives, movement, processing and industrialization, local to global perspective, theories and case studies.

Geog 299 (s) Directed Study (cr arr)

Geog 301 Meteorology (3 cr)
Atmospheric processes that produce weather; temperature; moisture, clouds, and precipitation; synoptic-scale weather; severe storms; weather instrumentation, weather maps, and forecasting; influences of weather on humans and impacts of humans on weather. (Fall only)
Prereq: Geog 100/Geog 100L, Phys 100/Phys 100L, Phys 111/Phys 111L, or Phys 211/Phys 211L; and Math 143; or Permission

Geog J313/J513 Global Climate Change (3 cr)
Scientific basis of the climate system and global climate changes; process-based understanding of past, present and future climate change; natural and anthropogenic influences; interactions between climate, society and ecosystems; scientific review and politicization; climate change solutions and opportunities. Students in 513 will be required to

For 501 (s) Seminar (cr arr)
Major philosophy, management, and research problems of wildlands; presentation of individual studies on assigned topics.
Prereq: Permission

For 502 (s) Directed Study (cr arr)

For 503 (s) Workshop (cr arr)
Selected topics in the conservation and management of natural resources.
Prereq: Permission

For 504 (s) Special Topics (cr arr)

For 515 Physical Hydrology (3 cr)
A quantitative treatment of the physical processes that control water fluxes in the environment. Specific emphasis on evaporation, transpiration, snow processes and soil water flow. (Fall, Alt/yrs)

For 516 Current Literature in the Hydrologic Effects of Forest Management (1 cr)
Evaluation and discussion of how management activities affect hydrologic processes and flow regimes in forested watersheds. Seminar based on primary literature. (Spring, Alt/yrs)

For 526 Fire Ecology (3 cr)
Fire-related ecology of plant and animal species in wildlands; effects of fire occurrence and suppression on physical environment, landscapes, and processes in both natural and managed ecosystems. Two days of field trips. (Alt/yrs)
Prereq: General ecology course

For 529 Forest Ecosystem Analysis (3 cr)
Forest ecosystem processes and analysis from the leaf to the landscape scale; techniques for measuring forest ecosystem attributes; integration with forest management. Field trip required. (Fall only)

For 531 Invasion Biology (3 cr)
An introduction to the biology of invasive species, covering plants, animals, and microbial invasives. The course will review relevant readings from the primary literature, especially those dealing with the current state of our knowledge of invasives, their ecology, control, and implications for public policy. (Spring only)
Prereq: Basic introductory genetics class and ecology

For 535 Remote Sensing of Fire (3 cr)
See For J435/J535.

For 540 Conservation Genetics (3 cr)
See WLF 540.

For 541 Stable Isotope Theory and Methods (3 cr)
Theory and practice of measuring stable isotope ratios of biologically important elements; training in the use of isotope mass spectrometers. Cooperative: open to WSU degree-seeking students. (Fall Alt/yrs)

For 542 Conservation Genetics Lab (1 cr)
See WLF 549.

For 551 Current Literature in Forest Ecology/Tree Physiology (1 cr, max arr)
Review recent articles in forest ecology and physiology journals. Students choose, critically review, and discuss the articles to develop critical-thinking skills and confidence in their knowledge of the literature. Graded P/F.

For 552 Current Literature in Remote Sensing (1 cr, max arr)
Review recent articles in remote sensing journals. Students choose, critically review, and discuss the articles to develop critical-thinking skills and confidence in their knowledge of the literature. Graded P/F.

For J454/J554 Air Quality and Smoke Management (3 cr)
See For J454/J554.

For 555 Current Topics: Regeneration/Restoration (1 cr, max arr)
Review recent articles pertaining to natural and artificial regeneration of native plants, including nursery production, restoration practices, and post-disturbance treatments. Students choose, critically review, and discuss the articles to develop critical-thinking skills and confidence in their knowledge of the literature. Graded P/F. Recommended Preparation: For 324, For 424, and For 551.

For 556 Phylogenetics Reading Group (1 cr, max arr)
Review recent articles in phylogenetics and systematics journals. Students choose, critically review, and discuss the articles to develop critical-thinking skills and confidence in their knowledge of the literature. Graded P/F.

For 570 Advanced Remote Sensing Measurement Methods (3 cr)
Development of remote sensing methods to measure vegetation attributes from individual trees, to stands, to regional scales. Includes, LIDAR and hyperspectral data, non-traditional accuracy assessment, land-use/land-cover change assessment, linear and non-linear mixture models, autocorrelation, time series analysis, and application of object-orientated approaches. (Spring, alt/yrs)
Prereq: For 472 or Geog 483

For 572 Spatial and Biophysical Modeling (3 cr)
Development of concepts, techniques, and methods for the fusion of remote sensing, GIS and biogeochemical modeling techniques for analyzing energy and material pathways and cycles; review latest methods for temporal and spatial scaling of datasets and models to develop and test hypotheses for understanding forest ecosystem structure and function.

For 584 Natural Resource Policy Development (3 cr)
The development of natural resource policy with emphasis on the policy process at the federal level in the U.S.; the role of and interrelationships between staff, committees, agencies and elected officials; the relationship of science and scientists with policy and politicians in the development of natural resource policy, including preparation of testimony related to natural resource science and policy issues; implementation of policy within the natural resource agencies and judicial interpretation of major natural resource policies in the U.S.
Prereq: Undergraduate course in natural resource policy or political science or Permission

For 585 Natural Resources Policy Analysis (2 cr)
Theories of policy analysis, natural resource policy formulation, and applications for developing policy-relevant information. (Alt/yrs)
Prereq: Undergraduate course in natural resource policy or political science or Permission

For 597 (s) Practicum (cr arr)

For 598 (s) Internship (cr arr)

For 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

For 600 Doctoral Research and Dissertation (cr arr)
Prereq: Admission to the doctoral program in "natural resources" and Permission of department

French Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Vertically-related courses in this subject field are: Fren 101/101L-Fren 102/102L-Fren 201/201L-Fren 202. Any one of the following courses may be considered the terminal course for the related vertical sequence above: Fren 301 or Fren 302. A maximum of 16 credits may be earned for vertical credit in any language, in the Department of Modern Languages & Cultures.

Fren 101 Elementary French I (4 cr)
Pronunciation, vocabulary, reading, spoken French, and functional grammar. Students with two or more years of high school French may not enroll in Fren 101, but may earn credit for Fren 101 by successfully completing a higher vertically-related course.
Coreq: Fren 101L

Fren 101L Elementary French I Lab (1 cr)
Pronunciation, vocabulary, reading, spoken French, and functional grammar. Students with two or more years of high school French may not enroll in Fren 101, but may earn credit for Fren 101 by successfully completing a higher vertically-related course. Four lec and one 1-hr lab a wk.
Coreq: Fren 101

Fren 102 Elementary French II (4 cr)
Pronunciation, vocabulary, reading, spoken French, and functional grammar.
Coreq: Fren 102L

ral and changing role of fire in forests, woodlands, shrublands and rangelands; influence of global change including climate and invasive species; fire as a management tool; application to current issues. (Fall only)
Prereq: For 221 or REM 221; and Instructor Permission

For 427 Prescribed Burning Lab (3 cr)
Planning, conducting and evaluating prescribed burns designed to accomplish natural resource management objectives. Sampling, models and analysis used in writing required fire use plan. 5 days of field trips; some on Saturdays. (Fall only)
Prereq: REM 244, and Senior standing; and Permission
Coreq: For 326

For 430 Forest Operations (3 cr)
Overview of the primary equipment and harvesting systems used in modern forest operations, including field design, layout, and administration of timber sales, logging production and cost estimation, laws, and certification. A brief introduction to quantitative forest planning methods is also provided. There are 2-3 early morning trips and one Saturday field lab (Fall only)
Prereq: Phys 100/100L or Phys 111/111L
Prereq or Coreq: Math 144

For 431 Low Volume Forest Roads (2 cr)
Design and field layout of access roads for forest management, through a combination of field labs and use of modern, GIS-based forest road engineering software. Field study includes design of at least one current industry or agency forest road design project. There are 2-3 early morning trips and one Saturday field lab. (Fall, Alt/yrs)
Prereq or Coreq: Math 144
Coreq: For 430 or Permission

For 433 Fire and Fuel Modeling (2 cr)
Learn to use and critically evaluate spatial fire behavior prediction systems, with attention to assumptions, uncertainty, sensitivity, and probability analysis. Topics include fuels classification systems, scale considerations, thematic mapping, and GIS overlay analysis, and how to access on-line geospatial data and decision-support tools. Read and discuss primarily literature on quantitative spatial analysis in fire science, engage in hands-on laboratory exercises, and prepare written reports comparing management alternatives with regards to fire behavior, fire effects, and ecological departure.
Prereq: For 375, Geog 385, or Permission
Coreq: For 450

For J435/J535 Remote Sensing of Fire (3 cr)
The course describes the state of the art algorithms and methods used for mapping and characterizing fire from satellite observations. The course will link the physical aspects of fire on the ground with the quantities that can be observed from remote sensing, and present an overview of the different aspects of environmental fire monitoring. The course will be accompanied by weekly lab sessions focused on the processing of satellite data from sensors used operationally for fire monitoring. This course assumes that you are familiar with the fundamental concepts of mathematics and physics, understand basic remote sensing techniques, and can use maps and GIS data layers. For graduate credit, additional literature review and a class project including evaluation of new, advanced technologies is required. (Spring)
Prereq: For 375 or Permission

For 436 Cable Systems (2 cr)
Overview of the major cable logging systems. Trigonometry and physical mechanics of cable systems, including analysis of forces, tensions, and payload capacity. Field layout and analysis of cable corridors using small yarders on the UI Experimental Forest using integrated field planning and GIS-based cable system design software. There are 2-3 early morning trips and one Saturday field lab. (Fall, Alt/yrs)
Prereq or Coreq: Math 144
Coreq: For 430 or Permission

For 444 Prescribed Fire For Ecologically-Based Management (2-3 cr)
Learn about prescribed burning in support of ecologically-based management through reading, discussion and participating in hands-on service learning, planning, conducting and monitoring prescribed burns, reading and discussing local ecology and management, working collaboratively, and developing skills in fire management. Course requires travel as well as pre, during and post-travel writing, discussion and presentations.
Prereq: REM 244 and Junior Standing; or Instructor Permission.

For 450 Fire Behavior (2 cr)
Understand the physical and chemical processes controlling combustion and fire behavior. Gain in-depth knowledge of commonly-used, point-scale fire behavior models and tools, including key assumptions and limitations. Critically review and discuss scientific literature, current topics, and case studies. Lab sessions include designing and undertaking small-scale fire behavior experiments, developing simple quantitative models, and a field trip.
Prereq: For 326; and Phys 100/100L or Phys 111/111L
Coreq: For 433

For 451 Fuels Inventory and Management (3 cr)
Tools, quantitative analysis, and approaches for inventory and management of fuels for wildland fires over large, diverse areas in forests, woodlands, shrubland, and grasslands. Critically review and synthesize relevant scientific literature.
Prereq: For 375, REM 244 and For 274 or REM 411

For J454/J554 Air Quality and Smoke Management (3 cr)
Assessment of the controls and drivers of emission processes and impacts on air quality from agricultural, prescribed, and wildfires. Overview of the combustion and emission process, how these emissions impact the 'quality of air', and what models exist to monitor the emission. Other topics to include: recent EPA and other guidelines for smoke management planning, attainment issues, collaborative process for implementing smoke management plans. Additional work required for graduate credit.
Prereq: For 326

For 462 Watershed Science and Management (3 cr)
Influence of land management practices on hydrologic processes, water quality, and riparian habitat w/emphasis on wildland watersheds. One day field trip. (Fall only)
Prereq: Math 143; and Phys 100 or Phys 111, or high school equivalent.

For 468 Forest and Plant Pathology (2 cr)
A survey of plant diseases. Emphasis on forest trees and other woody plants. Organisms that cause diseases. Strategies to minimize negative effects. Symbiotic roles of microbes in plants. Two hours of lecture, and two hours of lab per week, in addition to multiple field trips (as weather allows) to observe diseases and their effects. (Spring only)
Prereq: For 320 and For 330

For 472 Remote Sensing of the Environment (4 cr)
Same as REM 472. Current airborne and satellite systems, data acquisition on ground and from remote locations, instrumentation, imagery interpretation and digital analysis, applications for natural resource science and management. Two 75-minute kectures and one two-hour lab per week. Recommended Preparation: Phys 100 or Phys 112. Cooperative: open to WSU degree-seeking students.

For 483 Senior Project Presentation (1 cr)
Same as CSS/Fish/REM/WLF 483. Reporting and presenting the senior project (thesis or internship); taken after or concurrently with 485 or 497.

For 484 Forest Policy and Administration (2 cr)
Evaluation of land and forest problems and policies in the U.S.; analysis of current conditions and policies; historical development of governmental and private agencies concerned with the administration of forest conservation program. Recommended Preparation: FOR 235.
Prereq: Junior standing

For 485 Ecology and Conservation Biology Senior Project (1-3 cr, max 3)
See WLF 485.

For 497 (s) Senior Thesis (2-4 cr, max 4)
Independently plan and conduct a thesis project; write and defend the thesis under supervision of an advisor.
Prereq: Senior standing and minimum 3.20 GPA or Permission

For 498 (s) Renewable Natural Resources Internship (cr arr)
Supervised field experience with an appropriate public or private agency. Required for cooperative education students.
Prereq: Permission of department

For 499 (s) Directed Study (cr arr)
For the individual student; conferences, library, field, or lab work.
Prereq: Senior standing, GPA 2.5, and Permission

For 500 Master's Research and Thesis (cr arr)

Forest Resources Courses

Anthony S. Davis, Dept. Head, Dept. of Forest, Rangeland, and Fire Sciences (204 CNR Bldg. 83844-1133; phone 208/885-7952; fores@uidaho.edu).

Prerequisite: Courses in this subject field that are numbered above 299 are not open to undergraduate students on academic probation.

For 102 Introduction to Forest Management (1 cr)
Intro to forestry, current management issues, timber and non-timber resources, educational and professional opportunities.

For 200 (s) Seminar (cr arr)

For 221 Ecology (3 cr)
Fundamental principles of ecology. Major topics covered in the course include the physical environment, how organisms interact with each other and their environment, evolutionary processes, population dynamics, communities, energy flow and ecosystems, human influences on ecosystems, and the integration and scaling of ecological processes through systems ecology. Recommended preparation: introductory botany and zoology
Prereq: *Biol 102/102L, 115, 116, or PlSc 205; or Permission*

For 235 Society and Natural Resources (3 cr)
Same as CSS 235. An exploration of how people use, value, manage, impact, and are affected by natural resources; course emphasizes social and economic realities and political and legal processes in a context of current and historical natural resource issues. Two lectures and one 1-hr small discussion group meeting a week.

For 255 Nursery Irrigation and Fertilization (1 cr)
An introduction to nursery irrigation and fertilization practices commonly found in forest tree seedling and native plant nurseries. This course aims to provide some of the important theory behind the practices used every day in successful crop production. The course will be taught by faculty and staff at the UI Pitkin Forest Nursery and managed as part of the annual Position Description process. The course is developed and is presently offered online.

For 274 Forest Measurement and Inventory (3 cr)
Practical techniques for the design and execution of vegetation measurements for the inventory of forests, shrublands, and fire-fuels. Three one-hour lectures and one three-hour lab per week. (Fall only)
Prereq: *Math 143; or SAT math score of 610 or above, or ACT math score of 27 or above.*
Prereq *or* ***Coreq:*** *Math 144*

For 299 (s) Directed Study (cr arr)

For 310 Indigenous Culture and Ecology (3 cr, max 9)
Students will explore how both endemic plant and animal species and native culture have been impacted by non- native species. A roughly 10 day field trip to remote communities requires active and effective participation, hands-on projects are conducted in those communities based on preparatory materials, and a there is a major presentation for Idaho stakeholders upon completion of the field trip.

For 320 Dendrology (4 cr)
Phylogenetic approach to understanding the systematics, morphology, geography, and ecology of the major species of North American woody plants. Includes identification and classification of important tree species of North American and other important woody plants of the Pacific Northwest and northern Rocky Mountains. Three lectures and two 1.5-hour labs a week; two 1-day field trips.
Prereq *or* ***Coreq:*** *Biol 116 or PlSc 205*

For 324 Forest Regeneration (3 cr)
Natural and artificial regeneration of forest ecosystems; reproduction methods; selection of seed source and stock type; nursery cultural practices; tree improvement; site preparation methods to establish regeneration. One lecture and one 2-hr lab a week. Two all day field trips. A semester-long project requires time spent weekly in a nursery to regularly monitor plant development under varied environmental conditions (approximately 45 hours over the 18-week spring semester in addition to lectures, labs and out-of-class studying). (Spring only)
Prereq: *For 274, For 330, Soil 205 and Soil 206*

For 325 Numerical Analysis for Fire Managers (4 cr)
The assembly, summarizing and display of fire management data, including fuels inventories, fire occurrence, behavior, and weather, as well as environmental and other effects of fire. Students will learn to formulate testable hypotheses from data, develop predictive equations and correlations, create probability-weighted decision matrices, and draw supportable conclusions from analyses. Intensive off-campus short course with pre-work and homework. Course is only open to students enrolled in the US Technical Fire Management program. (Fall only)
Prereq: *1 year of high school math and a minimum 5 years of experience in natural resource management*

For 326 Fire Ecology and Management (3 cr)
Credit may only be earned in For 326 or For 426, but not both. The study of wildfire as a biophysical and ecological process, including controls of wildfires, ecological effects of wildfires, fire history, and fire in the context of global environmental change. Current issues in fire management in the Western US and globally, including readings and discussions of recent scientific literature. One-day field trip with data collection and formal lab write up. (Fall only).
Prereq: *For 221 or REM 221*

For 330 Forest Soil and Canopy Processes (4 cr)
Above- and below-ground biophysical processes that determine how forest ecosystems function. Emphasis is on interactions affecting forest productivity including soil nutrient cycles, light energy, water and nutrient acquisition. Process modeling is used to illustrate effects of complex interactions on carbon budgets. Applications include effects of environmental stress and disturbance such as forest management, fire, pests and global climate change. Builds from general ecology (For 221/REM 221) by exploring processes controlling forest production, and establishes a foundation to address forest management questions in For 324 and For 424. Two lec and one 4-hr lab a week, including several field trips.
Prereq: *Soil 205; and Math 143 or Math 160, and Phys 100/100L or Phys 111/111L, and For 221 or REM 221*

For 373 Forestry Sampling Methods (2 cr)
Principles and practice of natural resource inventory, forest sampling and data analysis techniques, LIDAR, forest growth, and quantitative decision support. Lab analysis examples and use of Excel and statistical packages are integrated into lectures. (Fall only)
Coreq: *For 274 and Stat 251*

For 375 Introduction to Spatial Analysis for Natural Resource Management (3 cr)
Methods and techniques for obtaining quantitative and qualitative geospatial information from aerial and satellite images, maps, and the Global Positioning System for input into geographic information systems. Analysis of geospatial data for mapping, monitoring and planning associated with all aspects of natural resource management. Two lec and one 2-hr lab a wk.
Prereq: *College Algebra*

For 398 (s) Renewable Natural Resources Internship (cr arr)
Supervised field experience with an appropriate public or private agency. Reqd for cooperative education students. Graded P/F.
Prereq: *Permission of department*

For 400 (s) Seminar (cr arr)

For 403 (s) Workshop (cr arr)

For 404 (s) Special Topics (cr arr)

For 424 Forest Dynamics and Management (4 cr)
Integrated methods and techniques for sustainable management of forest ecosystems including, stand and disturbance dynamics, exercises in forest assessment, thinning, harvesting, silviculture prescriptions, forest modeling and communicating management guidelines. Major integrative final project required. Course includes field labs and lectures; on average 3-hrs of lectures and 2-hrs of lab per week. (Fall only)
Prereq: *Senior standing and For 274, For 320, For 324 and For 330*

For 425 Forest and Soil Nutrient Cycling (3 cr)
Forest nutrient management requires an understanding of biogeochemical cycles relevant to forest ecosystems including inputs of plant nutrients from the atmosphere and lithosphere, accumulation by vegetation, soil cycling, processes, and losses to the atmosphere and hydrosphere. Two 1-hr lectures and with a 3-hr lab.
Prereq: *For 330 and Soil 205*

For 426 Global Fire Ecology and Management (3 cr)
Credit may only be earned in For 326 or For 426, but not both. This course is only available to distance education students. Integrated fire-related ecological effects of fire on vegetation, soils, and air quality; natu-

FS J464/J564 Food Toxicology (3 cr)
General principles of toxicologic evaluation of chemicals, which intentionally or unintentionally enter the food chain. Toxicology of food additives, colors, preservatives, drugs, pesticides and natural toxins in foods and risk characterization. Additional projects/assignments required for graduate credit. Cooperative: open to WSU degree-seeking students.
Prereq: Biol 300 or Biol 380

FS J465/J565 Wine Microbiology and Processing (3 cr)
Technical principles related to the processing and fermentation of wines with an emphasis on microbiology. Cooperative: open to WSU degree-seeking students.
Prereq: Biol 250 and Biol 300

FS 466 Wine Microbiology and Processing Lab (1 cr)
Hands-on winemaking; application of chemical microbiological methods for wine analysis. Field trip required. Cooperative: open to WSU degree-seeking students.
Prereq or Coreq: FS 465 or 565

FS J470/J570 Advanced Food Technology (3 cr)
Physical principles of food preservation and recent advances in food technology. Recommended Preparation: FS 432, and FS 460. Additional projects/assignments required for graduate credit. Cooperative: open to degree-seeking students.
Prereq: FS 302 and FS 303

FS 489 Food Product Development (3 cr)
Course serves as a capstone experience for food science seniors, and will require the application of food chemistry, food processing/engineering, and microbiology course knowledge in formulating a new food product. Cooperative: open to WSU degree-seeking students.
Prereq: FS 302, FS 303, FS 416, and FS 460; and senior standing

FS 499 (s) Directed Study (cr arr)
Cooperative: open to WSU degree-seeking students.

FS 500 Master's Research and Thesis (cr arr)

FS 501 (s) Seminar (cr arr)

FS 502 (s) Directed Study (cr arr)

FS 503 (s) Workshop (cr arr)
Workshops focusing on Food Science. Cooperative: open to WSU degree-seeking students.

FS 504 (s) Special Topics (cr arr)
Topics in Food Science. Cooperative: open to WSU degree-seeking students.

FS 509 Principles of Environmental Toxicology (3 cr)
See FS J409/J509.

FS 510 Functional Foods and Health (3 cr)
Functional foods are foods that provide health benefits beyond basic nutrition. This course will deal with the actions of bioactive compounds in functional foods and nutraceuticals as they relate to disease prevention and health promotion. In addition, this course will cover (1) the chemistry and mechanism of action of the various bioactive compounds, and (2) the safety, efficacy, stability and regulatory aspects of functional foods and nutraceuticals. The course is intended for graduate students in food science, nutrition, or related biological science fields. Cooperative: open to WSU degree-seeking students.

FS 511 Food Lipids (3 cr)
To gain an understanding of the functionality fats in our foods and the beneficial and detrimental health related aspects of fats in our diets. Emphasis will be placed on relationships among fat and oil chemistry and the physiological results of eating foods containing specific triacylglycerols, fatty acids, and other lipids. Recent research and popular literature will supplement the discussions. Cooperative: open to WSU degree-seeking students.

FS 512 Food Proteins and Enzymes (2 cr)
Chemistry/biochemistry of proteins/enzymes applied to food research and industry; protein functionality/enzyme technology application to food industry. Cooperative: open to WSU degree-seeking students.

FS 513 Food Carbohydrates (3 cr)
This course will provide insight into structure-function relationships of polysaccharides within food systems as a function of their respective molecular structures and physical characteristics. Cooperative: open to WSU degree-seeking students.

FS 516 Food Laws (2 cr)
Become familiar with government statutes and regulations that contribute to a safe, nutritious, and wholesome food supply. Understand more about the law and the US legal system relevant to the regulation of the manufacture and sale of food and supplements, including jurisdictional issues, administrative law, and tort, contract, corporate, environmental, labor and criminal law issues. Senior or Graduate student standing recommended. Cooperative: open to WSU degree-seeking students.

FS 517 Scientific Writing (2 cr, max 4)
Planning, writing, reporting, reviewing and evaluating current food-related research. Cooperative: open to WSU degree-seeking students.

FS 518 Oral Seminar (1 cr)
Development of skills and communication tools and techniques for oral presentations of current food science research. Additional projects/assignments required for graduate credit. Cooperative: open to WSU degree-seeking students.

FS 520 Instrumental Analysis (2 cr)
Theory and techniques involved in the use of various instruments in modern biological laboratories; topics include chromatography, spectrometry, sterilization, sample preparation, radioisotope techniques, electrophoresis, centrifugation, and fermentation. Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq: Permission

FS 522 Sensory Evaluation of Food and Wine (3 cr)
See FS J422/J522

FS 529 Dairy Products (3 cr)
See FS J429/J529.

FS 530 Dairy Products Lab (1 cr)
See FS J430/J530.

FS 532 Advanced Food Microbiology (3 cr)
Discuss current topics in foodborne pathogen including novel detection, method, virulence, and pathogenesis, and their interaction with environment and host. Recommended Preparation: Biol 115, Biol 250, and FS 416. Cooperative: open to WSU degree-seeking students.

FS 536 Principles of Sustainability (3 cr)
See FS J436/J536.

FS 538 Introduction to Physical Properties of Foods (2 cr)
Thermophysical behavior of foods and biopolymers, including water transport/activity, rheological, thermal, dielectric and barrier properties. Newtonian and non-Newtonian flow; Viscous, viscoelastic, and Hookean behavior. Relationship between rheology of food biopolymers and structure, composition, temperature, and plasticizer content. Recommended preparation one undergraduate course in calculus. Cooperative: open to WSU degree-seeking students.
Prereq: FS 432, FS 460, Math 310, or Permission

FS 564 Food Toxicology (3 cr)
See FS J464/J564.

FS 565 Wine Microbiology and Processing (3 cr)
See FS J465/J565.

FS 570 Advanced Food Technology (3 cr)
See FS J470/J570.

FS 583 Advances in Cereal Science and Technology (2 cr)
Chemistry and functionality of cereal grains as related to their processing and product quality. Cooperative: open to WSU degree-seeking students.

FS 588 Food Science Teaching Practicum (1-3 cr)
Supervised teaching in a university setting. Cooperative: open to WSU degree-seeking students.
Prereq: Admission to graduate program and Permission

FS 600 Doctoral Research and Dissertation (cr arr)

FS 220 Food Safety and Quality (3 cr)
Regulation, safety, and wholesomeness of food products; microbiological, chemical, and physical risks associated with food; hazard analysis as related to food safety, processing and quality; sanitation and pest management principles; methods for analyzing the sensory qualities of food products; problem management associated with food quality assurance. Cooperative: open to WSU degree-seeking students.

FS 302 Food Processing Lab (1 cr)
Application of specialized techniques, concepts and practices of food processing. Field Trip required. Cooperative: open to WSU degree-seeking students.
Prereq: FS 110 or FS 220; and Math 160 or Math 170; and Stat 251

FS 303 Food Processing (3 cr)
Specialized techniques, concepts and practices of food processing. Cooperative: open to WSU degree-seeking students.
Prereq: FS 110 and FS 220; Math 160 or Math 170; and Stat 251
Coreq: FS 302

FS 304 Cereal Products (2 cr)
Technical principles related to production and commercial processing of legume and cereal foods. Field trip required. Cooperative: open to WSU degree-seeking students.
Prereq: Chem 275 and Chem 276

FS 363 Animal Products for Human Consumption (4 cr)
See AVS 363.

FS 398 (s) Internship (cr arr)
Supervised professional internship in the food industry; requires formal written plan of activities approved by academic advisor and department head. Final written report and presentation required. Cooperative: open to WSU degree-seeking students.
Prereq: Permission of department.

FS 400 (s) Seminar (cr arr)

FS 403 (s) Workshop (cr arr)
Workshops focusing on Food Science. Cooperative: open to WSU degree-seeking students.

FS 404 (s) Special Topics (cr arr)
Special topics related to Food Science. Cooperative: open to WSU degree-seeking students.

FS 406 Evaluation of Dairy Products I (1 cr)
Identifying defects in dairy products and relating these defects to their probable cause; remedies. Cooperative: open to WSU degree-seeking students.

FS J409/J509 Principles of Environmental Toxicology (3 cr)
Same as EnvS J409/J509. Fundamental toxicological concepts including dose-response relationships, absorption of toxicants, distribution and storage of toxicants, biotransformation and elimination of toxicants, target organ toxicity and teratogenesis, mutagenesis, and carcinogenesis; chemodynamics of environmental contaminants including transport, fate, and receptors; chemicals of environmental interest and how they are tested and regulated; risk assessment fundamentals. Students registering for FS 509 are required to prepare an additional in-depth report. Recommended Preparation: Biol 102 or Biol 115, Chem 111, Chem 112, Chem 275, and Stat 251. Cooperative: open to WSU degree-seeking students.

FS 416 Food Microbiology (3 cr)
Purpose for enumeration, detection, and identification of microorganisms in food products; physical, chemical, and environmental factors influencing growth and survival of foodborne microorganisms; pathogenic and spoilage microorganisms in food and their control. Cooperative: open to WSU degree-seeking students.
Prereq: Biol 250 and Biol 255

FS 417 Food Microbiology Laboratory (2 cr)
Methods for enumeration, detection, and identification of spoilage and pathogenic microorganisms in foods. Two 3-hr labs a wk. Cooperative: open to WSU degree-seeking students.
Prereq or Coreq: FS 416

FS 418 Oral Seminar in Food Science (1 cr)
Development of skills and communication tools and techniques for oral presentations of current food science research. Cooperative: open to WSU degree-seeking students
Prereq: FS 110 or FS 220; and junior standing; and major in Food Science

FS J422/J522 Sensory Evaluation of Food and Wine (3 cr)
Theory, principles and application of sensory evaluation techniques to evaluate appearance, aroma, flavor and texture of foods and wine. Additional projects/assignments required for graduate credit. Cooperative: open to WSU degree-seeking students.
Prereq: FS 110 or FS 113; and Stat 251

FS 423 Sensory Evaluation of Food and Wine Laboratory (1 cr)
This course will provide a practical application of FS 422, including the theory, principles and applications of sensory evaluation techniques for the evaluation of appearance, aroma, flavor and texture of foods and wine. Recommended for ages 21 or older. Cooperative: open to WSU degree-seeking students.

FS J429/J529 Dairy Products (3 cr)
Dairy chemistry, microbiology, sanitation, product development and processing from cow to consumer. Cooperative: open to WSU degree-seeking students.
Prereq: Biol 250 and Biol 300

FS J430/J530 Dairy Products Lab (1 cr)
Students gain hands-on skills formulating, processing, evaluating and analyzing dairy products. Communication and critical thinking skills are also developed in this laboratory course. Graduate level has additional requirements. Cooperative: open to WSU degree-seeking students.

FS 432 Food Engineering (3 cr)
Fundamentals of food engineering for improving the efficiency of food processing operations and the quality of processed food. Principles of heat transfer, steam, air-vapor mixtures, refrigeration and fluid flow as applied to food processing and storage. Cooperative: open to WSU degree-seeking students.
Prereq: FS 302, FS 303, and Phys 111

FS 433 Food Engineering Lab (1 cr)
To enhance the learning experience of the students taking FS 432 through laboratories, problem sessions and group discussions. Cooperative: open to WSU degree-seeking students.
Prereq or Coreq: FS 432

FS J436/J536 Principles of Sustainability (3 cr)
Same as EnvS J436/J536. Presented as online doculectures, covering topics such as: Origins of Sustainability, Standards of Sustainability, Culture of Waste, Built Environment, Industrial Sustainability, Energy Sustainability, Water Resources, Measuring Sustainability, Sustainable Impact Assessment, and Our Sustainable Future. Readings and homework are assigned with each topic. Learning assessment will be from homework, exams and written papers. Additional work is required for graduate credit. Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq: Junior or higher standing

FS 460 Food Chemistry (3 cr)
Fundamentals of food chemistry; composition of foods and the changes that occur during processing. Cooperative: open to WSU degree-seeking students.
Prereq: Chem 275 and Chem 276; or Chem 277 and Chem 278, and Biol 300 or Biol 380

FS 461 Food Chemistry Laboratory (1 cr)
Experiments related to properties, reactions, and interactions of chemical components of foods. Cooperative: open to WSU degree-seeking students.
Coreq: FS 460

FS 462 Food Analysis (3 cr)
Introductory food analysis; methods common to many food commodities. Recommended Preparation: FS 460 and FS 461. Cooperative: open to WSU degree-seeking students.
Prereq: FS 302 and FS 303; and Chem 275/Chem 276 or Chem 277/Chem 278; and Senior Standing

Fish 422 Concepts in Aquaculture (3 cr)
Concepts and methods of extensive and intensive aquaculture in warm water and cold water systems. Two field trips reqd (a 1-day and a 3-day field trip). Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq or Coreq: Biol 481

Fish 424 Fish Health Management (4 cr)
Epidemiology, prevention, diagnostics, and treatment of infections and non-infectious diseases of free-living and confined finfish and shellfish. Two field trips reqd (a 1-day and a 3-day field trip). Recommended Preparation: Fish 422. Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq: Biol 250

Fish 430 Riparian Ecology and Management (3 cr)
Structure, function, and management of riparian ecosystems; interrelationships of terrestrial and aquatic components of riparian areas. 3 field trips. Special fee required. (Spring only)
Prereq: For 221, REM 221, or Biol 314

Fish 483 Senior Project Presentation (1 cr)
See For 483.

Fish 485 Ecology and Conservation Biology Senior Project (1-3 cr, max 3)
See WLF 485.

Fish 494 Current Issues in Fish Health (1 cr)
Focus on a range of issues related to fish health that are of regional and/or global importance. It is designed as a discussion course focusing on published literature. Professionals working in the fish health field may also present guest lectures. Recommended Coreq: Biol 250. (Fall, Alt/yrs)
Prereq: Senior standing

Fish 495 (s) Seminar (1 cr)
Discuss integrating biological, social, political, economic, and philosophic aspects of problems in managing fishery resources. (Spring only)
Prereq: Senior standing

Fish 497 Senior Thesis (1-3 cr, max 6)
Preparation of thesis, exhibition, video, computer program, multimedia program, or other creative presentation based on research conducted under the guidance of a faculty mentor.
Prereq: Cumulative GPA of at least 3.2 in all college courses, completion of at least 90 credits, and permission of a faculty mentor

Fish 499 (s) Directed Study (cr arr)
For the individual student; conferences, library, field, or lab work.
Prereq: Senior standing, GPA 2.5, and Permission

Fish 500 Master's Research and Thesis (cr arr)

Fish 501 (s) Seminar (cr arr)
Major philosophy, management, and research problems of wildlands; presentation of individual studies on assigned topics. Graded P (pass)/F (fail).
Prereq: Permission

Fish 502 (s) Directed Study (cr arr)

Fish 503 (s) Workshop (cr arr)
Selected topics in the conservation and management of natural resources.
Prereq: Permission

Fish 504 (s) Special Topics (cr arr)

Fish 510 Advanced Fishery Management (3 cr)
Contemporary management of marine and freshwater fish and shellfish populations of the world. Approaches, factors and models used to manage commercial, recreational and subsistence fisheries; and the policy interface of biological systems with governmental and social institutions. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)

Fish 511 Fish Physiology (2 cr)
Principles and methods used to study vital organs, organ systems, growth, and reproduction of fishes; emphasis on osmoregulation, metabolism, endocrinology, and respiration. Cooperative: open to WSU degree-seeking students. (Fall. Alt/yrs)
Prereq: Permission

Fish 515 Large River Fisheries (2 cr)
Management issues and problems in large river fisheries in North America and globally; importance of flood plains; ecological bases for management actions in large rivers; river fisheries in the context of multiple use of large rivers. Cooperative: open to WSU degree-seeking students. (Fall, Alt/yrs)

Fish 521 Community Ecology (3 cr)
Introduction to literature and contemporary research into processes structuring ecological communities. Topics will encompass community ecology in a range of ecological systems and across trophic levels, including community impacts on ecosystem processes. (Fall/Alt/yrs)
Prereq: For 221 or REM 221

Fish 525 Aquaculture in Relation to Wild Fish Populations (2 cr)
Historical and current relationships between wildness and domestication as it relates to fisheries management and aquaculture in mitigation and industry. Interactions between wild and hatchery-reared fishes, including salmon. Cooperative: open to WSU degree-seeking students. (Fall, alt/yrs)

Fish 530 Stream Ecology (3 cr)
Same as REM 530. Structure and function of running water ecosystems; principles of population, community, and ecosystem ecology in streams and rivers. Three 1-day field trips reqd. (Fall, Alt/yrs)

Fish 540 Wetland Restoration (3 cr)
This web-based course contains modules covering wetland science, restoration ecology, freshwater restoration, coastal restoration, and monitoring/maintenance. The emphasis is on the science of wetland ecosystems and the applied ecology/practice of restoration, with additional consideration of cultural and socio-political contexts. Extensive readings, an assignment, and a study guide are required for each module. Students apply their learning in and contribute relevant professional experience to weekly online discussions. Students are also responsible for obtaining documentation of at least one wetland restoration site in their region and conducting a site visit in order to evaluate the success of the restoration project. A final exam (re-design of a failed restoration project) is administered online, with partial credit earned through discussion with an interdisciplinary team of classmates and the remaining credit earned through individual analysis and synthesis. (Fall only)
Prereq: Biol 115 and 116; and For 221 or Biol 314 or Permission

Fish 597 (s) Practicum (cr arr)

Fish 598 (s) Internship (cr arr)

Fish 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Fish 600 Doctoral Research and Dissertation (cr arr)

Food Science Courses

Denise Smith, Dept. Head, UI/WSU Bistate School of Food Science (111 Agricultural Science Bldg., 83844-2312; phone 208/885-0707; e-mail foodscience@uidaho.edu).

FS 110 Introduction to Food Science (3 cr)
Chemistry, microbiology, and processing of food and food products; concepts of food preservation, packaging and marketing of foods; food additives and regulations; world food problems. Field trip may be required. Cooperative: open to WSU degree-seeking students.

FS 113 Introduction of Vines and Wines (3 cr)
The importance of viticulture (grape growing) including world wine regions and enology (winemaking). Cooperative: open to WSU degree-seeking students.

FS 201 Science on Your Plate (3 cr)
Applications of science, scientific literacy, and critical thinking as related to the development and manufacture of modern food products and their use in modern civilizations. Cooperative: open to WSU degree-seeking students.
Prereq or Coreq: One science or physical science course

FS 204 (s) Special Topics (cr arr)

FCS 488 Management Supervised Practice (8 cr)
Supervised practice with dietitians and employees in school and hospital food service settings in Idaho or Washington.
Prereq: FCS 387 and Senior Standing in CPD

FCS 490 Infant & Toddler SPED Internship (1-7 cr)
Direct practical experience in settings serving typically and atypically developing infants: ages birth to 35months. Demonstration of screening, assessment, development of IFSP, programming in natural environments, working closely with parents to increase their roles as partners and collaboration among service providers.
Prereq: FCS 480 and FCS 481

FCS 491 Research Methods in Food Nutrition (3 cr)
Research methodology currently used in food and nutrition; critical review of the literature; use of electronic surveys; research proposal and presentations. (Spring only)
Prereq: FCS 205 and Stat 251

FCS 492 Nutrition Education in the Life Cycle (2 cr)
Principles and theories of learning, curriculum development, evaluation methods, and applied food and nutrition education throughout the life cycle. (Spring only)
Prereq: FCS 205 and FCS 486

FCS 494 Portfolio Development (3 cr)
Preparation of a professional portfolio, in both digital and hard copy formats, for design, merchandising, and other FCS career development applications.
Prereq: FCS 319 and FCS 324; or Permission

FCS 496 Internship: Fashion Business (2-8 cr, max 8)
Supervised experience in fashion business: fashion design, textile/apparel manufacturing, retailing, merchandising; geared to career goals of student. Graded P/F.
Prereq: Clothing, Textiles and Design major and FCS 395.

FCS 497 Internship Preschool (cr arr)
Supervised applied experience in child development and family relations. The field experience offers opportunity for students to learn about working in settings for children and families.
Prereq: FCS 234 with a grade of 'C' or better, FCS 235 with a grade of 'C' or better, FCS 333 with a grade of 'C' or better, and Permission

FCS 498 (s) Internship (3-9 cr, max 9)
Supervised internship in education institutions, governmental/social agencies, hospitals, business, or industry; geared to the professional goals of students.
Prereq: Permission

FCS 499 (s) Directed Study (cr arr)

FCS 500 Master's Research and Thesis (cr arr)

FCS 501 (s) Seminar (cr arr)

FCS 502 (s) Directed Study (cr arr)

FCS 503 (s) Workshop (cr arr)

FCS 504 (s) Special Topics (cr arr)

FCS 508 Helping Skills in Family and Consumer Sciences (3 cr)
Using the Skilled Helper Model, students apply the model in working with families and clientele in FCS occupations. (Spring only)

FCS 534 Adulthood and Aging within the Context of Family (3 cr)
See FCS J434/J534.

FCS 540 Parent-Child Relationships (3 cr)
Open to nonmajors. The developing family; patterns of child rearing.
Prereq: FCS 234 or 334, 440, and 6 credits in Psychology and/or Sociology or Equivalent

FCS 545 Issues in Work and Family Life (3 cr)
See FCS J445/J545.

FCS 562 Eating Disorders (2 cr)
See FCS J462/J562.

FCS 590 Intellectual Foundations in Family and Consumer Sciences (3 cr)
Overview of historical perspectives of family and consumer sciences profession; explanation and application of alternative modes of inquiry in family and consumer sciences research.

FCS 597 (s) Practicum (cr arr)

FCS 598 (s) Internship (cr arr)
Supervised internship in educational institutions, governmental/social agencies, hospitals, or industry; geared to the educational and vocational goals of students.
Prereq: Permission

FCS 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Fishery Resources Courses

Kerry Paul Reese, Dept. Head, Dept. of Fish and Wildlife Sciences (104 CNR Bldg. 83844-1136; phone 208/885-6434).

Prerequisite: Courses in this subject field that are numbered above 299 are not open to undergraduate students on academic probation.

Fish 102 The Fish and Wildlife Professions (1 cr)
Same as WLF 102. Orientation of students to the profession of fishery resources and wildlife resources: introduction to fish and wildlife faculty, review of fish and wildlife curriculum, awareness of career opportunities, employment procedures, associated job duties/responsibilities, job preparation, educational preparation, and management challenges in the Pacific Northwest. (Fall only)

Fish 200 (s) Seminar (cr arr)

Fish 203 (s) Workshop (cr arr)

Fish 204 (s) Special Topics (cr arr)

Fish 299 (s) Directed Study (cr arr)

Fish 314 Fish Ecology (3 cr)
Examination of physical, chemical, and biological factors that affect fish populations and communities, with emphasis on environmental stressors. Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq: For 221, REM 221, or Biol 314

Fish 315 Fish Ecology Lab (1 cr)
Laboratory and field experience in fish ecology with emphasis on field techniques, laboratory experimentation, and habitat assessment. One weekend field trip and several day trips required. (Fall only)
Prereq: For 221, REM 221, or Biol 314
Coreq: Fish 314

Fish 316 Principles of Population Dynamics (2 cr)
Basic principles of population ecology of animals. Taught first half of semester. (Spring only)
Prereq: Fish 314 and Fish 315 with a grade of 'C' or better and For 221, REM 221, or Biol 314; or Permission

Fish 398 (s) Renewable Natural Resources Internship (cr arr)
Supervised field experience with an appropriate public or private agency. Reqd for cooperative education students. Graded P/F.
Prereq: Permission of department

Fish 400 (s) Seminar (cr arr)

Fish 403 (s) Workshop (cr arr)

Fish 404 (s) Special Topics (cr arr)

Fish 415 Limnology (4 cr)
Physical, chemical, and biological features of lakes and streams. Four 1-day field trips. (Fall only)
Prereq: Stat 251 and For 221, REM 221, or Biol 314

Fish 418 Fisheries Management (4 cr)
Techniques employed in sampling and application of principles toward managing recreational and commercial aquatic resources. Three lec and one 3-hr lab a wk; two weekend field trips. Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq: Fish 314, Biol 481, Stat 251

FCS 424 Apparel Product Line Development: Senior Capstone (3 cr)
Advanced patternmaking, draping, and construction skills, combined with aesthetic principles of design, prepare students to create apparel lines. A senior capstone to design and product development studies. Two 3-hour studios a week and assigned work.
Prereq: FCS 119, FCS 323, FCS 324, or Permission

FCS 428 Housing America's Families (3 cr)
Housing, furnishings, and equipment as they influence family well-being, and families' housing choices as affected by social, psychological, economic, technological, and political factors. Four-five 2-hr field trips. (Spring only)

FCS J434/J534 Adulthood and Aging within the Context of Family (3 cr)
Analysis of development from young adulthood to old age. Includes factors that influence changes as well as continuity in physical, emotional, social, cognitive, and creative development. Overview of theories of human development and current issues in aging, including dementia, family and lifestyle choices, relationships, retirement, and grandparenting. Requirements for graduate credit include conducting a review of literature in a chosen topic and presenting it to the class. (Alt/yrs, spring only)
Prereq: FCS 105, Junior standing

FCS 435 Feeding Young Children in Group Settings (1 cr)
This course increases awareness concerning the best practices in feeding young children. Practical, hands-on activities and assignments are included in the course through videotapes and the course website, www.cals.uidaho.edu/feeding.

FCS 436 Theories of Child and Family Development (3 cr)
Identification, interpretation, and evaluation of individual and family developmental theories. (Fall only)
Prereq: Family and Consumer Sciences major or Permission

FCS 440 Contemporary Family Relationships (3 cr)
Dynamics of the major types of family relationships; marital, parent-child, sibling, and extended-family interaction in contemporary society. (Spring only)
Prereq: Psyc 101, Soc 101, or Permission

FCS J445/J545 Issues in Work and Family Life (3 cr)
Study of theories, trends, policies, and issues related to work and family; examination of assessment instruments; development of proposals. Additional projects/assignments required for graduate credit. (Spring only)
Prereq: FCS 105 and 346; and Family and Consumer Sciences major

FCS 446 Financial Counseling and Debt Management (3 cr)
Course content includes an examination of financial counseling and debt management with individuals and families. Topics include principles of financial counseling, budgets, financial statements, credit, debt, collection policies and practices, mortgages, foreclosures, and bankruptcy. After completion, students are eligible to take a national exam towards becoming an Accredited Financial Counselor. Recommended Preparation: FCS 346. (Fall only)

FCS 448 Consumer Economic Issues (3 cr)
Consumer economic issues, including consumers in the marketplace, the consumer movement, rights and remedies, advocacy, public policy, decision making, buying, credit, banking, insurance, clothing, health care, food, housing, and investments. (Fall only)
Prereq: Econ 201, Econ 202, Econ 272 or FCS 105; or Permission

FCS 461 Methods & Strategies in FCS Education (3 cr)
Changing family and societal conditions and enhancing teaching and learning processes are addressed in this course. A focus is integration of professional-technical concepts and the development of classroom presentation skills.
Prereq: FCS 350

FCS J462/J562 Eating Disorders (2 cr)
Examination of anorexia nervosa, bulimia nervosa, compulsive eating, obesity, and weight preoccupation; discussion of cultural and nutritional factors, family issues, and psychological consequences, as well as preventative and therapeutic interventions. Additional projects/assignments required for graduate credit.
Prereq: Family and Consumer Sciences major or Permission

FCS 463 Helping Skills in Dietetics (2 cr)
Application and integration of the Skilled Helper and nutritional counseling models in dietetics. Development of communication skills essential for effective helping. This course requires role-playing. Students are assessed on the knowledge and skills they have acquired. (Fall only)
Prereq: FCS 362

FCS 465 Introduction to FCS Internship (3 cr)
Field-based introduction to the student teaching environment with guided observations and initial lesson development. (Fall only)
Prereq: Assignment to student teaching site

FCS 469 Individualized Assessment and Instruction in the FCS Classroom (2 cr)
Capstone course in which the beginning teacher demonstrates understanding of how students differ in their approaches to learning, and is able to create instructional opportunities that are adapted to diverse learners. (Spring only)
Coreq: FCS 470 and 471

FCS 470 Curriculum Portfolio in FCS Education (2 cr)
Professional portfolio preparation based on internship activities for the College of Education Exit Standards. (Spring only)
Coreq: FCS 469 and 471

FCS 471 Internship in Family and Consumer Sciences Education (12 cr)
Sixteen weeks of practical experience in secondary family and consumer sciences program. (Spring only)
Prereq: Admission to teacher education, FCS 350
Coreq: FCS 469 and 470

FCS 472 Clinical Dietetics II (8 cr)
Continuation of FCS 364. Supervised practice in Washington/Idaho hospitals. (Spring only)
Prereq: FCS 364, Senior standing in CPD

FCS 473 Community Nutrition (3 cr)
Identification of current public health nutrition problems; influence of socioeconomic, cultural and psychological factors on food and nutrition behavior; available community programs; program development and marketing; and the implications of public policy legislation; teaching/counseling methods for the nutrition education of small groups and individual clients/patients. (Fall only)
Prereq: FCS 270

FCS 475 Food Preservation (1 cr)
Online course explores foodborne illness, food safety and food science behind high quality, shelf-stable home preserved foods; topics include water bath canning, pressure canning, pickling, freezing and drying. Real-time chat Thursdays at 1:00 PDT.
Prereq: FCS 170

FCS 480 Assessment: Early Childhood/SPED (3 cr)
The assessment process, link between assessment, curriculum planning, and IEP/IFSP development, cultural responsiveness in assessment, legal issues and family partnerships. Practical experience using strategies and tools for screening and assessing development of infants and children birth through age 8, including typical and atypical development. Recommended Preparation: FCS 234 and FCS 333.

FCS 481 Early Childhood SPED Curriculum (3 cr)
Overview of typical and atypical infant and child development; instructional strategies for working with infants, toddlers and young children through third grade, linking assessment, curriculum and IEP and IFSP development, designing instructional programming for natural settings and formal settings; involving families, collaboration among professionals, working with volunteers and paraprofessionals. Recommended Preparation: FCS 234 and FCS 333.

FCS 486 Nutrition in the Life Cycle (3 cr)
Maternal nutrition and fetal development; lactation; nutritional needs and dietary patterns from conception to end of life. (Fall only)
Prereq: FCS 205; and Food and Nutrition major; or Permission

FCS 487 Community Nutrition Supervised Practice (4 cr)
Community nutrition supervised practice experience in WIC, Child Nutrition, wellness facilities, public health, etc.
Prereq: FCS 486 and Senior standing in CPD
Coreq: FCS 473 and FCS 486

process for a target customer, including corresponding design boards, line of garments, line presentation, and creation of an online portfolio site.
Prereq: FCS 119, FCS 123, and FCS 224

FCS 323 Apparel Product Development (3 cr)
Analysis of textile and apparel products and processes relative to design, development, and production methods, including evaluation of consumer value. Students must complete this course with a grade of 'C' or higher as a prerequisite to future Clothing, Textiles and Design courses.
Prereq: FCS 123 with a grade of 'C' or better and FCS 224 with a grade of 'C' or better; or Permission

FCS 324 Patternmaking (3 cr)
Methods and principles of flat pattern and draping design; use of pattern making skills and advanced construction skills in apparel product development; developing specifications for apparel production. Two 3-hour studios a week and assigned work. Students must complete this course with a grade of 'C' or higher as a prerequisite to future Clothing, Textiles and Design courses.
Prereq: FCS 224 with a grade of 'C' or better and Clothing, Textiles, and Design major; or Permission

FCS 329 History of Western Dress (3 cr)
Historic overview of western dress from ancient Mesopotamia and Egypt to Western Europe through the 20th century; focus on dress and human appearance as a reflection of the socio-cultural factors of the times. (Spring only)
Prereq: Junior standing; and FCS 123 and Art 100; or Permission

FCS 333 Developmental Curriculum for Young Children (4 cr)
Principles and practices of a developmentally based curriculum, assessment, intervention, and evaluation. Three hrs of lec and two hrs of lab a wk. (Spring only)
Prereq: FCS 235 with a grade of 'C' or better or Permission

FCS 334 Middle Childhood-Adolescence (3 cr)
Behavior, development, and guidance of children and youth from entrance in school until they are launched into adulthood; influences of family, school, peer group, and larger community. (Fall only)
Prereq: FCS 105, Psyc 101, Soc 101, or Permission

FCS 340 Parent-Child Relationships in Family and Community (3 cr)
May be taken by nonmajors. Dynamics of parent-child interactions and models for parent education programs in community and school settings. (Fall only)
Prereq: FCS 234 or 334

FCS 346 Personal and Family Finance and Management (4 cr)
Principles and procedures of individual and family management and their relationship to human and economic resources; applications of management principles to spending, saving, borrowing, and investing decisions. (Spring only)

FCS 350 Curriculum Development in Family and Consumer Sciences Education (3 cr)
Analysis of curricular models and content; development of curricular units for family life. (Fall only)
Prereq: Admission to teacher education

FCS 351 Administration of FCCLA Organizations (2 cr)
This course will prepare FCS education students to become successful advisors of co-curricular FCCLA chapters. Attendance at the state FCCLA convention required. (Spring only)
Prereq: Admission to teacher education, and CTE 111

FCS 361 Advanced Nutrition (3 cr)
Principles of nutrition; physiology of digestion, absorption and metabolism of nutrients. (Fall only)
Prereq: FCS 205, Biol 300, Biol 120 and Biol 121

FCS 362 Introduction to Clinical Dietetics (3 cr)
Nutritional assessment; review and application of the American Dietetic Association's Nutrition Care Process; introduction of nutrition therapies for disease. (Spring only)
Prereq: FCS 361

FCS 363 Medical Nutrition Therapy (4 cr)
Diet modification for adult and child needs in disease and convalescence. Clinical experience in Spokane hospitals. (Fall only)
Prereq: Senior standing in CPD

FCS 364 Clinical Dietetics I (4 cr)
Clinical experience and simulations preparing students for entry into hospital rotations in Idaho/Washington hospitals.. (Fall only)
Prereq: Senior standing in CPD

FCS 365 Advanced Nutrition Lab (1 cr)
Lab to accompany FCS 361 for students accepted into CPD program only. One 2-hour lab per week. (Fall only)
Prereq: CPD major, FCS 205, Biol 300, Biol 120 and Biol 121

FCS 384 Quantity Food Production and Equipment (3 cr)
Food production in large volume; use and selection of institutional equipment and food; supervised practice in food service. Three hrs of lec a wk. (Fall only)
Prereq: FCS 270 or Permission

FCS 385 Intro Dietetics Supervised Practice I (2 cr)
CPD supervised practice experience with emphasis in quantity food production. Weekly rotations in food service facilities with on-line discussions. One 3-hour lab and one recitation per wk. (Fall only)
Prereq: FCS 270
Coreq: FCS 384

FCS 387 Food Systems Management (3 cr)
Institutional organization and management; supervised practice in food service. Three lec a wk. (Spring only)
Prereq: FCS 384 or Permission

FCS 388 Food Systems Management Lab (1 cr)
CPD supervised practice experience including introductory clinical, community, and food service management activities and facility rotations. One 3-hour lab per wk. (Spring only)
Prereq: FCS 384
Coreq: FCS 387

FCS 395 Career Development in Apparel & Textiles (1 cr, max 2)
Preparation for professional internship and job search experiences, including identifying goals, skills, opportunities and strategies, fine-tuning resumes, the application processes, preparing for interviews, analyzing the internship, and introductory portfolio preparation. (Fall only)
Prereq: Cloth, Textiles and Design major or Permission

FCS 400 (s) Seminar (cr arr)

FCS 403 (s) Workshop (cr arr)

FCS 404 (s) Special Topics (cr arr)

FCS C410 Growing Old in a New Age (3 cr)
Overview of issues related to aging; life-span development, how environments affect older persons, seeking an optimal quality of life, cross-cultural considerations, how aging is studied, and how to access resources.

FCS 411 Global Nutrition (3 cr)
The history of food, hunger, and the global nature of food systems. Food & culture, environmental impact of food decisions, agricultural production, world populations relative to food supply, hunger, biotechnology, safety of our food supply, sustainability, effects of urbanization, and problems of under- and over-nutrition will be examined. (Spring only)

FCS 414 Idaho's Journey Toward Diversity and Human Rights (1 cr, max 3)
Off campus traveling workshop on Idaho's past and current challenges of diversity and human rights.
Prereq: Psyc 101, Soc 101, or PolS 101 or Permission

FCS 419 Dress and Culture (3 cr)
Dress and culture examined from an interdisciplinary and cross-cultural perspective with emphasis on diversity within a global scale society; the relationship of dress to physical environments, social and economic systems, aesthetic expression, individual identity, and cultural ideals and values. Field trip. (Spring only)
Prereq: Humanities and Social Science General Education completed, Junior standing, or Permission

FCS 423 Sewn Product Industry Tour (1 cr, max 3 cr)
Field site tours of apparel industry firms representing design, manufacturing, merchandising, sourcing, retailing, and other aspects of the industry. Forty-five hours of instruction, field experience, and follow-up project work (3 hours prep, 32 hours tours/company visits, 10 hours project). Variable field trip fee depending on actual cost.
Prereq: Clothing, Textiles and Design major and junior standing; or Perm

EMBA 534 Managing and Leading Change (2 cr)
Examines how to lead transformational change and manage mid level organizational change through personal and project initiatives.

EMBA 535 Decision Analysis (3 cr)
Theory and practice of decision making under uncertainty and risk in individual and multi-person settings.

EMBA 542 Negotiation and Conflict Management (2 cr)
Theory and practice of negotiation and dispute resolution.
Prereq: EMBA 535

EMBA 543 Assessing to Improve Firm Performance (3 cr)
Evaluation of organizational performance from multiple perspectives using quantitative and qualitative methods.

EMBA 544 Risk Management (3 cr)
Introduction to the tools, models, and strategic aspects of risk management.
Prereq: EMBA 514

EMBA 545 Integrative Business Analysis (1-3 cr, max 3)
All EMBA students must complete a project or business case designed in consultation with faculty prior to graduation. The purpose of the project or case is to integrate and synthesize topics learned in the EMBA program.
Prereq: EMBA 509, EMBA 512, EMBA 514, EMBA 516, EMBA 517, EMBA 521, EMBA 524, EMBA 525, EMBA 522, and EMBA 534

EMBA 546 Managing for Your Future (1 cr)
A personal perspective on the lessons learned in the EMBA program and a plan on utilizing those lessons in the student's professional career.

EMBA 599 (s) Non-thesis Master's Research (1-3 cr, max 6)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Family and Consumer Sciences Courses

Sonya S. Meyer, Dept. Chair, Margaret Ritchie School of Family and Consumer Sciences (Mary Hall Niccolls Family and Consumer Sciences Bldg. 83844-3183; phone 208/885-6546; famcon@uidaho.edu).

FCS 105 Individual and Family Development (3 cr)
Basic principles and sequences in individual and family development; family structure and functions as they support human development. (Fall only)

FCS 119 Introduction to Fashion and the Apparel Industry (3 cr)
Introduction to the sewn product manufacturing and merchandising industry; overview of socio-cultural, historic, aesthetic, design, business, and economic factors; emphasis on careers in the sewn products industry. Students must complete this course with a grade of 'C' or higher as a prerequisite to future Clothing, Textiles and Design courses. (Fall only)
Prereq: Clothing, Textiles and Design major; or Child, Family, and Consumer Studies major; or Permission

FCS 123 Textiles (3 cr)
Fiber, yarn, and fabric properties, color and finishes as they relate to performance, care, and consumer satisfaction. Students must complete this course with a grade of 'C' or higher as a prerequisite to future Clothing, Textiles and Design courses.
Prereq: Clothing, Textiles, and Design; or Child, Family, and Consumer Sciences/Family Life major; or Permission

FCS 170 Introductory Foods (3 cr)
Basic concepts and techniques of food preparation; applied sensory evaluation of food. (Fall only)
Prereq: Family and Consumer Sciences major or Permission

FCS 175 Introductory Foods Laboratory (1 cr)
Laboratory experiences to accompany FCS 170. (Fall only)
Coreq: FCS 170

FCS 200 (s) Seminar (cr arr)

FCS 203 (s) Workshop (cr arr)

FCS 204 (s) Special Topics (cr arr)

FCS 205 Concepts in Human Nutrition (3 cr)
Nutrition principles with their application to nutrition in life cycle; nutrition problems and controversies such as weight control and nutrition for athletes; individual computerized study of student's dietary intake.

FCS 210 Introduction to Early Childhood Education (2 cr)
Provides an overview of the complexity of working with young children, including children with disabilities, and their families. The course includes introduction to history of early childhood education, supportive agencies, roles of professionals, contexts of typical and atypical child and family development, and curricular models. (Fall only)

FCS 224 Apparel Construction and Assembly Processes (3 cr)
Design conception, fabric characteristics, garment construction and assembly, principles of fitting, quality control for the apparel industry. Two 3-hour studios a week and assigned work. Students must complete this course with a grade of 'C' or higher as a prerequisite to future Clothing, Textiles and Design courses. (Spring only)
Prereq: FCS 123 with a grade of 'C' or better; and Clothing, Textiles, and Design; or Child, Family, and Consumer Sciences/Family Life major; or Permission

FCS 234 Infancy and Early Childhood (3 cr)
Influences on development before birth through the preschool years; factors that determine physical, emotional, cognitive, social, and creative development. (Spring only)

FCS 235 Principles and Methods of Child Observation (3 cr)
Development of skills necessary to observe, record, and interpret child behavior; observations to be arranged. (Fall only)
Prereq: FCS 234with a grade of 'C' or better

FCS 240 Intimate Relationships (3 cr)
Dynamics of intimate relationships from early adulthood through the adult lifespan. (Spring only)

FCS 251 Survey of FCS Professions (1 cr)
Web delivered, survey course for students considering a career in Family and Consumer Sciences, particularly teaching. Televised interviews with professionals in a variety of FCS careers, and an in-depth look at teaching as a career. An advising meeting with the FCS Teacher Educator is required to explain the requirements of the program.

FCS 270 Intermediate Foods (3 cr)
Web-assisted course focusing on food safety, menu planning, and cultural and religious influences on food choices, and role of food in promotion of a healthy lifestyle. Practice in communicating foods information through food demonstrations and news articles. Web-based modules, with one 2-hr face-to-face lab per week. (Spring only)
Prereq: FCS 170; and Family and Consumer Sciences major or Permission

FCS 299 (s) Directed Study (cr arr)

FCS 301 Professional Skills in Dietetics I (1 cr)
Development of professional skills for CPD students including leadership skills, communication techniques, involvement in professional organizations, and promotion of foods and nutrition. Students will create a professional development portfolio. (Fall only)
Prereq: FCS 270 and Junior standing in the Food and Nutrition Coordinated Program in Dietetics Option.

FCS 302 Professional Skills in Dietetics II (1 cr)
Development of professional skills for CPD students through career planning, portfolio development, involvement in professional organizations, participation in public policy development, promoting food and nutrition during National Nutrition Month and practice of communication techniques. (Spring only)
Prereq: FCS 301 and Junior standing in the Food and Nutrition Coordinated Program in Dietetics Option.

FCS 305 Nutrition Related to Fitness and Sport (2 cr)
Identification of energy, macro/micro nutrient and fluid requirements during exercise; evaluation of dietary regimens and ergogenic aids for pre and post competition, weight maintenance, and wellness. (Fall only)
Prereq: FCS 205; and Family and Consumer Sciences major or Movement Sciences major or Permission

FCS 319 Digital Illustration for the Apparel Industry (3 cr)
Introduction to digital illustration software including apparel illustration tools, editing and coloring, working in the digital environment, and digital board building. Students follow an industry-typical concept and design

EnvS 497 (s) Senior Research (2-4 cr, max 4)
Open only to majors in environmental science. Preparation of proposal, poster, formal presentation and written thesis or report based on research or project conducted with a faculty member. Research addresses an environmental problem using laboratory, field, or library techniques.
Prereq: Senior standing
Prereq or Coreq: Engl 316 or Engl 317

EnvS 498 (s) Internship (cr arr)

EnvS 499 (s) Directed Study (cr arr)

EnvS 500 Master's Research and Thesis (cr arr)

EnvS 501 (s) Seminar (cr arr)

EnvS 502 (s) Directed Study (cr arr)

EnvS 504 (s) Special Topics (cr arr)

EnvS 509 Principles of Environmental Toxicology (3 cr)
See FS J409/J/509.

EnvS 515 Environmental Lifecycle Assessment (3 cr)
See EnvS J415/J515.

EnvS 536 Principles of Sustainability (3 cr)
Same as EnvS J436/J536.

EnvS 538 Western US Water Resource Policy and Environmental Equity (3 cr)
See EnvS J438/J538.

EnvS 541 Sampling and Analysis of Environmental Contaminants (3 cr)
Covers the sampling and analysis of environmental contaminants from a statistical perspective. Includes designing sampling plans for environmental studies, statistically analyzing environmental data, and touches on more advanced techniques such as time series analysis and censored data. (Fall only)
Prereq: Stat 251

EnvS 546 Drinking Water and Human Health (3 cr)
See EnvS J446/J546

EnvS 552 Environmental Philosophy (3 cr)
See Phil 452.

EnvS 577 Law, Ethics, and the Environment (3 cr)
See AgEc 577.

EnvS 579 Introduction to Environmental Regulations (3 cr)
See EnvS J479/J579.

EnvS R581 Applications of Environmental Regulations (3 cr)
Details of the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); interpretation and application of environmental regulations to remediation of hazardous waste treatment, storage, and disposal sites; detailed coverage of environmental regulatory affairs of concern in Idaho; interrelationships between RCRA, CERCLA, and other environmental laws. (Spring only)
Prereq: EnvS 479/579 or Permission

EnvS R582 Natural Resource Policy and Law (3 cr)
See EnvS J482/J582.

EnvS J483/J593 Water and Energy Systems (3 cr)
See EnvS J483/J583.

EnvS 596 Advanced Environmental Science (3 cr)
Interdisciplinary capstone graduate course for the PhD in Environmental Science exploring the scholarship of integration with respect to current environmental issues related to global change. The course will explore topics relevant to current student research and help them improve communication and problem-solving skills across disciplines. (Fall, alt/yrs)
Prereq: Admission to candidacy upon completion of preliminary examination or instructor permission

EnvS 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

EnvS 600 Doctoral Research and Dissertation (cr arr)

EnvS 604 (s) Special Topics (cr arr)
Prereq: Enrollment in a Doctoral Program and Permission

Executive Master in Business Administration Courses

Scott K. Metlen, Dept. Head of Business (301F J. A. Albertson Bldg. 83844-3161; phone 208/885-7146).

EMBA 501 (s) Seminar (cr arr)

EMBA 509 Team Building & Group Dynamics (1 cr)
Design and development of work groups and teams; influences, issues, and problems affecting team productivity.

EMBA 510 Summer Integrative Experience (3 cr)
Participation in an integrative project of the students own design in consultation with faculty. Possible topics include international study and exchange, social marketing, community outreach, and research writing for publication.

EMBA 512 The External Context of Business (3 cr)
Examines the economic, social, technological, legal, and competitive environment of business, with emphasis on the interfaces between business, society, and the natural environment and the challenges and opportunities these interfaces create.

EMBA 514 Financial Reporting and Financial Management (4 cr)
Introduction to financial accounting, financial statement analysis, and capital budgeting. Employs the tools of accounting and finance to help managers make short-term and long-term decisions. Topics include the role of financial reporting, analysis and auditing in the capital markets, long-term financing through capital structure management, and working capital management.

EMBA 516 Strategic Business Communication (1 cr)
Delivery of strategic messages to internal and external audiences; cross-cultural communication.

EMBA 517 Ethical Leadership (1 cr)
Examines the foundations of business ethics, and the challenges of ethical decision making and leadership in an environment of globalization and change.

EMBA 521 Strategy Formulation and Execution (2 cr)
Formulation and implementation of competitive strategies to build and leverage core competencies in an uncertain, competitive, and ambiguous environment. Emphasizes assessing the alignment of strategy with action throughout the organization.
Prereq: EMBA 512

EMBA 522 Innovation and New Product Development (3 cr)
Explores the framework management must create in order to promote innovation, including aspects of strategy, process, resources, organization and learning, and the gathering of expertise from every corner of the organization and beyond.

EMBA 524 Strategic Cost and Process Management (3 cr)
This course examines the concepts and tools needed for systematically designing, evaluating, and improving business processes to better achieve organizational objectives and for understanding and managing the costs associated with these processes and the products and services resulting from them.

EMBA 525 Managing Relationships to Influence Behavior (2 cr)
Principles of developing and maintaining exchange relationships. Application of the principles to the practice of managing relationships between the organization and two key stakeholder groups: employees and customers.

EMBA 531 Mass Media and Crisis Communication (1 cr)
Mass media interviews and message strategies; risk and crisis communication.
Prereq: EMBA 516

EMBA 533 Launching New Products and Services (2 cr)
Investigates the process sequence for new product development from idea generation through to commercialization and how it fits into overall business strategy. Includes pro-forma analysis of a new product launch, financing and business investment analysis.
Prereq: EMBA 522

Ent 572 Aquatic Entomology (3 cr)
See Ent J472/J572.

Ent 584 Insect Anatomy and Physiology (3 cr)
Organ systems of insects and their functions. A comprehensive term paper and research project reqd for grad cr. Three lec and one 3-hr lab a wk. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Permission

Ent 590 Special Topics in Entomology (1-4 cr, max 4)

Ent 597 (s) Practicum (cr arr)

Ent 598 (s) Internship (cr arr)
Prereq: Ent 322 or Permission

Ent 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Ent 600 Doctoral Research and Dissertation (cr arr)

Environmental Engineering Courses

Thomas Hess, Program Director (419 Engineering Physics 83844-0904; phone 208/885-6182; FAX 208/885-7908; enve@uidaho.edu; www.web1.uidaho.edu/enve).

Note: Most of the courses in this program are in the Departments of Biological and Agricultural Engineering, Civil Engineering, and Chemical Engineering. Please refer to the curricular requirements for a complete list of courses.

EnvE 500 Master's Research and Thesis (cr arr)

EnvE 501 (s) Seminar (cr arr)

EnvE 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Environmental Science Courses

Jan Boll, Director, (216 Morrill Hall 83844-3006; phone 208/885-6113; FAX 208/885-4674; envs@uidaho.edu; www.webs.uidaho.edu/envs).

Note: Most of the courses in this interdisciplinary program are in other academic departments and are not listed below. Please refer to the curricular requirements for a complete list of classes.

EnvS 101 Introduction to Environmental Science (3 cr)
Introduction to basic principles in the biological, physical, and social science areas of environmental science.

EnvS 102 Field Activities in Environmental Sciences (1 cr)
May be used with EnvS 101 *as general education credit in J-3-b.* Field studies for EnvS 101. Field demonstrations on waste management, water, air pollution, and the ecosystem. Field trips required.
Prereq or Coreq: EnvS 101

EnvS 200 (s) Seminar (cr arr)

EnvS 225 (s) International Environmental Issues Seminar (3 cr)
Designed for individuals who have an interest in understanding environmental issues from a global perspective. The course focuses on various social and physical issues related to the environment and natural resources using human population dynamics as a backdrop. EnvS 101 recommended. (Spring only)

EnvS 400 (s) Seminar (cr arr)
Prereq: Senior standing

EnvS 404 (s) Special Topics (cr arr)

EnvS J409/J509 Principles of Environmental Toxicology (3 cr)
See FS J409/J/509.

EnvS J415/J515 Environmental Lifecycle Assessment (3 cr)
Environmental life cycle assessment is the study of the environmental impacts resulting from the human production of goods and services from raw material acquisition through ultimate disposition. The class covers the basic concepts of life cycle assessment including definition of system boundaries, inventory of energy and material inputs and resultant emissions, assessment of impacts on human health and the environment, and interpretation of results. Recommended preparation: basic physical and biological sciences and familiarity with spreadsheet programs such as Excel. Additional assignment/projects required for graduate credit.

EnvS 428 Pollution Prevention (3 cr)
Basic concepts of pollution prevention and waste minimization; pollution prevention strategies and case studies for solid waste, hazardous waste, water and energy use, and air pollution. (Spring only).

EnvS 429 Environmental Audit (3 cr)
Details on a variety of equipment and processes used by business in order to decrease generation of solid and hazardous waste. (Fall only).

EnvS J436/J536 Principles of Sustainability (3 cr)
See as FS J436/J536.

EnvS J438/J538 Western US Water Resource Policy and Environmental Equity (3 cr)
Participatory online course focusing on social justice constraints reflected in the struggle over water resource management in the US West. Uses an environmental equity conceptual framework to analyze institutional control, rural-urban conflicts, and cultural impacts on disenfranchised groups. Additional assignments/projects required for graduate credit. Recommended Preparation: For 235 or AgEc J477/J577.
Prereq for EnvS 438: Junior Standing
Prereq for EnvS 538: Graduate Standing

EnvS J446/J546 Drinking Water and Human Health (3 cr)
Understand the characterization, testing, and treatment of chemical, microbial and hazardous compounds and their impact on human health. Be familiar with drinking water standards, regulatory aspects and protection of municipal, community, and private well systems. (Spring, Alt/yrs)

EnvS 450 Environmental Hydrology (3 cr)
Carries no credit after BAE 355 or CE 325. Comprehensive understanding of the hydrologic processes associated with the environmental processes. Includes components of the hydrologic cycle, analysis of precipitation and run off, evapotranspiration, routing, peak flow, infiltration, soil and water relationships, snowmelt, and frequency analysis. (Spring only)
Prereq: Math 170

EnvS J479/J579 Introduction to Environmental Regulations (3 cr)
Interpretation and implementation of local, state, and federal environmental rules; introduction to environmental regulatory process; topics include regulatory aspects of environmental impact assessment, water pollution control, air pollution control, solid and hazardous waste, resource recovery and reuse, toxic substances, pesticides, occupational safety and health, radiation, facility siting, environmental auditing and liability. Additional projects/assignments required for graduate credit. (Fall only)

EnvS R-J482/R-J582 Natural Resource Policy and Law (3 cr)
Examination of U.S. natural resource policy and law including historical contexts and current policies and laws. Additional projects/assignments reqd for grad cr. Recommended Preparation: an undergraduate course in political science. (Spring, Alt/yrs)

EnvS J483/J583 Water and Energy Systems (3 cr)
The class covers the basic science of water and energy and the applied interrelationships of those two resources in today's society. The broad spectrum coverage of the topic includes the energy linkage to both the supply and demand of water and also the water linkage to the supply of and demand for energy. The class includes development of systems dynamics models for describing the resource interactions. Recommended Preparation: Basic Physical Sciences.
Prereq: Math 143

EnvS 484 History of Energy (3 cr)
Covers the history of humanity's relationship to energy. Takes a historical approach beginning with ancient sources of energy, the discovery and exploitation of coal and the industrial revolution, the critical importance of oil and its derivatives, natural gas, nuclear and renewables. Finishes with a look to possible future energy sources.

EnvS 485 Energy Efficiency and Conservation (3 cr)
Includes aspects of science, policy, and economics of energy use and efficiency measures. Considers use trends and existing and potential efficiencies primarily on a national scale with some consideration of both global and local situations. Focuses on residential and transportation energy with some coverage of commercial and industrial energy use.

Engl 560 (s) Studies in American Literature Before 1900 (3 cr, max 12)
Normally offered in period survey, genre studies, and major author(s). (Alt/yrs)

Engl 570 (s) Studies in 20th-21st-Centuries British and American Literature (3 cr, max 12)
Normally offered in period survey, genre studies, and major author(s).

Engl 581 Techniques of Poetry (3 cr, max arr)
A substantial and highly analytical examination of the art and craft of poetry, from a writerly perspective.
Prereq: Admission to the MFA in Creative Writing program or instructor permission

Engl 582 Techniques of Fiction (3 cr, max arr)
A substantial and highly analytical examination of the art and craft of fiction, from a writerly perspective.
Prereq: Admission to the MFA in Creative Writing program or instructor permission

Engl 583 Techniques of Nonfiction (3 cr, max arr)
A substantial and highly analytical examination of the art and craft of nonfiction, from a writerly perspective.
Prereq: Admission to the MFA in Creative Writing program or instructor permission

Engl 591 MFA Poetry Workshop (3 cr, max arr)
Advanced poetry writing workshop.
Prereq: Admission to the MFA in Creative Writing program or instructor permission

Engl 592 MFA Fiction Workshop (3 cr, max arr)
Advanced fiction writing workshop.
Prereq: Admission to the MFA in Creative Writing program or instructor permission

Engl 593 MFA Nonfiction Workshop (3 cr, max arr)
Seminar on the evolving genre of "literary non-fiction": using modes of fiction, drama, and poetry for nonfictive aims, such as memoirs or autobiography, travel narrative, and character sketch; workshop on participants' writing in the genre.
Prereq: Admission to the MFA in Creative Writing program or instructor permission

Engl 595 MFA Novel Workshop (3 cr, max 6)
A two-semester intensive seminar/workshop on the craft of novel writing, which includes directed writing, individual conferencing, critical analysis of exemplary novels, as well as critical response to peer work. Students will make substantial progress toward the completion of a novel of publishable quality.
Prereq: Admission to the MFA in Creative Writing program or instructor permission

Engl 597 (s) Practicum (1-3 cr, max 3)

Engl 598 (s) Internship (1-3 cr, max 6)
See Engl J498/J598.

Engl 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Entomology Courses

Paul McDaniel, Dept. Head (Ag. Sci. Bldg. Room 242, 875 Perimeter Drive MS 2339, Moscow, ID 83844-2339; phone (208) 885-7012; paulm@uidaho.edu).

Ent 322 General and Applied Entomology (4 cr)
Identification, biology, and importance of insects and related arthropods to humans and agriculture; basic principles of arthropod pest management. Three lec and one 3-hr lab a wk.

Ent 398 Internship (1-6 cr, max 6)
Graded P/F.
Prereq: Ent 322 or Permission

Ent 400 (s) Seminar (cr arr)

Ent 404 (s) Special Topics (cr arr)

Ent 438 Pesticides in the Environment (3 cr)
See Soil 438.

Ent J440/J540 Insect Identification (4 cr)
Survey of approximately 200 major families; collecting and preservation techniques. For grad cr, an additional 50 families and selected subfamilies and genera will be covered and a term paper is reqd. Two lec and two 2-hr labs a wk; two 1-day field trips. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Ent 322 or Permission

Ent J441/J541 Insect Ecology (3 cr)
Population and community dynamics set in a systems framework; theory and applications in natural and altered systems. Requirements for graduate credit include a longer (10 vs. 5 pages), more synthetic term paper, and each 500-level student will lead a web-based or in-class discussion on a research paper of their choice. Two 1-day field trips. Recommended Preparation: General ecology. Cooperative: open to WSU degree-seeking students.
Prereq: Ent 322 or Permission

Ent J446/J546 Host Plant Resistance to Insects and Pathogens (3 cr)
Principles and methodologies for developing pest-resistant crop varieties. Requirements for graduate credit include preparation of grant proposal, classroom presentation. Field trips. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Ent 322 or Permission

Ent 469 Introduction to Forest Insects (2 cr)
Roles and impacts of insects within forest ecosystems. Current management techniques of arthropod pests (insects and mites) in natural and managed forest systems. Interactions of arthropods with other agents of forest disturbance (fire and fungi). Identification of some common arthropod pests of Rocky Mountain forests.
Prereq: For 221 or REM 221

Ent J472/J572 Aquatic Entomology (3 cr)
Identification and biology of insects associated with aquatic and subaquatic environments. Additional projects/assignments required for graduate credit. One lec and two 3-hr labs a wk; two 1-day field trips. Cooperative: open to WSU degree-seeking students. (Spring, alt/yrs)

Ent J490/J590 Special Topics in Entomology (1-4 cr, max 4)
Cooperative: open to WSU degree-seeking students.

Ent 499 (s) Directed Study (cr arr)

Ent 500 Master's Research and Thesis (cr arr)

Ent 501 (s) Seminar (cr arr)

Ent 502 (s) Directed Study (cr arr)

Ent 504 (s) Special Topics (cr arr)

Ent 540 Insect Identification (4 cr)
See Ent J440/J540.

Ent 541 Advanced Insect Ecology (3 cr)
See Ent J441/J541.

Ent 546 Host Plant Resistance to Insects and Pathogens (3 cr)
See Ent J446/J546.

Ent 549 Insect-Plant Interactions (3 cr)
Ecology, evolution, and mechanisms of the interactions between insects and plants. Requirements for graduate credit include formal report of field study, term paper. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Ent 322 or Permission

Ent 551 Applied Biological Control: Weeds (1 cr)
Principles and methodologies in biological control of weeds. Requirements for graduate credit include leading a classroom presentation and discussion session. Recommended Preparation: one ecology course, Principles of Biological Control. Cooperative: open to WSU degree-seeking students. (Alt/yrs)

Ent 569 Advanced Forest Entomology (3 cr)
Methods and applications of biological and economic evaluation and control strategies of forest insect populations in relation to pest management programs. Recommended preparation: Ent 469. (Fall, alt/yrs)

students for the demands of college writing, focusing on reading critically and incorporating source material. Graded P (pass)/N (repeat)/F (fail).
Coreq: Students with ACT scores 1-17, SAT verbal scores 200-440, COMPASS scores 1-67, or no standardized test scores must concurrently enroll in Engl 109.

Engl 102 College Writing and Rhetoric (3 cr)
Applied principles of expository and argumentative essay writing, including summaries, critiques, and syntheses of texts, and the research essay; emphasis on clear, concise, and vigorous prose. Graded A/B/C/N (repeat)/F.
Prereq: Engl 101 or Equivalent

Engl 109 Writing Studio (1 cr)
Student-centered group tutorial focusing on writing improvement connected to the ENGLISH 101 course. Graded Pass/Fail.
Coreq: Engl 101

Engl 175 Introduction to Literary Genres (3 cr)
Introduction to the terminology, techniques, and formal characteristics of literary genres. Intended to provide the general student and the beginning English major with basic experience in literary analysis.

Engl 201 English Grammar: Key Concepts and Terms (1 cr)
Study of grammar and grammatical concepts; terms and concepts drawn from traditional and transformational grammar; includes practice in sentence diagramming with connections drawn to other grammatical systems. Not an ESL course and not remedial. (Spring only)

Engl 202 Introduction to Professional Writing (3 cr)
Introduction to the theory and practice of professional writing and its functions in workplace settings. In this rhetorically-based course, students will study and apply conventions to meet the needs of professional writing situations and begin to establish a professional identity by creating and learning how to maintain an electronic portfolio.
Prereq: Engl 102 or equivalent

Engl 204 (s) Special Topics (cr arr)

Engl 207 (s) Persuasive Writing (3 cr)
Intermediate course in the practices of writing to persuade with special emphasis on current issues and audience awareness; includes research-based writing.
Prereq: Engl 102 or Equivalent

Engl 208 (s) Personal and Exploratory Writing (3 cr)
Intermediate course in the practices of personal and exploratory writing; may include personal narrative and observation, autobiography, or extended reflection; special attention to prose style and voice; includes research-based writing.
Prereq: Engl 102 or Equivalent

Engl 215 Introduction to English Studies (3 cr)
The gateway course for all English majors, focusing on goals of and opportunities opened by the various branches of English studies, the practice of close reading, critical terminology and issues central to English studies, and basic research and writing practices necessary for literary study.
Prereq or Coreq: Engl 102

Engl 221 History of World Cinema I (3 cr)
Introduction to film history; a comprehensive survey of the major film movements from the birth of the cinema to the mid 20th Century. Recommended preparation: Engl 102.

Engl 222 History of World Cinema II (3 cr)
Introduction to modern film history; a comprehensive survey of the major film movements from the mid 20th Century to the contemporary cinematic scene. Recommended preparation: Engl 102.

Engl 230 Introduction to Film Studies (3 cr)
Introduction to the study of film; survey of film aesthetics, form, theory, style, and analysis. Recommended Preparation: Engl 102.

Engl 241 Introduction to the Study of Language (3 cr)
Same as Anth 241. Surveys of sound patterns, morphological processes and syntactic structures; questions of language acquisition, variation, and history; exercises from a variety of languages, with emphasis on American English.

Engl 257 Literature of Western Civilization (3 cr)
Masterpieces reflecting development of Western thought and culture. Classical Greece to the Renaissance.

Engl 258 Literature of Western Civilization (3 cr)
Masterpieces reflecting development of Western thought and culture. 17th century to the present.

Engl 291 Beginning Poetry Writing (3 cr)
Intro to techniques of writing poetry.

Engl 292 Beginning Fiction Writing (3 cr)
Intro to techniques of writing fiction.

Engl 293 Beginning Nonfiction Writing (3 cr)
Intro to techniques of writing creative nonfiction.

Engl 309 Advanced Prose Writing (3 cr)
Theory and practice in writing prose; many assignments in expression, explanation, and persuasion.
Prereq: Engl 102 or Equivalent

Engl 310 Literary Theory (3 cr)
Current trends and issues in literary theory, with practice in the application of theory to literary texts.
Prereq: Engl 102 and Engl 215; and Engl 175, Engl 257, or Engl 258

Engl 313 Business Writing (3 cr)
Principles and practice in writing business correspondence, memoranda, and reports that employ conventions, tone, and style appropriate to the specific discourse situation. Recommended for students with some business background or upper-level standing.
Prereq: Engl 102 or Equivalent; Sophomore standing

Engl 316 Environmental Writing (3 cr)
Principles and practice in writing related to communicating information about scientific and environmental issues to public audiences through proposals, correspondence, and essays or reports.
Prereq: Engl 102 or Equivalent; Junior standing or Permission

Engl 317 Technical Writing (3 cr)
Principles of clear writing related to technical style; problems such as technical description, proposals, formal reports, and technical correspondence.
Prereq: Engl 102 or Equivalent; Junior standing or Permission

Engl 322 Environmental Literature and Culture (3 cr)
Introduction to environmentally-oriented literature and other cultural texts, such as visual art, music, and film. Focus on British and American traditions of nonfiction nature writing, nature poetry, and environmental fiction, but may include work from other countries and regions.
Prereq: Engl 102

Engl 341 Survey of British Literature (3 cr)
Medieval, Renaissance, 17th Century, Restoration, and 18th Century Literature.
Prereq: Engl 102; and Engl 175, Engl 257, or Engl 258

Engl 342 Survey of British Literature (3 cr)
Romantic, Victorian, Modern, and Contemporary literature.
Prereq: Engl 102; and Engl 175, Engl 257, or Engl 258

Engl 343 Survey of American Literature (3 cr)
Indigenous beginnings to the American Civil War.
Prereq: Engl 102; and Engl 175, Engl 257, or Engl 258

Engl 344 Survey of American Literature (3 cr)
Post-Civil War to contemporary writers.
Prereq: Engl 102; and Engl 175, Engl 257, or Engl 258

Engl 345 Shakespeare (3 cr)
Introductory course; background and study of selected plays representative of Shakespeare's achievement.
Prereq: Engl 102; and Engl 175, Engl 257, or Engl 258

Engl 375 The Bible as Literature (3 cr)
Same as RelS 375. Literary qualities of the Bible.
Prereq: Engl 102; and Engl 175, Engl 257, or Engl 258

Engl 380 Introduction to U.S. Ethnic Literatures (3 cr)
Emphasis on U.S. minority writers and reading across cultures; selections will vary from semester to semester.
Prereq: Engl 102; and Engl 175, Engl 257, or Engl 258

Engr 204 (s) Special Topics (cr arr)

Engr 205 Near Space Engineering (1 cr, max 6)
Idaho RISE (Research Involving Student Engineers and Educators) is the NASA Idaho Space Grant Consortium student high-altitude scientific balloon program at the University of Idaho. RISE is a multidisciplinary program involving students from all departments in the College of Engineering, as well as Physics, Chemistry, Life Sciences, Education, and many other departments. Students in ENGR 205 will participate in the design, development, testing, flight and flight operations, recovery, and data analysis of balloon-borne science and engineering instrumentation flown to altitudes of 100,000 feet and higher. Recommended Preparation: Interest in space, aerospace science and engineering recommended.

Engr 206 Near Space Engineering II (1 cr, max 6)
Idaho RISE (Research Involving Student Engineers and Educators) is the NASA Idaho Space Grant Consortium student high-altitude scientific balloon program at the University of Idaho. RISE is a multidisciplinary program involving students from all departments in the College of Engineering, as well as Physics, Chemistry, Life Sciences, Education, and many other departments. Students in ENGR 206 will participate in the design, development, testing, flight and flight operations, recovery, and data analysis of balloon-borne science and engineering instrumentation flown to altitudes of 100,000 feet and higher. Recommended Preparation: Interest in engineering, space, and aerospace sciences. (Spring only)

Engr 210 Engineering Statics (3 cr)
Principles of statics with engineering applications; addition and resolution of forces, vector algebra, moments and couples, resultants and static equilibrium, equivalent force systems, centroids, center of gravity, free body method of analysis, two and three dimensional equilibrium, trusses, frames, and friction. Cooperative: open to WSU degree-seeking students.
Prereq: Math 170

Engr 220 Engineering Dynamics (3 cr)
Particle and rigid body kinematics and kinetics; rectilinear, curvilinear, and relative motion, equations of motion, work and energy, impulse and momentum, systems of particles, rotation, rotating axes, rigid body analysis, angular momentum, vibration, and time response. Cooperative: open to WSU degree-seeking students.
Prereq: Engr 210

Engr 240 Introduction to Electrical Circuits (3 cr)
Not open for credit to electrical engineering majors. Circuit analysis, transient and steady state behavior, resonant systems, system analysis, and power and energy concepts; elementary differential equations will be introduced to solve basic transient problems.
Prereq: Math 175, Phys 211/211L

Engr 320 Engineering Thermodynamics and Heat Transfer (3 cr)
First and second laws of thermodynamics; thermodynamic processes; thermodynamic properties; flow processes; conversion of heat into work; conduction, convection, radiation, and heat exchangers. Recommended Preparation: Engr 210 and Math 310. Cooperative: open to WSU degree-seeking students.

Engr 335 Engineering Fluid Mechanics (3 cr)
Physical properties of fluids; fluid statics; continuity, energy, momentum relationships; laminar and turbulent flow; boundary layer effects; flow in pipes, open channels, and around objects. Cooperative: open to WSU degree-seeking students.
Prereq: Engr 210, Math 275

Engr 350 Engineering Mechanics of Materials (3 cr)
Elasticity, strength, and modes of failure of engineering materials; theory of stresses and strains for ties, shafts, beams, and columns. Cooperative: open to WSU degree-seeking students.
Prereq: Engr 210, Math 175
Coreq: Math 310

Engr 360 Engineering Economy (2 cr)
Economic analysis and comparison of engineering alternatives. This class meets for 3 lectures per week for the first 10 weeks of the semester.
Prereq: Junior standing

Engr 428 Numerical Methods (3 cr)
See Phys J428/J528.

Engr 573 Fuzzy Logic Control Systems (3 cr)
Introduction to fuzzy logic systems and the methods used to design these systems.
Prereq: ChE 445, ECE 470, or ME 481

Engineering Management Courses

Sandy Lieske, Program Coordinator, Engineering Management and Technology Management Programs (322 E Front Street, Boise, ID 83702; 208/364-4568; Lieske@uidaho.edu; www.uidaho.edu/engr/technologymanagement).

EM 486 Software-Assisted Project Management (3 cr)
Characteristics and features of project management; procedures and techniques used in identifying software features that are necessary for recording project plans and for reporting project progress; process of selecting project management software that is consistent with the organization's procedures and requirements; evaluation of the modeling capabilities of a system in estimating and scheduling specific case studies of engineering projects. Two lec and 3 hrs of lab a wk.
Prereq: CE 482 or PMP Certification

EM 502 (s) Directed Study (cr arr)

EM 504 (s) Special Topics (cr arr)

EM 510 Engineering and Technology Management Fundamentals (3 cr)
Same as TM 510. Fundamental principles of engineering management addressing management theory applied to the engineering environment; management processes and techniques; attitudes that facilitate the leadership role of the engineering manager in an engineering organization; team-taught by business and engineering faculty.
Prereq: Permission

EM 515 (s) Advanced Topics in Engineering Management (2-9 cr, max 9)
Same as TM 515. Advanced topics in Engineering Management and Technology Management.
Prereq: Instructor Permission

EM 560 Project Risk Management (3 cr)
Application of project risk assessment tools and techniques that help increase the probability of project success. Discover different approaches used by commercial and federal agencies to identify, assess, and quantify risks and their impacts on projects.
Prereq: EM 510 or TM 510; or Instructor Permission

EM 582 Advanced Topics in Project Management (3 cr)
Application of project management tools from a management perspective to address the basic nature of all types of projects including public, business, engineering, information systems, etc. Individual and group projects will apply project management tools to case studies and readings on current issues in project management. The course will roughly cover the eight knowledge areas recommended by the Project Management Institute.
Prereq: CE 482 or PMP Certification

EM 596 Capstone Integration (1 cr)
Capstone integration of degree material in Engineering Management and comprehensive final exam.
Prereq: Permission

EM 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

English Courses

Gary Williams, Dept. Chair, Dept. of English (200 Carol Ryrie Brink Hall 83844-1102; phone 208/885-6156).

Vertically-related courses in this subject field are: Engl 101-102.

Engl 090 Developmental Writing (0 cr)
A basic skills course to prepare students for Engl 101. Graded P (pass)/N (repeat)/F (fail).

Engl 101 Introduction to College Writing (3 cr)
Workshop on strategies for generating ideas for writing, for planning and organizing material, and for revising and editing; intended to prepare

ECE R538 EM Simulation (3 cr)
Computer simulation of electromagnetics using the finite-difference time-domain (FDTD) method; theory of finite-difference simulation, techniques for modeling EM propagation in lossy and dispersive media, boundary conditions for time-domain simulation.
Prereq: Permission

ECE 539 Advanced Topics in Electromagnetics (3 cr)
Topics include computational and analytical methods, remote sensing, nonlinear optics, guided wave theory, antenna theory.
Prereq: ECE 530 or Permission

ECE 541 Advanced Computer Architecture (3 cr)
See ECE J441/J541.

ECE 544 Supervisory Control and Critical Infrastructure Systems (3 cr)
See ECE J444/J544.

ECE 545 Advanced VLSI Design (3 cr)
CMOS circuit techniques, analysis, modeling, performance, processing, and scaling; design of CMOS logic, gate arrays, data and signal processors, and memory. May not be used with ECE 546 for graduation.
Prereq: ECE 445

ECE 551 Electroacoustic Sensors and Systems (3 cr)
See ECE J451/J551.

ECE 556 Adaptive Signal Processing (3 cr)
Theory and applications of adaptive signal processing; adaptive linear combiner; performance surfaces; adaptive optimization of performance by gradient search; learning curve behavior, adaptation rates, and misadjustment; applications to filtering, prediction, estimation, control, and neural networks.
Prereq: ECE 350, Math 330, and ECE 450 or ECE 452 or ECE 476 or ECE 477, or Permission

ECE 557 Biological Signal Processing (3 cr)
See Neur 521.

ECE 562 Semiconductor Theory (3 cr)
See ECE J462/J562.

ECE 565 Introduction to Microelectronics Fabrication (3 cr)
See ECE J465/J565.

ECE 570 Random Signals (3 cr)
Probability, random variables, and random signals in engineering systems; stochastic calculus, stationarity, ergodicity, correlation, and power spectra; propagation of random signals through linear systems; Kalman filter theory and applications. Cooperative: open to WSU degree-seeking students.
Prereq: ECE 350, and Stat 301 or Stat 451, or Permission

ECE 571 Estimation Theory for Signal Processing, Communications, and Control (3 cr)
Identification of dynamic system models from test data; methods to be considered include least-squares, prediction error, maximum likelihood, instrumental variables, correlation, and extended Kalman filter; practical applications and computer-based exercises emphasized within a mathematically rigorous framework. Cooperative: open to WSU degree-seeking students.
Prereq: ECE 570 or Permission

ECE 572 Linear System Theory (3 cr)
Same as ME 580. Linear spaces and linear operators; descriptions of dynamic systems; input-output descriptions; state-space concepts; canonical forms; controllability and observability; minimal realizations; application to control and general systems analysis; pole assignment; observers. Cooperative: open to WSU degree-seeking students.
Prereq: ECE 470 or Equivalent

ECE 578 Neural Network Design (3 cr)
Same as CS 578 and ME 578. Introduction to neural networks and problems that can be solved by their application; introduction of basic neural network architectures; learning rules are developed for training these architectures to perform useful functions; various training techniques employing the learning rules discussed and applied; neural networks used to solve pattern recognition and control system problems.
Prereq: Permission

ECE 579 Engineering Acoustics (3 cr)
See ME J413/J513. Cooperative: open to WSU degree-seeking students.

ECE 591 Electrical Engineering Research Colloquium (0 cr)
Graded P/F. Weekly colloquia on topics of general interest in electrical engineering and related fields; speakers will be from UI Electrical Engineering Department, other departments on campus, WSU, the local community, and outside agencies and universities.

ECE 598 (s) Cooperative Internship (cr arr)
Supervised internship in industry in professional engineering settings, integrating academic study with work experience; requires a final written report and possible additional requirements to be worked out with the faculty supervisor. Graded P/F.
Prereq: Permission

ECE 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

ECE 600 Doctoral Research and Dissertation (cr arr)

Background Courses

These are not introductory-level courses. They are intended for engineers and scientists whose previous degrees are not in electrical engineering from ABET/EAC-accredited programs, who need to remove deficiencies before beginning graduate studies in electrical engineering.

ECE 319 Background Study in Electronics (3 cr)
Not applicable toward any UI undergrad degree; valid only for removal of electronics (ECE 310) deficiency for grad students who do not have BSEE background. See ECE 310 for description. Graded P/F based on comprehensive exam at completion of course.
Prereq: Permission

ECE 329 Background Study in Energy Systems (3 cr)
Not applicable toward any UI undergrad degree; valid only for removal of electrical machinery (ECE 320) deficiency for grad students who do not have BSEE background. See ECE 320 for description. Graded P/F based on comprehensive exam at completion of course.
Prereq: Permission

ECE 339 Background Study in Electromagnetic Theory (3 cr)
Not applicable toward any UI undergrad degree; valid only for removal of electromagnetic theory (ECE 330) deficiency for grad students who do not have BSEE background. See ECE 330 for description. Graded P/F based on comprehensive exam at completion of course.
Prereq: Permission

ECE 349 Background Study in Digital Logic (3 cr)
Not applicable toward any UI undergraduate degree; valid only for removal of digital computer fundamentals (ECE 240) deficiency for graduate students. See ECE 240 for description. Graded P/F.

ECE 359 Background Study in Signals and Systems Analysis (3 cr)
Not applicable toward any UI undergrad degree; valid only for removal of signals and systems analysis (ECE 350) deficiency for grad students who do not have BSEE background. See ECE 350 for description. Graded P/F based on comprehensive exam at completion of course.
Prereq: Permission

Engineering - General Courses

Larry A. Stauffer, Dean (125 Janssen Engr. Bldg.; 208/885-6470).

Engr 101 Introduction to Space Systems and Spacecraft Design (3 cr)
A systems engineering approach to space systems and overview of university type spacecraft design requirements and design methods. Recommended Preparation: Interest in engineering, space, and aerospace sciences. (Spring only)

Engr 102 Introduction to Engineering (2 cr)
Offered summer only for students in the JEMS Program. Introduction to engineering career opportunities through analysis of engineering design problems; includes computer graphics, programming languages, economics, and statistics. (Summer only).

Engr 105 Engineering Graphics (2 cr)
Freehand and computer aided drawing in pictorial and orthographic projection; section and auxiliary views; descriptive geometry; graphical presentation of data; scales, dimensioning, and measurements. Two lec and one 2-hr lab a wk.

ECE 481 EE Senior Design II (3 cr)
The capstone design sequence for electrical engineering majors. Course topics include design, research, simulation, and experimental methods; specifications, prototyping, troubleshooting and verification; report writing, documentation and oral presentations. Topics are considered in the context of a major design project involving a team of students. Projects incorporate realistic engineering constraints; i.e. environmental, sustainability, manufacturability, ethical, safety, social and political considerations.
Prereq: ECE 480, or Permission

ECE 482 Computer Engineering Senior Design I (3 cr)
The capstone design sequence for computer engineering majors. Application of formal software and hardware design techniques, hardware/software interface considerations, project management; specifications, prototyping, troubleshooting and verification; report writing, documentation and oral presentations. Topics are considered in the context of a major design project involving a team of students. Projects incorporate realistic engineering constraints; i.e. environmental, sustainability, manufacturability, ethical, safety, social and political considerations.
Prereq: CS 240, 270, ECE 240, 241, 310, 311, 340, 341, 350, 351 and Stat 301; or Permission
Coreq: ECE 440

ECE 483 Computer Engineering Senior Design II (3 cr)
The capstone design sequence for computer engineering majors. Application of formal software and hardware design techniques, hardware/software interface considerations, project management; specifications, prototyping, troubleshooting and verification; report writing, documentation and oral presentations. Topics are considered in the context of a major design project involving a team of students. Projects incorporate realistic engineering constraints; i.e. environmental, sustainability, manufacturability, ethical, safety, social and political considerations.
Prereq: ECE 440 and 482; or Permission

ECE 490 Near Space Engineering Leadership (1 cr, max 6)
This course is for students in the Near Space Engineering program who are in the position of Flight Director, Assistant Flight Director, Project Systems Engineer, Launch and Recovery Manager, or leading one of the four flight engineering teams. The course emphasizes important leadership skills, including communication, planning and scheduling, and delegation. Students are expected to make oral technical presentations of goals, activities, progress, and accomplishments at technical meetings and conferences, work closely with research engineers and scientists in industry and NASA, and work with other high altitude scientific ballooning and near space engineering programs throughout the State. Recommended preparation: Prior experience and concurrent enrollment in University of Idaho Near Space Engineering Program.
Prereq: Permission

ECE 491 Senior Seminar (0 cr)
Technical topics, professional ethics, employment practice, and interviewing. One lec a wk; one 3-6 day field trip may be required. Graded P/F.

ECE 499 (s) Directed Study (cr arr)

ECE 500 Master's Research and Thesis (cr arr)

ECE 501 (s) Seminar (cr arr)

ECE 502 (s) Directed Study (cr arr)

ECE 504 (s) Special Topics (cr arr)

ECE 512 Analog Filter Design (3 cr)
See ECE J412/J512.

ECE 513 Radio-Frequency IC Design (3 cr)
See ECE J413/J513.

ECE 515 Analog Integrated Circuit Design (3 cr)
See ECE J415/J515.

ECE 516 Image Sensors and Systems (3 cr)
See ECE J419/J516.

ECE 517 Mixed Signal IC Design (3 cr)
See ECE J417/J517.

ECE 518 Introduction to Electronic Packaging (3 cr)
See ECE J418/J518.

ECE 520 Advanced Electrical Machinery (3 cr)
Synchronous machines and transformers, machine transient and subtransient reactances, excitation and voltage regulation, power curves, transformer connections, impedance, harmonics, and impulse characteristics.
Prereq: ECE 422

ECE 521 Power System Stability (3 cr)
Understanding, modeling, and analysis of power system transient and voltage stability; techniques for improving power system stability; use of computer tools. (Alt/yrs)
Prereq: ECE 520 or Permission

ECE 522 Induction Machines (3 cr)
Winding theory, reference frame theory, induction machine models, complex vector methods, small signal analysis, induction machine capability, simulation, introduction to variable speed drives.
Prereq: ECE 350, ECE 422, or Permission

ECE 523 Symmetrical Components (3 cr)
Concepts of symmetrical components, sequence impedances of devices and lines, circuit equivalents for unbalanced faults, management during faults.
Prereq: ECE 422

ECE 524 Transients in Power Systems (3 cr)
Analysis and simulation of electromagnetic transients on electric power systems; switching transients; lightning transients; mitigation of transient overvoltages; surge protection; modeling power systems apparatus for transient studies.
Prereq: ECE 421

ECE 525 Power System Protection and Relaying (3 cr)
Power systems protection fundamentals; dynamic response of current voltage measurement devices; numerical relay fundamentals; review of symmetrical components; application of overcurrent elements, distance elements and differential elements for the real time protection and monitoring of transmission, distribution and generation apparatus.
Prereq: ECE 422 or Permission

ECE 526 Protection of Power Systems II (3 cr)
Protection of electrical equipment as related to electric power systems with emphasis on digital algorithms. Cooperative: open to WSU degree-seeking students.
Prereq: ECE 525 or Permission

ECE 527 Dynamics and Control of AC Drives (3 cr)
Review of machine modeling techniques and simulation methods, principles of power converters for motor drive applications; analytical modeling and dynamic behavior of machine-drive systems; modulation, regulation, and control techniques; simulation of drive systems; case studies.
Prereq: ECE 320 and 470, or Permission

ECE 528 Understanding Power Quality (3 cr)
Electrical fundamentals in the context of power quality; origins and characterization of power quality problems on distribution systems; applications of standards; advanced ground techniques; case study approach to common situations.

ECE 529 Utility Applications of Power Electronics (3 cr)
HVdc transmission, static VAr compensators, FACTS devices, Custom Power devices, electrical energy storage systems, power quality, harmonic compensation, and alternative energy supply interfacing.
Prereq: ECE 422

ECE 530 Advanced Electromagnetic Theory I (3 cr)
Maxwell's equations, potential theory, wave propagation and scattering, canonical problems, guided wave theory, antenna concepts, boundary value problems. Cooperative: open to WSU degree-seeking students.
Prereq: ECE 432 or Permission

ECE 531 Advanced Electromagnetic Theory II (3 cr)
Boundary value problems in non-Cartesian systems, diffraction, perturbation techniques, variational techniques, wave transformations.
Prereq: ECE 530 or Permission

ECE 533 Antenna Theory (3 cr)
Maxwell's equations, reciprocity, equivalence theorems; wire antennas, antenna arrays, aperture antennas; analysis and design techniques; hardware considerations. Cooperative: open to WSU degree-seeking students.
Prereq: ECE 432 or Permission

ECE 421 Introduction to Power Systems (3 cr)
One line diagrams, regulating transformers, calculation of transmission line parameters, line models, Ybus, power flow, power flow studies using commercial software, contingency studies, and power system control. (Fall only)
Prereq: ECE 420

ECE 422 Power Systems Analysis (3 cr)
Balanced and unbalanced faults, Zbus methods, transient generator models, stability analysis, fault analysis using commercial software, and introduction to power system protection. (Spring only)
Prereq: ECE 421

ECE 427 Power Electronics (3 cr)
Characteristics, limitations, and application of solid state power devices; practical aspects of power electronic converters, including rectifiers and inverters; choppers, AC phase control, and device gating techniques. Cooperative: open to WSU degree-seeking students.
Prereq: ECE 420

ECE 430 Microwave and Millimeter Wave Circuits (3 cr)
Telegrapher's and wave equations; characteristic impedance, wave velocity and wave number; physical transmission lines, including coax, microstrip and stripline; circuit analysis techniques, reflection coefficient and power flow; impedance analysis, impedance matching techniques and Smith Chart; S-parameters; Wilkinson power dividers, circulators and hybrid couplers; transformers and filters.
Prereq: ECE 330 or Permission

ECE 432 Propagation of Wireless Signals (3 cr)
Maxwell's Equations, including Poynting's vector and Poynting's theorem; Wave equation with solutions, Helmholz equation, plane waves; Reflection and refraction; Theory of guided waves, ray theory and mode theory; Atmospheric and ionospheric effects on wave propagation; Multipath effects and fading; Ground waves and surface waves. Course will be offered every third semester.
Prereq: ECE 330 or Permission

ECE 434 Antenna Principles and Design (3 cr)
Maxwell's equations, vector potential theory, radiation patterns, antenna efficiency and bandwidth, polarization, dipole and loop antennas, line sources, patch antennas, lineal arrays, antenna systems, radar equation.
Prereq: ECE 330 or Permission

ECE 440 Digital Systems Engineering (3 cr)
Design of digital systems using a hardware description language and field-programmable gate arrays; projects emphasize a top-down design process using software tools; topics include datapath optimization, pipelining, static and dynamic memory, technology issues, intra-system communication, and design for testability.
Prereq: ECE 240, 241, or Permission

ECE J441/J541 Advanced Computer Architecture (3 cr)
See CS J451/J551.
Prereq: ECE 240

ECE 443 Distributed Processing and Control Networks (3 cr)
This course has three major parts: real-time computing, distributed processing, and control networks. Analysis of hardware and software performance with respect to speed, accuracy, and reliability. Investigation ways of maximizing the three essential processors resource, member, CPU Time, and Input/output. Methods for writing error free programs and designing fault tolerant computing systems.
Prereq: ECE 340, 341, 350, and 351

ECE J444/J544 Supervisory Control and Critical Infrastructure Systems (3 cr)
Principles of network-based distributed real-time control and critical infrastructure systems. Integration of dedicated control protocols with wide area networks (e.g. the Internet). Issues of reliability, cost, and security. Application to selected industries, such as electric power distribution and waste and water management. Recommended preparation: ECE 340, CS 240, ME 313, CE 330, or CE 372. (Spring, alt/yrs.)
Prereq: Senior or Graduate standing in the College of Engineering

ECE 445 Introduction to VLSI Design (3 cr)
Principles of design of very large scale integrated circuits; CMOS logic design; transistor sizing and layout methodologies; intro to IC CAD tools.
Prereq: ECE 310, 240 or Permission

ECE 449 Fault-Tolerant Systems (3 cr)
See CS J449/J549

ECE 450 Signals and Systems II (3 cr)
Continuation of ECE 350. Two-sided Laplace transform. Relationships among Fourier series, Fourier transform, and Laplace transform. Feedback, modulation, filtering, sampling, state space analysis, and modeling of systems. Emphasis on practical applications of theory to solve engineering problems.
Prereq: ECE 350 and Math 330

ECE J451/J551 Electroacoustic Sensors and Systems (3 cr)
Review linear systems. Derive and solve wave equation for strings, membranes, plates, acoustic waveguides. Radiation, reflection, transmission of sound. Analogies among electrical, magnetic, mechanical, acoustical systems. Strong emphasis on 2-port networks. Modeling transducers: loudspeakers, microphones, hydrophones. Sound perception and models of human hearing. Applications to voice communication systems, medical imaging, sonar, spatial listening, seismology, hearing protectors and hearing aids, materials inspection, room acoustics, etc. Additional projects/assignments required for grad credit. (Fall only)
Prereq: ECE 350 or ME 313 or Permission

ECE 452 Communication Systems (3 cr)
Introduction to modern communication systems; baseband pulse and data communication systems; communication channels and signal impairments; filtering and waveform shaping in the time and frequency domain; carrier-modulation for AM and FM transmission; bandpass digital and analog communication systems; comparison of system performance. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: ECE 450

ECE 455 Information and Coding Theory (3 cr)
Introduction to information theory; information content of messages; entropy and source coding; data compression; channel capacity data translation codes; fundamentals of error correcting codes; linear block and convolutional codes; introduction to trellis-coded modulation.
Prereq: Math 330 and Stat 301

ECE 460 Semiconductor Devices (3 cr)
Introduction to semiconductor physics and basic semiconductor devices; intro to electro-optical devices.
Prereq: ECE 350

ECE J462/J562 Semiconductor Theory (3 cr)
Fundamental theory and behavior of modern semiconductor devices. Additional projects/assignments reqd for grad cr.
Prereq for ECE 462: ECE 460
Prereq for ECE 562: Permission

ECE J465/J565 Introduction to Microelectronics Fabrication (3 cr)
This course serves as an introduction to the fabrication of microelectronic devices. Topics include the basics of IC structures, clean room protocol, photolithography, film growth and deposition, as well as IC interconnect technologies. Additional projects/assignments required for graduate credit.
Prereq: ECE 310

ECE 470 Control Systems (3 cr)
See ME 481.

ECE 476 Digital Filtering (3 cr)
Design methods for recursive and non-recursive filters; frequency domain characteristics; computer-aided design; applications.
Prereq: ECE 450

ECE 477 Digital Process Control (3 cr)
See ChE 445.

ECE 480 EE Senior Design I (3 cr)
The capstone design sequence for electrical engineering majors. Course topics include design, research, simulation, and experimental methods; specifications, prototyping, troubleshooting and verification; report writing, documentation and oral presentations. Topics are considered in the context of a major design project involving a team of students. Projects incorporate realistic engineering constraints; i.e. environmental, sustainability, manufacturability, ethical, safety, social and political considerations.
Prereq: ECE 240, ECE 241, ECE 310, ECE 311, ECE 320, ECE 321, ECE 330, ECE 331, ECE 340, ECE 341, ECE 350, ECE 351 and Stat 301; or Permission

ECE 310 Microelectronics I (3 cr)
Operational amplifier fundamentals and applications, introduction to electronic devices such as diodes, bipolar junction transistor (BJT) and metal oxide semiconductor field effect transistors (MOSFET), large and small-signal modeling of non-linear electronic devices, DC and small-signal analysis of circuits with non-linear electronic devices, biasing of electronic circuits using passive and active elements such as current mirrors, frequency response of electronic circuits,, introduction to the analysis, design, and applications of electronic circuits such as rectifiers, power supplies, and low-frequency single-stage amplifiers. Practical limitations of amplifiers of electronic circuits.
Prereq: ECE 212 and ECE 213
Coreq: ECE 311

ECE 311 Microelectronics I Lab (1 cr)
Lab to accompany ECE 310.
Coreq: ECE 310

ECE 320 Energy Systems I (3 cr)
Single-phase AC measurements, transformer parameters, transformer performance, rotating DC machines, DC-DC PE converters. Three lec a wk.
Prereq: ECE 212 and Phys 212/212L
Coreq: ECE 321

ECE 321 Energy Systems I Laboratory (1 cr)
Lab to accompany ECE 320. Lab experiments and computer simulations. One 3-hr lab a wk.
Prereq: ECE 213, Phys 212/212L, Math 310
Coreq: ECE 320

ECE 330 Electromagnetic Theory (3 cr)
Vector mathematics; charge and current; fields as forces; work, potential and electro-motive force; Faraday's law of induction; Gauss's and Ampere's laws; material modeling; waves in isotropic media.
Prereq: Math 275, Math 310, and Phys 212/212L
Coreq: ECE 331

ECE 331 Electromagnetics Laboratory (1 cr)
Lab to accompany ECE 330. Lab experiments and computer simulations. One 3-hr lab a wk.
Prereq: Math 275, Math 310; Phys 212/212L
Coreq: ECE 330

ECE 340 Microcontrollers (3 cr)
Introduction to use of embedded microcontrollers and microprocessors; processor architecture; assembly language programming; use of development systems and/or emulators for system testing and debugging; software and hardware considerations of processor interfacing for I/O and memory expansion; programmed and interrupt driven I/O techniques. Three lec a wk.
Prereq: ECE 212, ECE 213, ECE 240, ECE 241, and CS 112 or CS 120
Coreq: ECE 341

ECE 341 Microcontrollers Lab (1 cr)
Lab to accompany ECE 340.
Coreq: ECE 340

ECE 350 Signals and Systems I (3 cr)
Continuous and discrete linear time invariant systems. Differential and difference equations. Convolution integrals and sums. Fourier and Laplace transforms. Discrete time Fourier transforms and Z transforms. Emphasis on practical applications to engineering systems.
Prereq: ECE 212 and Math 310
Coreq: ECE 351

ECE 351 Signals and Systems I Lab (1 cr)
Laboratory to accompany ECE 350. Software and hardware laboratories. Introduction to Matlab.
Coreq: ECE 350

ECE 398 Electrical Engineering Cooperative Internship (1-3 cr, max arr)
Supervised internship in industry in professional engineering settings, integrating academic study with work experience; requires weekly progress reports, a final written report, and a talk/presentation and additional details to be worked out with the faculty supervisor. Cannot be counted as a technical elective toward the B.S.E.E. or B.S.Comp.E. Graded P/F.
Prereq: Permission

ECE 404 (s) Special Topics (cr arr)

ECE 410 Microelectronics II (3 cr)
Introduction to analog integrated circuit (IC) implementation and design, differential and common-mode signal concepts, differential amplifiers, multistage amplifiers, operational amplifier design, frequency response of electronic circuits, feedback in electronic circuits, large-signal/power amplifiers, advanced current sources and mirrors, and fundamentals of analog filters.
Prereq: ECE 310 and ECE 311; or Permission

ECE 411 Microelectronics II Lab (1 cr)
Lab to accompany or follow ECE 410.
Prereq or Coreq: ECE 410

ECE J412/J512 Analog Filter Design (3 cr)
Second order, Butterworth, Chebychev, Elliptic and Bessel filter functions and active realizations for highpass, lowpass, bandpass, notch and all-pass filters; frequency and impedance scaling; frequency transformations; phase and group delay; filter sensitivity to passive and active elements; introduction to switched capacitor filters. Additional projects/assignments reqd for grad cr.
Prereq: ECE 310 or Permission

ECE J413/J513 Radio-Frequency IC Design (3 cr)
Radio frequency (RF) communications concepts, integrated circuit (IC) transceiver architectures, low-noise amplifier, mixers, passive devices and matching networks, oscillators, power amplifiers, phase-locked loops, and frequency synthesizers. Additional projects/assignments are required for graduate students.
Prereq: ECE 410 or Permission

ECE J415/J515 Analog Integrated Circuit Design (3 cr)
Analog integrated circuit (IC) analysis, design, simulation, and layout, advanced biasing techniques, voltage references and regulators, operational amplifiers, frequency compensation techniques, noise analysis in analog circuits, and continuous-time integrated circuit filter design. Additional projects/assignments required for graduate credit.
Prereq: ECE 410 or Permission

ECE 416 Applications of Linear Integrated Circuits (3 cr)
Theory and practical implementation of operational amplifiers, comparators, voltage regulators, and selected integrated circuits. Non-ideal characteristics of op-amps and comparators and circuit considerations, stability and compensation, active filters, non-linear circuits.
Prereq: ECE 310 or Permission

ECE J417/J517 Mixed Signal IC Design (3 cr)
Sample and hold (S/H) circuits, comparators, data-converter fundamentals, Nyquist-rate digital-to-analog converters (DAC) and analog-to-digital converters (ADC), over-sampling data converters, and phase-locked loops. Additional projects/assignments are required for graduate credit.
Prereq: ECE 410 or Permission

ECE J418/J518 Introduction to Electronic Packaging (3 cr)
This course serves as an introduction to electronic packaging and "back-end" microelectronic processes. Topics include substrate design & fabrication, SMT & first level assembly, clean room protocol, thermal design, simulation, and process considerations. Additional project work will be required for students enrolled in 518.
Prereq: ECE 310

ECE J419/J516 Image Sensors and Systems (3 cr)
This course introduces various concepts and fundamentals related to semiconductor image sensors. Topics cover light production and detection, video image formats, image sensor characteristics and performance metrics, basic and advanced operation principals and types of semiconductor image sensors (CCD and CMOS), noise in imagers, image and color processing, and issues related to camera system design, integration and signal processing. Additional projects/assignments are required for graduate credit.
Prereq: ECE 310

ECE 420 Energy Systems II (3 cr)
Three-phases, three-phase transformers, winding theory, rotating waves, steady state operation of three-phase synchronous and steady state operation of single and three-phase induction machines, and AC drives. Labs: three-phase measurements, three-phase transformers, synchronous machines, induction machines. ECE 420 cannot be counted as a graduate depth area course.
Prereq: ECE 320 and ECE 321

The primary themes: (1) the integration of research with educational practices, (2) the role of diversity in the social/political context of research, and (3) the design and use of research in education.

EdAd 571 Educational Leadership in the Global Society (3 cr)
This course is designed to empower superintendents to become leaders who are culturally knowledgeable and can function well and initiate change in multicultural and international settings. This need is driven by rapid changes in the educational marketplace, competition in technical and financial resources, and the emergence of a global economy. Students gain an understanding of culture and pluralism as it relates to present organizations and trans-organizations with a global framework. The course emphasizes organizations that are global within as well as outside the United States, multinational organizations, transnational organizations, as well as global, social-change issues. Issues covered include adapting organization development strategies to the cultural blinders, understanding cultural diversity and the effect of cultural values on the organization change process, and applying strategy to dramatically changing environments.
Prereq: Bachelor's Degree in Education

EdAd 575 Superintendent as Researcher (3 cr)
An examination of applied research methods and topics associated with educational reform at the superintendent of school level. (Fall only)

EdAd 584 Bargaining/Mediation/Arbitration (3 cr)
For superintendent candidates. This course examines a bargaining model endorsed by state organizations and prepares the superintendent for collective bargaining and other dispute resolution models.

EdAd 586 Advanced School Finance (3 cr)
Economic principles to provide insights into practical matters relating to school finance for principals, teachers, business managers, and other school officials; issues of educational productivity, allocation of resources, efficiency, equity, and liberty; review of basic accounting principles and requirements applying to both district and building levels.
Prereq: EdAd 535

EdAd 587 The Superintendency (3 cr)
Prepare students for assuming the role of superintendent of schools; emphasis on research-based role expectation and practical guidelines for superintendent behavior.

EdAd 588 Critique of Research (2-3 cr)
Research design and methods applicable to the dissertation; dissertation content, format, and style; primarily for educational administration doctoral students who have completed most of their course work; emphasis on review of educational administration doctoral dissertations and peer-reviewed literature.
Prereq: Stat 251 or Equivalent, ED 571 or Equivalent

EdAd 589 Critical Thinking (2-3 cr)
Same as AOLL 589. For individuals curious about the thinking process; a variety of ways of learn about Vertical Thinking and Lateral Thinking; emphasis on practice using Lateral Thinking skills.

EdAd 592 School-Community Relations (3 cr)
Interpreting the schools to the public, two-way flow of ideas between school and community.

EdAd 593 School Facilities Planning and Maintenance (3 cr)
Planning new school facilities; facility maintenance; legal provisions involving financing; preliminary surveys of need; relationships with architects and contractors.

EdAd 594 Theory in Educational Administration (3 cr)
Theories from psychology, sociology, and cultural points of view applied to school administration; problem solving/decision making; case study approach.
Prereq: EdAd 509

EdAd 595 Administration and Supervision of Personnel (3 cr)
School-level personnel issues – certified and classified – including supervision and evaluation models, resource allocation, professional development, recruitment, contract law, tort law, selection, placement, evaluation and collective bargaining. Case studies in each area are presented, using local district materials, internet searches and text readings. While the principal's role is the main focus, the course also examines district level issues such as personnel organization and school board policies.

EdAd 598 (s) Internship (cr arr)
Interns assigned for two semesters to practicing administrators in elementary or secondary schools or in district offices or in appropriate offices in higher education. Graded P/F.
Prereq: Approval of major professor and substantial completion of certification program

EdAd 600 Doctoral Research and Dissertation (cr arr)

EdAd 610 Issues in Educational Governance (3 cr)
An examination of current topics including ethics, federalism, internationalism and trend analysis of and projections for education reform. (Fall only)
Prereq: Enrollment to a doctoral program

Electrical and Computer Engineering Courses

Fred D. Barlow, Dept. Chair, Dept. of Electrical and Computer Engineering (214 Buchanan Engr. Lab. 83844-1023; phone 208/885-6554).

ECE 101 Foundations of Electrical and Computer Engineering (2 cr)
Course is geared toward freshmen ECE students with little or no fundamental electrical/computer engineering knowledge and is highly interactive and hands-on; includes introductory coverage of basic signal characteristics, amplifier applications and design, fundamental circuit analysis, data analysis, digital logic and computer architecture, electromagnetics, semiconductor physics and solar cells, and VLSI, etc.; nontechnical topics relevant to freshmen will also be included.
Coreq: Math 143 or Math 170

ECE 204 (s) Special Topics (cr arr)

ECE 210 Electrical Circuits I (3 cr)
Intro to d.c. and transient electrical circuits; mesh and nodal analysis; dependent sources; circuit theorems; transient analysis with differential equations. Three lec and one recitation a wk.
Prereq: Math 175 with a grade of 'C' or better
Coreq: ECE 211, Math 310 and Phys 212/212L

ECE 211 Electrical Circuits Lab I (1 cr)
Lab to accompany ECE 210. Lab experiments and computer simulations. One 3-hr lab a wk.
Coreq: ECE 210 and Phys 212/212L

ECE 212 Electrical Circuits II (3 cr)
Continuation of ECE 210. Intro to sinusoidal steady state circuits; time and frequency domain analysis; Laplace transforms; Fourier series; transfer functions; Bode plots, filters. Three lec and one recitation a wk.
Prereq: ECE 210, Math 310, and Phys 212/212L; a grade of 'C' or better is required for all prerequisite courses
Coreq: ECE 213

ECE 213 Electrical Circuits II Lab (1 cr)
Lab to accompany ECE 212. Continuation of ECE 211. Lab experiments and computer simulations. One 3-hr lab a wk.
Prereq: ECE 211 and Phys 212/212L
Coreq: ECE 212

ECE 240 Digital Logic (3 cr)
Number systems, truth tables, logic gates, flip-flops, combinational and synchronous sequential circuits; intro to digital systems and basic microprocessor architecture; certification exam not reqd.
Prereq: Phys 212/212L
Coreq: ECE 241

ECE 241 Logic Circuit Lab (1 cr)
Open lab to accompany ECE 240. Design and construction of combinational and synchronous sequential logic circuits; certification exam not reqd.
Prereq: Phys 212/212L
Coreq: ECE 240

ECE 292 Sophomore Seminar (0 cr)
Curriculum options, elective courses, preparation for graduate study, professional ethics, and current technical topics. Field trip may be reqd. Graded P/F.

ing and context of instrument items; and post-survey follow-up and data processing. Recommended Preparation: Foundations of research course at graduate level.

ED 611 Doctoral Seminar I (1 cr)
This seminar is intended to help facilitate a community among doctoral students and build an understanding of the processes and strategies necessary for success in the doctoral program. (Fall only)
Prereq: Enrollment to a doctoral program

ED 612 Doctoral Seminar II (1 cr)
The seminar is intended for those doctoral students who have completed all or most of their course work. The seminar will focus on preparation for the preliminary examination and advancement to candidacy. Preparation of the dissertation proposal will also be covered. (Spring only)
Prereq: Enrollment to a doctoral program

ED 628 Program Evaluation (3 cr)
Schools, organizations, and community agencies are being increasingly held accountable for their respective programs. This course addresses how action research can be a powerful tool for empirically evaluating all aspects of a given program.
Prereq: ED 573

ED 668 Writing for Publication (3 cr)
Development of knowledge, skills, and potential of researchers and other writers desiring to prepare and publish manuscripts in education or other professional and trade journals; technical and theoretical aspects of writing for publication and the process of manuscript preparation, submission, and editing.
Prereq: Enrollment in a doctoral program in Education

ED 680 Philosophical Foundations of Educational Research (3 cr)
This doctoral level course involves learners in an examination of the philosophical foundations, epistemological assumptions, and methodological frameworks of educational and social science research. Given the current acknowledgement of the importance of perspective and point of view in inquiry. readings in gender, class, and ethnic identity will be included.
Prereq: Enrollment to a doctoral program

Educational Administration Courses

Jeffrey S. Brooks, Dept. Chair (208/667-2588; jsbrooks@uidaho.edu). Program Faculty serving North Idaho—Don Wattam; phone 208-667-2588 dwattam@uidaho.edu and Kathy Canfield-Davis; phone 208-667-2588 canfield@uidaho.edu.

EdAd 501 (s) Seminar (cr arr)

EdAd 502 (s) Directed Study (cr arr)

EdAd 504 (s) Special Topics (cr arr)

EdAd 505 (s) Professional Development (cr arr)
Professional development and enrichment of certificated school personnel. Cr earned will not be accepted toward grad degree programs, but may be used in a fifth-yr program.

EdAd 509 Educational Policy and Politics for Educational Leaders (2-3 cr)
Principles and problems of organization and administration of American education, including local, regional, and state systems.

EdAd 513 Administration of Special Education Law (3 cr)
Explore in-depth the legal issues related to the delivery of special education and pupil services. The course examines legal frameworks used to address issues in this area.

EdAd 523 Contemporary Issues in Higher Education (3 cr)
Analysis of leading current issues in post-secondary education, including but not restricted to tenure, research/teaching, extended learning-outreach programs, admission, retention, graduation requirements, and student-faculty evaluations.

EdAd 524 History and Philosophy of Higher Education in the U.S. (3 cr)
Exploration of history and philosophy of higher education from its origins to the present day; emphasis on trends and issues that have impacted higher education and contributed to its evolution.

EdAd 525 Higher Education Accounting, Budgeting, and Finance (3 cr)
Provides a foundation for exploring the procedures and processes for providing financial support to institutions of higher education; the focus is on public institutions, and information about private institutions will be discussed as appropriate.

EdAd 527 Ethics and Law in Higher Education (3 cr)
Comprehensive overview of salient legal issues that have a direct impact on post-secondary education; topics include judicial review process, agency/authority, labor relations/collective bargaining, Affirmative Action, Americans' Disability Act (ADA), accreditation, and the Land Grant university system.

EdAd 528 Leading Standards Driven Instruction (3 cr)
This course explores the management skills, concepts, and information needed to administer a district-wide standards-based instructional and assessment program, with emphasis at the school principal level. This also includes the role of the administrator in supervising for change through the creation of an inclusive learning environment. The administrator's responsibility in the auditing of content standards and corrective procedures based on assessment results will be covered in depth. The course will also include the various forms of standards-based assessment, both formative and summative, and how to lead organizations to align instruction with state assessments. Both the content and context of instruction and its effect on assessment results will be covered. The formal as well as the informal content of the instructional process and the leader's responsibility to supervise for both is a critical component of creating inclusive learning environments. The effect of technology, articulation, and the role of the administrator in monitoring what is taught will be investigated as a means toward quality control. (Fall only)
Prereq: Bachelor's Degree in Education

EdAd 530 Ethical Leadership and Law in Education (3 cr)
Ethical and legal principles undergirding schools in the U.S.; statutory and case laws focusing on Idaho and surrounding states.

EdAd 533 Multicultural Diversity and Educational Leadership (3 cr)
An introductory graduate-level course in educational administration with an emphasis on the diverse student population that we serve. Its aim is to examine what it means to lead educational organizations in a changing society. Specifically the course focuses on policy, theory and practice, as they relate to diverse school populations. Issues related to multicultural diversity will be drawn from readings as well as personal experiences. The goal of the class is to assist students in developing their own understanding and skills in becoming more effective leaders in organizations that affirm diversity.

EdAd 534 The Principalship (3 cr)
Prepare students for assuming the role of elementary or secondary school principal; emphasis on skills reqd for confidence in the role of principal.

EdAd 535 School Finance (3 cr)
Theory and application of financing schools; application to Idaho schools. Cooperative: open to WSU degree-seeking students.
Prereq: EdAd 509

EdAd 566 Leading Continuous School Improvement (4 cr)
The focus of this course is the improvement of teaching and learning through the use of student achievement data analysis and application to classroom and school improvement. It is structured around three themes: 1) Interpersonal Communications, 2) Student Achievement Data Analysis and Application and 3) Collaborative Coaching. This course is designed to develop instructional leaders who are able to implement continuous school improvement efforts through the application of these three themes. By demonstrating the use of data as the basis for educational decisions, leaders will be expected to improve achievement through the supervision of learning and the creation of a professional learning organization that promotes the learning of all: students, teachers, parents, and administrators. (Spring only)

EdAd 567 Administration of Teacher Development (3 cr)
Application of leadership skills including mentoring, cognitive coaching, crucial conversations and innovative state / local models designed to increase student achievement through the professional development of teachers. (Fall only)

EdAd 570 Methods of Educational Research (3 cr)
This course examines philosophical and theoretical frameworks, methodologies, strategies, techniques, and designs of educational research.

policy: health, nutrition and education, agriculture, rural markets for land, labor and credit, and corruption
Prereq: Econ 201 and Econ 202; or Econ 272; or Permission

Econ 453 Econometrics (3 cr)
Same as Stat 433. Application of statistical methods to economics and business studies; emphasis on regression analysis methods.
Prereq: Stat 251 or Stat 301

Econ 490 Economic Theory and Policy (3 cr)
A capstone course for economics majors. Integrates theory, quantitative methods, and policy in the economics major; will involve independent research projects.
Prereq: Econ 351, Econ 352, and Econ 453

Econ 499 (s) Directed Study (cr arr)

Econ 500 Master's Research and Thesis (cr arr)

Econ 501 (s) Seminar (cr arr)

Econ 502 (s) Directed Study (cr arr)

Econ 504 (s) Special Topics (cr arr)

Econ 527 Mathematics for Economists (3 cr)
See AgEc 527. Econ 527 is a cooperative course available to WSU degree-seeking students.

Econ 597 (s) Practicum (cr arr)
Prereq: Permission

Econ 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Education Courses

Cori Mantle-Bromley, Dean, College of Education (301 Educ. Bldg. 83844-3080; phone 208/885-6772).

Related Fields: See Educational Administration, Special Education, and Teacher Education.

ED 101 Orientation to the Teaching Profession (1 cr)
A dual credit course open to high school students. Provides prospective teachers with experiences in the K-12 educational environment and an examination of current trends, school-based practices, and professional responsibilities of school personnel. Fulfills the 100 hr. College of Education public service requirement.

ED 510 Schools in Context (3 cr)
Introduction to an inquiry based model to examine student learning and diversity in the context of the school setting. Course examines the purpose and function of schools in a K-12 setting through the development of a teaching portfolio. Course designed for post baccalaureate students seeking teaching certification. Practicum element required.

ED 531 NBPTS Certification I (3 cr)
An overview of the National Board for Professional Teaching Standards (NBPTS) certification process and a framework for completion of requirements for National Board certification; gaining an understanding of the purpose of NBPTS certification by reviewing the history of the NBPTS certification process; students examine NBPTS standards and portfolio guidelines for their area of certification and receive guidance and consultation in gathering, organizing, and writing documentation required for the NBPTS portfolio.

ED 532 NBPTS Certification II (3 cr)
Continuation of ED 531. Students will complete the requirements for National Board certification, submit a complete portfolio, and prepare to take the assessment center exercises.
Prereq: ED 531

ED 571 Introduction to Quantitative Research (3 cr)
Overview of research techniques, emphasizing experimental, quasi-experimental, descriptive, analytical, single subject designs. Special emphasis on interpreting and critically evaluating research articles; planning, analyzing, and writing quantitative research studies.
Prereq: Graduate standing

ED 573 Action Research (3 cr)
Introduction to action research as a form of systematic applied inquiry conducted by professionals to gain insight, develop reflective perspective, effect change, enhance environment, and improve practice, pedagogy, learner/participant outcomes, policies/procedures. Goals of course include: understanding the theoretical foundations of practical and critical action research, self-study, and teacher research; examining the impact of action research on professional knowledge/actions/environment; exploring processes for identifying area of focus, generating data, analyzing and interpreting data, and developing an action plan for change.

ED 574 Introduction to Qualitative Research (3 cr)
Introduction to historical background and theoretical foundations of qualitative research. Addresses issues of design, methods, analysis, political, and ethical issues as they relate to practice. Goals of course include: developing introductory understanding of designing a qualitative study; exploring framework and methods within qualitative research; appreciation of complexities within approach; and developing beginning skills through conducting a qualitative inquiry project.
Prereq: Permission

ED 584 Intermediate Quantitative Analysis in Education (3 cr)
An in-depth analysis of quantitative research methods in social and behavioral sciences. The overall goal of the course is to prepare students to apply quantitative research methodology in education. Topics include understanding applied experimental, quasi-experimental and behavioral designs, survey design, measurement and instrumentation, sampling, item analysis, reliability analysis, and validity assessment.
Prereq: Introductory statistics coursework or Permission

ED 586 Advanced Planning and Design of Educational Research (3 cr)
Planning, analyzing, writing, and evaluating research studies appropriate for the dissertation; formulation of conceptual framework relative to analytical process; research designs and control of variables, and interpretation of data; preparation of research presentations and writing for publication.
Prereq: ED 571 or ED 574, or Permission

ED 587 Advanced Quantitative Analysis in Education (3 cr)
Advanced analysis of quantitative research methods in education and social sciences. The goal of the course is to expose students to multivariate statistics and quantitative research approaches. Topics include multiple correlation/regression, discriminate analysis, exploratory and confirmatory factor analysis, multivariate analysis of variance (MANOVA), multivariate analysis of covariance (MANCOVA), canonical correlation analysis, cluster analysis, log linear model, path analysis and structural equation modeling.
Prereq: ED 584 or Permission

ED 589 Designing and Conducting Qualitative Research (3 cr)
Addresses philosophical foundations underlying qualitative research and extends understanding of design, methods of data generation, and analysis. Goals of course include understanding: relationship of design to methodologies; contextual considerations; role of Critique of Literature in developing theoretical framework; approaches to analysis; issues of trustworthiness and credibility; Researcher as Instrument; and ethical issues. Forms of reporting/writing/ representing data are introduced through reporting on newly collected or existing data.
Prereq: ED 574 or Permission

ED 590 Qualitative Research: Writing, Critiquing, Practice, and Application (3 cr)
Advanced course to develop in-depth understanding of qualitative methodologies and relationship to methods, analysis, reporting, and theoretical framework. Examines diverse perspectives, current issues in research, standards of quality, and ethical issues. Focuses on writing, interpreting qualitative data, and theory building. Goals of course include: understanding various formats for writing/reporting data; presenting and publishing qualitative research; formats for critiquing; understanding the responsibility/ commitment of researcher and research to participants/community; and use of findings from educational/social/political perspectives.
Prereq: ED 589 or Permission

ED 595 Survey Design for Social Science Research (3 cr)
This course focuses on the design and development of the survey instrument. Topics include how to word questions, validation, development of appropriate scales, traditional and alternative modes of survey administration; impacts of non-response; the effect of question structure, word-

Dan 404 (s) Special Topics (cr arr)

Dan 410 Pre-professional Dance Theatre (2 cr, max 12)
Advanced work in choreography and performance. Two hrs of company class a wk plus additional rehearsals leading to performance.
Prereq: Two semesters of Dan 210; or Permission

Dan 412 Dance Theatre Choreography (1 cr, max 6)
Independent work on intermediate and advanced levels of choreography leading to mainstage performance with Dance Theatre. Develop and refine practical skills as well as personal approaches.
Prereq: Dan 384 and Permission

Dan 416 (s) Advanced Technique (cr arr)
For majors and minors. Advanced techniques and theory in ballet, modern, jazz, and performance. Two to three hrs a wk in preprofessional technique classes.

Dan J421/J521 Dance History (3 cr)
Development of theatrical, social, and educational dance from lineage-based to contemporary styles. Students registering for graduate credit are required to complete an additional research paper make two substantial presentations synthesizing overriding concepts within a historical concept. (Alt/yrs)

Dan J422/J522 Labanalysis (2-3 cr)
An exploration of movement concepts based on Rudolf Laban's principles of Efforts, Shape, and Space. Additional projects/assignments for graduate students include a research paper on Irmgard Bartenieff. (Spring, Alt/yrs)

Dan 490 Senior Project (3 cr)
Open-ended projects representing the capstone of the student's work, consistent with the chosen emphasis within the dance degree (e.g., concerts of original work, a major choreographic work, major performance, teaching or research projects).
Prereq: Senior standing

Dan 495 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission

Dan 499 (s) Directed Study (cr arr)

Dan 510 Labanotation (3 cr)
See Dan J320/J510.

Dan 521 Dance History (3 cr)
See Dan J421/J521.

Dan 522 Labanalysis (2-3 cr)
See Dan J422/J522.

Dan 584 Dance Composition I (3 cr)
See Dan J384/J584.

Economics Courses

Scott K. Metlen, Dept. Head, Department of Business (301F J. A. Albertson Bldg. 83844-3161; phone 208/885-7146).

Notes: No course (CBE or outside the college) that is required in a CBE student's curriculum may be taken by CBE undergraduates on a P/F basis, with the exception of courses that are taught only on a P/F basis. Only upper-division CBE courses used as free electives may be taken by CBE undergraduates on a P/F basis.

The combination of credits for Econ 201, Econ 202, and Econ 272 may not exceed 6 credits.

Prerequisite: Enrollment in 300- and 400-level economics courses is restricted to students who have completed at least 58 credits. In addition, CBE students must have earned at least a 2.4 GPA in the CBE predictor courses. Students who have not completed the prerequisites to a course for which they are otherwise eligible may register for the course with the instructor's approval.

Econ 201 Principles of Macroeconomics (3 cr)
Econ 201 and Econ 202 may be taken in either order. Organization and operation of American economy; supply and demand, money and banking, macroeconomic analysis of employment, aggregate output and inflation, public finance, and economic growth. Econ 201 or Econ 202 carry only two cr after Econ 272. May involve some evening exams.

Econ 202 Principles of Microeconomics (3 cr)
Econ 201 and Econ 202 may be taken in either order. Microeconomic principles governing production, price relationships, and income distribution. Econ 201 or Econ 202 carry only two cr after Econ 272. May involve some evening exams.

Econ 204 (s) Special Topics (cr arr)

Econ 272 Foundations of Economic Analysis (4 cr)
One-semester introductory course on the principles of economics, covering both micro- and macro- concepts, theory, analysis, and applications. May involve evening exams. Carries no credit after Econ 201 and Econ 202; carries 3 credits after either Econ 201 or Econ 202. Students who have successfully completed this course, have not completed Econ 340, and later decide to major in economics are required, in consultation with the advisor, to take either Econ 201 or Econ 202 for 2 credits.

Econ 299 (s) Directed Study (cr arr)

Econ 340 Managerial Economics (3 cr)
May only be repeated once. Student may petition to repeat a second time in consultation with the Dean and course faculty team. This course covers the fundamental economic principles in applied business decisions from both micro and macroeconomic perspectives.
Prereq: Econ 201 and Econ 202; or Econ 272

Econ 343 Money and Banking (3 cr)
Influence of money and banking on economic activity; influence of monetary policies to achieve society's economic goals. May include evening exams.
Prereq: Econ 201 and Econ 202, or Econ 272

Econ 351 Intermediate Macroeconomic Analysis (3 cr)
Theory of the economy as a whole; national income accounting as a tool of analysis; national output and income, employment, price levels, and growth. May include evening exams.
Prereq: Econ 201 and Econ 202, or Econ 272, or Permission

Econ 352 Intermediate Microeconomic Analysis (3 cr)
Theory of the consumer, firm, industry, market, price determination, and allocation of productive resources.
Prereq: Econ 201 and Econ 202, or Econ 272 or Permission

Econ 385 Environmental Economics (3 cr)
Theory of externalities and public goods, and application of economic principles to environmental issues.
Prereq: Econ 202 or Econ 272 or Permission

Econ 398 (s) Economics Internship Program (1-3 cr, max 6)
Enrollment restricted to economics majors; may not be used to fulfill upper-division economics requirement in any of the three economics degree programs. Graded P/F. Relevant learning experience in business and government.
Prereq: Permission

Econ 400 (s) Seminar (cr arr)

Econ 404 (s) Special Topics (cr arr)

Econ 407 Public Finance (3 cr)
Role of government in a market economy; public choice and collective decision-making; tax-shifting and incidence; structure and economics of federal taxes; governmental budgeting; public debt; special topics.
Prereq: Econ 201 and Econ 202, or Econ 272

Econ 441 Labor Economics (3 cr)
Structure and composition of the labor force, wages and employment, human resources, income-maintenance program, and related policy issues.
Prereq: Econ 201 and Econ 202, or Econ 272

Econ 446 International Economics (3 cr)
Analysis of international trade and financial transactions; trade policy; foreign exchange markets; adjustment processes; and international monetary system. May include evening exams.
Prereq: Econ 201 and Econ 202, or Econ 272

Econ 447 International Development Economics (3 cr)
Same as AgEc 447 and LAS 447. Characteristics of development; historical perspective; macroeconomic theories and policies: models of growth, poverty, inequality, trade, aid and debt; microeconomic theories and

EDCI 534 Schools as Organizations (3 cr)
The purpose of this course is to examine the evolution of the "public school" in American society and culture, and then to examine the global competitive forces that are reshaping and driving the evolution of schools in America. We try to understand the role of the school; how schools and educational systems have changed over time; how comparative systems of education have defined their schools/school systems; and finally, we investigate how we can better organize educational systems, schools, and classrooms to address issues of justice, equity, and humanity.

EDCI 539 Robotics Technologies for K-12 Environments (3 cr)
See EDCI J439/J539.

EDCI 542 Power, Engineering & Transportation (3 cr)
Students will develop an understanding of a variety of areas of power, energy and transportation technologies through integration and application of the engineering design process and science, technology, engineering and math (STEM) fields. Engineering processes and materials will be addressed through both individual and group research and laboratory projects. Recommended preparation: Phys 111 and Math 143.

EDCI 558 Writing Institute: NW Inland Writing Project (6 cr)
Theory, research, and practice of kindergarten through college writing instruction including prewriting, drafting, revising, editing, publishing, grammar, mechanics, writing across the curriculum, error analysis, writing to learn; focus on writing for a variety of audiences and purposes (transactional, poetic, expressive); develops participant's own writing ability and ability to present in-service workshops for school districts. Four lec and four hrs of lab a wk.
Prereq: Engl 401 or EDCI 322 or Equivalent or Permission

EDCI 563 Literacy Methods for Content Learning (3 cr)
See EDCI J463/J563.

EDCI 565 Linguistics, Literacy, and Brain Function (3 cr)
Same as Neur 565. Course examines the psycholinguistic processes of literacy acquisition and learning in conjunction with recent physiological brain research.
Prereq: EDCI 320 and EDCI 466; or Permission

EDCI 567 Math Thinking for Instruction Grades K-3
Fundamental mathematical theory underlying number and operation and student reasoning of number and operation. Topics include child cognitive development, early numeracy, issues of number, meanings of operations, and computation as a foundation for algebra. Emphasis on development of student mathematical ideas, and instructional practices that promote student understanding of mathematics.
Prereq: Permission

EDCI 568 Math Thinking for Instruction Grades 4-8
Fundamental mathematical theory underlying number and operations and development of student reasoning about number and operation s. Topics include number systems, representing numbers, meanings of operations and how they relate to one another, and computation as a foundation for algebra. Emphasis on developing ideas about multiplicative thinking and proportional reasoning.
Prereq: Permission

EDCI 569 Math Thinking for Instruction Grades 6-12
Study of fundamental mathematical theory underlying number and operation and structures of algebraic thinking. Topics include qualitative and quantitative change, the need to describe and predict variation, use of mathematical models, and understanding student thinking. Emphasis on developing ideas about algebraic reasoning.
Prereq: Permission

EDCI 570 Introduction to Research in Curriculum and Instruction (3 cr)
Explorations of research foundations focused on developing skills in consuming, synthesizing and conduction research from contemporary and diverse perspectives.

EDCI 572 Measurement and Evaluation (3 cr)
Improvement of testing, examination, and evaluation in schools; practice in making, giving, scoring, and interpreting tests; use of results in counseling.

EDCI 597 (s) Practicum (cr arr)
Graded P/F.
Prereq: Permission

EDCI 598 (s) Internship (cr arr)
Currently offered in public school teaching and college teaching. Graded P/F.
Prereq: Permission

EDCI 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

EDCI 600 Doctoral Research and Dissertation (cr arr)

Dance Courses

Philip W. Scruggs, Dept. Chair (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

Dan 100 Dance in Society (3 cr)
Introduction to dance as an art form, as entertainment, and as a lifelong activity; emphasis on appreciation and understanding of movement as an expression of human values, genres and historical styles, factors affecting change, current issues.

Dan 101 First Year/Transfer Student Orientation (1 cr)
Introductory course to introduce new students to dance at the university level. Open to dance majors and minors only. (Fall Only)

Dan 105 (s) Dance (1 cr, max arr)
Modern, ballet, jazz, tap, and a variety of social dance (ballroom, Latin dance, swing, country western, etc.). Two hrs per wk. Graded Pass/Fail.

Dan 200 (s) Seminar (cr arr)

Dan 203 (s) Workshop (cr arr)

Dan 204 (s) Special Topics (cr arr)

Dan 210 Dance Theatre (2 cr, max 12)
Open to all students. Stagecraft; dance styles including modern, jazz, ballet, tap. Two hrs of company class a wk plus additional rehearsals leading to performance. Recommended Preparation: dance experience.

Dan 216 (s) Techniques (cr arr)
For majors and minors. Theory and techniques in ballet, modern, jazz, and performance. Two to three hrs a wk in a basic instructional curriculum.

Dan 299 (s) Directed Study (cr arr)

Dan J320/J510 Labanotation (3 cr)
Intro to methods of notating movement; notating and reading basic elements of Motif Writing and Labanotation. Additional projects/assignments required for graduate credit include a research paper and oral presentation to class comparing early and contemporary notation systems; developing a series of lessons applying notation concepts to technique classes--these lessons must demonstrate the graduate student's comprehension of the symbolic language system of Labanotation. (Alt/yrs)
Prereq: Permission

Dan 321 Dance Pedagogy (3 cr)
Learning styles, teaching styles, and behaviors as they affect teaching and learning in dance; science of dance training. (Alt/yrs)

Dan 360 Children's Dance (1 cr)
Basic principles and techniques for teaching dance to elementary school age children and integrating dance into the curriculum; emphasis on content, methods, and resource material. One lec and two labs a wk. (Alt/yrs)

Dan J384/J584 Dance Composition I (3 cr)
Improvisation and choreography using basic compositional elements. Additional projects/assignments for graduate students include research and analysis of two major choreographic works from two different choreographers. (Fall only, Alt/yrs)

Dan 385 Dance Composition II (2 cr)
Advanced exploration of choreographic procedures and performance. (1 lec cr; 1 lab cr) (Spring, Alt/yrs)
Prereq: Dan 384

Dan 400 (s) Seminar (cr arr)

Dan 403 (s) Workshop (cr arr)

EDCI 447 Secondary Foreign Language Methods Practicum (1 cr)
Implementation of secondary foreign language methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 437

EDCI 453 Phonics, Phonological Awareness, Fluency, and Assessment (1 cr)
Specific methods, research, and strategies providing competency in phonological awareness, phonics, fluency, and assessments and intervention strategies.
Prereq: EDCI 302 or MusT 383; or Permission

EDCI 454 Secondary Mathematics Methods Practicum (1 cr)
Implementation of secondary mathematics methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 434

EDCI J463/J563 Literacy Methods for Content Learning (3 cr)
Theory of and practical strategies for extending and reinforcing student learning of subject matter through reading and writing. Additional projects/assignments reqd for grad cr.
Prereq: EDCI 302 or MusT 383.

EDCI 466 Literacy Assessment and Intervention (3 cr)
Various assessment issues and procedures appropriate for monitoring student progress in reading and writing in the classroom; instructional methods for assisting readers at-risk. Recommended Preparation: EDCI 320 or 463.

EDCI 483 Elementary Internship I (7-14 cr)
Guided observation, supervised instruction and comprehensive team and independent teaching in school settings with a discipline-specific and integrated pedagogical focus. Graded P/F.

EDCI 484 (s) Elementary Internship II (15 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in school settings.
Prereq: Permission of division and EDCI 483

EDCI 485 (s) Secondary Internship (7-15 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in school settings. Graded P/F. Recommended Preparation: integrated course work.
Coreq: EDCI 401 and Permission of Department

EDCI 499 (s) Directed Study (cr arr)

EDCI 500 Master's Research and Thesis (cr arr)

EDCI 501 (s) Seminar (cr arr)

EDCI 502 (s) Directed Study (cr arr)

EDCI 503 (s) Workshop (cr arr)

EDCI 504 (s) Special Topics (cr arr)

EDCI 505 (s) Professional Development (cr arr)
See EDCI J405/J505.

EDCI 509 Math Education Seminar (1 cr, max 6)
This weekly seminar will examine current research and theory in mathematics education. Participants will read, analyze, and discuss current research and theory articles. Participants will take an active role in discussions, including leadership of seminar discussions. Pass/Fail grading only.

EDCI 510 Educational Perspectives: Theories, Policies, and Practices (3 cr)
Overview of educational issues historically grounded and currently relevant to policies and practices in school settings; examination of how beliefs and practices are constructed and challenged from various philosophical frameworks applied to knowledge bases, administrative models, and developmental theories of learning.

EDCI 511 Planning and Administering the Curriculum (3 cr)
Management skills, concepts, and information needed to administer a district-wide curriculum; audits and other evaluations as part of the curriculum or program development cycle; duties and responsibilities of curriculum developers from a standpoint of several possible roles and assignments; criteria and basic concepts for an audit, including essential curriculum management components, alignment, quality control, standards, and data sources.

EDCI 513 History of Educational Thought (3 cr)
Writings that have influenced educational theory and practice.

EDCI 514 Creativity and Critical Thinking Skills for Gifted and Talented Students (3 cr)
This course is designed to develop the knowledge of critical thinking and creativity; awareness of cognitive and affective characteristics of creativity and critical thinking skills and how to foster and assess those skills within the Gifted/Talented population.

EDCI 515 Social and Emotional Needs of Gifted/Talented Students (3 cr)
This course is designed to examine the social-emotional characteristics of G/T students and to explore the relationship between the intellect and emotions of this special population.

EDCI 516 (s) College Teaching (1-2 cr, max 2)
Techniques for effective teaching at college level.

EDCI 517 Curriculum and Instruction for Gifted and Talented Education (3 cr)
This course is designed to develop knowledge of Instructional Management Strategies for Differentiation of Instruction, Assessment, Curriculum Design including models and technologies, talent areas and connection with Administrative (Curriculum) Plans in the field of G/T Education.

EDCI 519 Foundations of Gifted/Talented Education (3 cr)
This course is designed to develop knowledge of the philosophy, rationale, and historical perspectives of Gifted and Talented education.

EDCI 520 Critical Issues in Education (3 cr)
This course helps students understand contemporary policy trends and research that are helping to shape the American educational landscape and encourages them to reflect on the meaning of education and schooling in a diverse society and to examine the moral and ethical responsibilities of teaching in a democracy.

EDCI 521 Teachers as Leaders (3 cr)
Specific methods, research, and strategies providing proficiency in relevant technology skills and practices to enhance classroom management and instruction.

EDCI 524 Models of Teaching (3 cr)
Examination of information processing, social interaction, personal, and behavioral models of teaching; emphasis on practical implementation of these models in teaching situations.

EDCI 526 Advanced Educational Psychology (3 cr)
Examination of selected psychological theories as applied to classroom management, values education, instructional and motivational strategies, learning and cognitive styles, gender differences, and related educational research.
Prereq: EDCI 301 or Permission

EDCI 531 Mathematics Education (3 cr)
Students will examine relevant research and practical knowledge shared by the mathematics education community. Includes the examination of history, theoretical perspectives, student learning, and pedagogy. (Summer Only)

EDCI 533 Educational Policy and Strategic Planning (3 cr)
This course is designed to introduce students to educational policy, the intergovernmental system of education in the US and some of the major issues and challenges confronting US policymakers. This seminar will increase students' understanding of the complexities of educational policy and to assist them in becoming effective leaders and practitioners who inform, shape, and implement education policy. This course has a particular focus federal and state policy in education. We will begin by examining standards-based, market-driven and professionally led models of reform, looking at their underlying theories of change, implementation challenges and the critiques leveled against these approaches.

EDCI 327 Elementary Mathematics Education (3 cr)
Specific methods, research, curricula, and technology in teaching elementary mathematics for diverse populations. Facilitation of understanding content, curriculum, methods and assessment in an integrated setting.
Prereq: EDCI 302 and Math 235-236 or Math 301; or Permission
Coreq: EDCI 328, EDCI 329, EDCI 408 and EDCI 410; or Permission

EDCI 328 Elementary Social Studies Education (3 cr)
Specific methods, research, curricula, and technology in teaching elementary social studies for diverse populations. Facilitation of understanding content, curriculum, methods and assessment in an integrated setting.
Prereq: EDCI 302 or Permission
Coreq: EDCI 327, EDCI 329, EDCI 408 and EDCI 410; or Permission

EDCI 329 Elementary Science Education (3 cr)
Specific methods, research, curricula, and technology in teaching elementary science for diverse populations. Facilitation of understanding content, curriculum, methods and assessment in an integrated setting.
Prereq: EDCI 302 or Permission
Coreq: EDCI 327, EDCI 328, EDCI 408 and EDCI 410; or Permission

EDCI 400 (s) Seminar (cr arr)

EDCI 401 Internship Seminar (1 cr)
A review of the professional commitments and responsibilities and the interactions and partnerships that support student learning and well-being.
Coreq: EDCI 483, EDCI 484, EDCI 485, CTE 484, AgEd 460, FCS 471, MusT 432 or PEP 484; or Permission

EDCI 402 Practicum (cr arr)

EDCI 403 (s) Workshop (cr arr)

EDCI 404 (s) Special Topics (cr arr)

EDCI J405/J505 (s) Professional Development (cr arr)
Professional development and enrichment of certificated school personnel. Cr earned will not be accepted toward grad degree programs, but may be used in a fifth-yr program. Additional projects/assignments reqd for grad cr.

EDCI 408 Integrated Methods Practicum I (1 cr)
Implementation of mathematics/science/social studies methods, research, curricula, and technology in elementary classrooms. Course will include 30 hours in K-8 classrooms and 15 hours of associated scheduled activities.
Prereq: EDCI 302 or Permission
Coreq: EDCI 327, EDCI 328, EDCI 329 and EDCI 410; or Permission

EDCI 409 Integrated Methods Practicum II (1 cr)
Implementation of literacy and arts methods, research, curricula, and technology in elementary classrooms. Course will include 30 hours in K-8 classrooms and 15 hours of associated scheduled activities.
Prereq: EDCI 302 or Permission
Coreq: EDCI 320, EDCI 322, EDCI 325, and Dan 360; or Permission

EDCI 410 Technology, Teaching and Learning (2 cr)
Specific methods, research, and strategies providing proficiency in relevant technology skills and practices to enhance classroom management and instruction. Recommended coreq in Elementary Education Program only EDCI 327, EDCI 328, EDCI 329, and EDCI 408.
Prereq: EDCI 302 or Permission

EDCI 411 Geometry, Measurement, and Trigonometry (3 cr)
Examines topics in measurement, geometry, and trigonometry and the way that grade 5-10 students develop an understanding of these ideas. Emphasis will be placed on recent and seminal research on learning and teaching geometry to develop mathematical practice as described in CCSS-M, especially for topics such as symmetry, congruence and similarity, right triangle trigonometry, transformations, unit, and partitioning of space. Particular emphasis will be placed on extended tasks that expose learners to investigation, conjecture, argumentation, and incorporating dynamic software. Does not count toward mathematics MAT or MS graduate programs.
Prereq: Math 236 and admission to Teacher Education; or instructor permission

EDCI 431 Secondary English Methods (3 cr)
Specific methods, research, curricula, and media in teaching Secondary English Methods. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 441

EDCI 432 Secondary Social Studies Methods (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Social Studies Methods. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 442

EDCI 433 Secondary Science Methods (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Science Methods. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 443

EDCI 434 Secondary Mathematics Methods (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Mathematics Methods. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 454

EDCI 436 Secondary Art Methods (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Art Methods. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 446

EDCI 437 Secondary Foreign Language Methods (3 cr)
Specific methods, research, curricula, and media in teaching Secondary Foreign Language. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 447

EDCI J439/J539 Robotics Technologies for K-12 Environments (3 cr)
Same as CTE J439/J539. In-depth examination of a variety of programming languages and methods, hardware and software for robotics technologies. Teaching and learning of robotics theory, programming and applications through Career-Technical student organizations will be emphasized. Students will participate in leadership roles in K-12 robotics events. Additional projects required for graduate credit. Recommended preparation: CTE 438, CTE 428.

EDCI 441 Secondary English Practicum (1 cr)
Implementation of Secondary English methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 431

EDCI 442 Secondary Social Studies Methods Practicum (1 cr)
Implementation of secondary social studies methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 432

EDCI 443 Secondary Science Methods Practicum (1 cr)
Implementation of secondary science language methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 433

EDCI 446 Secondary Art Methods Practicum (1 cr)
Implementation of secondary art methods, research, curricula and technology in secondary classrooms. Course will include 30 hours in grade 6-12 classrooms and 15 hours of associated scheduled activities. (Fall only)
Prereq: EDCI 302 or Permission
Coreq: EDCI 436

CRC 534 Rehabilitation and Community Case Management (2 cr)
Making effective case and case load management decisions including intake interviewing; medical, psychological, and vocational evaluation; job placement and rehabilitation/treatment planning; preparation in writing case histories and notes.

CRC 535 Vocational Placement and Assistive Technology (3 cr)
Environmental and attitudinal barriers to employment experienced by people with disabilities; legislation and current assistive technologies examined as a means of addressing barriers to employment; methods and techniques in employer contact, job analysis, job development, job placement, and transitional planning to overcome those barriers; integrating knowledge about the consumer and labor markets to facilitate an appropriate vocational placement and retention.
Prereq: CRC 533 or Permission

CRC 536 Professional Issues, Ethics, and Law in Counseling and School Psychology (2 cr)
Analytical process of ethical decision-making as it applies to casework, organizational policy, and law; examination of relevant professional and legal issues.

CRC 540 Addictions Counseling (2 cr)
Knowledge and abilities of assessment, treatment, and relapse prevention of addictions; focus on interventions appropriate for people with addiction problems.

CRC 543 Neuropsychology of Learning and Behavior (2 cr)
Overview of the fundamental principles of neuropsychology. Emphasis is placed on developing an understanding of the relationship between these principles and how they apply to individual case studies. Students are expected to develop an understanding of the brain and its relation to learning, developmental, behavioral, and psychological disorders. (Summer only)

CRC 551 Assessment of Cognitive Functioning (3 cr)
Overview of theories of intelligence, commonly used assessment instruments/procedures, measurement and statistical concepts, test interpretations and reporting practices, assessment of diverse populations, and ethical/legal issues. Develop competence in administering, scoring, interpreting, and reporting results of intelligence tests commonly used in school settings.
Prereq: CRC 510 and Permission

CRC 563 Consultation in Counseling and School Psychology (2 cr)
Constructs and processes that influence human, organizational, and systems development through consultation.
Prereq: Placement in counseling and school psychology specialist or doctoral programs, or Permission
Coreq: CRC 597

CRC 570 Research and Evaluation in Counseling Psychology (2 cr)
Overview of measures, instruments, and research methodologies used in the fields of counseling and school psychology. Primary focus is on preparing students to understand the process of scientific enquiry, fundamental statistical concepts, the use of technology, data analysis, qualitative research, and single-subject design. Students will be equipped with an ethical and competent skill set that can be used in the research and evaluation of individual/group treatments, programs, and student outcomes. (Summer only)

CRC 597 (s) Practicum (cr arr)
Closely supervised experience as a counselor or school psychologist in a professional setting; 50 hrs of experience are required for each credit. Graded P/F.
Prereq: CRC 510, CRC 512, CTE 464, and Permission

CRC 598 (s) Internship (cr arr)
For advanced grad students. Currently offered in counselor education, counselor supervision, college counseling, college student personnel services, school special services, school psychology, school counseling, agency counseling, and private counseling practice. Graded P/F.
Prereq: Permission

CRC 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

CRC 600 Doctoral Research and Dissertation (cr arr)

Curriculum and Instruction Courses

Paul H. Gathercoal, Dept. Chair, Dept. of Curriculum and Instruction (405B Educ. Bldg. 83844-3082; phone 208/885-6587; teachered@uidaho.edu).

Prerequisite: For registration in upper-division courses in education (except EDCI 301), students must be admitted to the teacher-education program and have a minimum GPA of 2.75, unless a higher average is stated as a prerequisite in the course description.

Related Fields: For other offerings in education, see adult, career, and technology education; agricultural education; art; business education; counseling; education; educational administration; family and consumer sciences; music; physical education; professional-technical education; and special education.

EDCI 200 (s) Seminar (cr arr)

EDCI 201 Contexts of Education (2 cr)
Introduction to the philosophical, social, cultural, historical, legal and political contexts of schooling. Develops an understanding of the sources of curriculum, standards, and assessments. Explores what it means to become a successful teacher committed to student success through the development of observation and analysis skills. Requires additional 20 hours of service learning.

EDCI 203 (s) Workshop (cr arr)

EDCI 204 (s) Special Topics (cr arr)

EDCI 299 (s) Directed Study (cr arr)
Graded P/F.
Prereq: Permission

EDCI 301 Learning, Development, and Assessment (3 cr)
Exploration of theories of learning and human development and the use of this knowledge to support student success in classroom settings. Provides a practical understanding of motivation as a classroom management tool. Develops a fundamental understanding of assessment terminology; the uses of assessment and its relationship to student success.

EDCI 302 Teaching Culturally Diverse Learners (4 cr)
An examination of cultural and linguistic diversity in classrooms. Explores strategies for creating the culturally inclusive classroom that values diversity and supports student success. Examines the use of instructional planning as a tool for motivation and classroom management. Includes 45 hours of practicum in K-12 classrooms.
Prereq: EDCI 301 or FCS 234; and admission to teacher education program

EDCI 320 Teaching Reading and Literacy (3 cr)
Foundations of literacy and the methods and strategies involved in the teaching of reading. Topics include: phonological awareness, phonemic awareness, and phonics; vocabulary; fluency; comprehension.
Prereq: EDCI 302 or Permission
Coreq: EDCI 322, EDCI 325, EDCI 409 and Dan 360; or Permission

EDCI 321 Literature for Children (3 cr)
Specific methods, research, curricula, and technology in teaching Children's Literature for diverse populations. Facilitating of understanding content, curriculum, methods and assessment in an integrated setting.
Prereq: EDCI 302 or Permission

EDCI 322 Teaching Writing/Language Arts (3 cr)
Teaching communication, including listening and speaking, and the teaching and evaluation of writing. Topics include principles, problems, methods, and strategies for promoting the ability to communicate with an emphasis on the development of the writer. Other topics include vocabulary; spelling; grammar; fluency.
Prereq: EDCI 302 or Permission
Coreq: EDCI 320, EDCI 325, EDCI 409, and DAN 360; or Permission

EDCI 325 Elementary Art Education (3 cr)
Specific methods, research, curricula, and technology in teaching elementary art for diverse populations. Facilitation of understanding content, curriculum, methods and assessment in an integrated setting.
Prereq: EDCI 302 or Permission
Coreq: EDCI 320, EDCI 322, EDCI 409, and Dan 360; or Permission

CRC 403 (s) Workshop (cr arr)

CRC 404 (s) Special Topics (cr arr)

CRC J405/J505 (s) Professional Development (cr arr)
Professional development and enrichment of certificated school personnel. Cr earned will not be accepted toward grad degree programs, but may be used in a fifth-yr program. Additional projects/assignments reqd for grad cr.

CRC 499 (s) Directed Study (cr arr)

CRC 500 Master's Research and Thesis (cr arr)

CRC 501 (s) Seminar (cr arr)

CRC 502 (s) Directed Study (cr arr)

CRC 503 (s) Workshop (cr arr)

CRC 504 (s) Special Topics (cr arr)

CRC 505 (s) Professional Development (cr arr)
See CRC J405/J505.

CRC 507 Introduction to Rehabilitation Counseling (1 cr)
Exploratory/introductory course for students considering entering rehabilitation counseling and human services. Focus is on the role and function of counselors, their values, and responses to contemporary issues. Students are also introduced to the counseling profession (e.g. history, professional preparation, credentialing). Successful completion of the course is one of the criteria for final admission to the masters degree program in rehabilitation counseling and human services.
Prereq: Permission

CRC 508 Adult Assessment (3 cr)
Provides knowledge and skills with commonly used psychological assessments for adults including the WAIS III, MMPI-2, MCMI III, Strong Inventory, Myers Briggs Type Indicator, and Beck Depression and Anxiety Inventories along with others. Students will have an opportunity to review each test, take the test, interpret results and write a psychological report. Recommended Preparation: CRC 509 and CRC 510.

CRC 509 Psychometrics (1 cr)
Basic psychometric principles for developing and evaluating instruments of psychological and educational assessment; includes validity, reliability, correlation, scaling, standardization, and test development.

CRC 510 Individual Appraisal I (2 cr)
Theoretical background and practical skills needed to administer, score, and interpret individual assessment procedures in counseling and human services. Broad exposure to techniques and instruments of psychological and educational assessment is provided.
Prereq: CRC 509 or Equivalent and Permission

CRC 511 Individual Appraisal II (2 cr)
Overview of a broad range of appraisal/assessment methods: record reviews, diagnostic interviewing, observation, student participation techniques, informal tests and standardized tests; completion of comprehensive assessment on a student in accordance with prescribed procedures.
Prereq: CRC 510 and Permission

CRC 512 Theories and Applications of Counseling I (3 cr)
Overview of prevailing theories of counseling, didactic and experiential activities to model application of technique activities; skill mastery through microskills role-playing.
Prereq: Permission

CRC 514 Career Counseling and Development (3 cr)
Career development theories, occupational and educational information and systems, career and leisure counseling, life-style and career decision-making, and career development program planning, resources, and evaluation.
Prereq: Permission

CRC 515 Counseling in the Schools (2 cr)
Analysis of developmental approach to school counseling through in-depth study of its potential for application in educational settings; procedures to plan, design, implement, and evaluate developmental school programs are emphasized.
Prereq: Permission

CRC 516 School Interventions (2 cr)
Exploration of school system dynamics, the change process, and in-depth orientation to problem-specific preventative and interventive measures.
Prereq: CRC 515

CRC 517 Group Counseling (2 cr)
Group theory and practice in counseling, including appropriate uses of group, member selection, planning and implementing groups, members' roles, rights, and responsibilities, group leader characteristics and skills, curative factors in group, ethical considerations, problems unique to group, client dynamics in group, and stages of group development.
Prereq: CRC 512 or CRC 512 and Permission
Coreq: CRC 518

CRC 518 Group Counseling Laboratory (1 cr)
Participation in a personal development group to promote group counseling skills and awareness of the self as an instrument in effective group leadership; participation as group members as well as observing and serving as part of a reflecting team for the group. Graded P/F. Two hrs of lab a wk.
Prereq: CRC 512 and Permission

CRC 519 Social and Cultural Foundations (2 cr)
Increase student awareness and knowledge of social forces, trends, and changes as they relate to the practice of counseling, assessment, consultation, learning, development, and problem-solving. A particular focus will be the study of cultural pluralism as it relates to cultural mores, social interaction patterns, differing life styles, and the political and economic realities existing in the U.S. today. Through the exploration of contemporary social and cultural issues in the diverse population of the U.S., students will be better able to understand the effects of these issues on their own values and on the practice of their professions as counselors and school psychologists.

CRC 520 Approaches to Counseling with Families (2 cr)
Introduction to the application of general systems theory to families within the context of the larger culture; overview of systems approaches to family treatment, multicultural aspects of family treatment, ethics involved in consultation with families, and referral to appropriate services.
Prereq: CRC 512, CRC 517, and CRC 519

CRC 521 Counseling Techniques (2 cr)
Overview of the skilled-helper counseling model and the counseling approaches; skill mastery through microskills role-playing activities.

CRC 528 Diagnosis and Case Conceptualization in Counseling and Human Services (3 cr)
Review of adult and child psychopathology with an emphasis on diagnosis and case conceptualization; basic issues in classification and diagnosis; training in differential diagnosis utilizing the DSM-IV diagnostic system.

CRC 529 Psychopharmacology (2 cr)
Examination of medications that are commonly prescribed for psychiatric disabilities; descriptions of medication effects, interaction, and side effects.

CRC 530 Legislative and Philosophical Foundations in Working with People with Disabilities (2 cr)
Orientation to the history, philosophy, legislation, and delivery of services to people with disabilities across placements.

CRC 531 Psycho-social Aspects of Disability (3 cr)
Social and psychological aspects of disability; attitudinal and environmental problems associated with specific disabilities and their implications for intervention, approaches to rehabilitation across all disabilities, and differences between typical and pathological behavior of people with disabilities.

CRC 532 Medical/Physical Aspects of Rehabilitation (2 cr)
Medical terminology, physical characteristics, and medical information needed to serve people with disabilities; medical and health services used to accommodate and remediate medical and physical disabilities.

CRC 533 Principles of Rehabilitation, Community, and School Counseling (2 cr)
Survey of human service agencies including their history, purpose, and intent, and eligibility requirements; description of community and rehabilitation services populations and personnel.

be included in the format of the course. The course will focus on how to engage each student to learn ecological principles and apply them in a field teaching setting. (Fall only)

CSS 563 Place Based Env. Education (3 cr)
Educating students so that they have the skills and knowledge base in order to begin to understand the human and natural environment in which they live is a complicated endeavor. This course is designed to provide a foundation of educational pedagogy, a survey of place-based literature in areas critical to this educational endeavor, and opportunities for personal and professional application. (Fall only)

CSS 566 Adv. Field Ecology Course Design (5 cr)
Address designing field ecology courses that include research, outdoor leadership, and natural history components. Students will design the following: a program to teach students about ecological information and engage them in the scientific process; an adventure-based curriculum for high school and middle school students; an investigation of a local ecological issue and the scientific and social components of that issue. (Summer only)

CSS 567 Environmental Education Teaching Practicum I (2 cr)
The teaching practicum is an opportunity to improve teaching methods and techniques and expand professional skills under the guidance of mentors at a residential environmental learning center. Teaching in a residential environmental learning center consists of classroom lectures and demonstrations with groups up to 30, as well as field teaching groups of 8 to 10. (Fall only)

CSS 568 Environmental Education Teaching Practicum II (1-2 cr)
The teaching practicum is an opportunity to improve teaching methods and techniques and expand professional skills under the guidance of mentors at a residential environmental learning center. Teaching in a residential environmental learning center consists of classroom lectures and demonstrations with groups up to 30, as well as field teaching groups of 8 to 10. (Spring only)

CSS 569 Environmental Education Teaching Practicum III (2 cr)
The teaching practicum is an opportunity to improve teaching methods and techniques and expand professional skills under the guidance of Teton Science School staff. Teaching at the Teton Science School consists of classroom lectures and demonstrations with groups up to 30, as well as field teaching groups of 8 to 10. (Spring Only)

CSS 572 Human Dimensions of Restoration Ecology (3 cr)
An in-depth investigation of multi-dimensional human considerations, including economic, social, and cultural values and the role they play in maintaining, restoring, or sustaining ecosystems. Explores the major premise that projects designed for the restoration and sustainable management of ecosystems and associated resources must be ecologically sound, economically viable, and socially desirable to be successful. Web course. (Spring only)

CSS 573 Planning & Decision Making for Watershed Management (3 cr)
Focus on ecological and human factors in process-oriented approaches to watershed analysis and planning for effective decision-making; emphasis on practical applications of current tools and approaches, e.g., GIS, MAU Theory, collaborative management. (Fall only)

CSS 575 Leadership for the Environmental Educator (2 cr)
Addresses basic outdoor leadership theory and practice for instructors involved with experiential environmental education with students 12 to 18 years old. Includes a backcountry trip, class work, instructor modeling, peer feedback and reflective practice. Focuses on the individual student's understanding of leadership theory and ability to put theory into practice as a member of a community of learners. Offered at the McCall Field Campus. (Fall only)

CSS 580 Restoration Ecology Practicum (2 cr)
Capstone experience in the Restoration Ecology Certificate Program. Students work independently to develop plan for implementing and assessing the success of ecological restoration; plan must synthesize literature, concepts, and challenges; plan shall be written with graphics and electronic submission for possible Internet publication.
Prereq: For 526 and REM 440 or Permission

CSS 581 Water Policy and Politics (3 cr)
Graduate level introduction to the politics of water use and management in western U.S. Examines models of policymaking to explain the politics of water resources. Specific topics include collaborative watershed management, irrigated agriculture, rural-urban demand, habitat conservation, regional conflict and cooperation, and social-ecological systems. (Spring, alt/yrs)

CSS 582 Natural Resource Policy (3 cr)
See Pols 562.

CSS 585 Economics and Policy of Ecosystem Services (3 cr)
Introduction to economic concepts and methods related to ecosystem services. Specific topics include the history of the ecosystem service framework, methods for valuing ecosystem services and market-based approaches for ecosystem service conservation. (Fall only)

CSS 587 Research Literature in Conservation Social Sciences (3 cr)
Readings in research literature pertinent to problems, practices, and theories of the conservation social sciences; evolution of literature and critical evaluation of scientific methods used. (Fall only)

CSS 591 Theories of Environmental Behavior (3 cr)
Social science perspectives on attitudes and human behavior in relation to environmental concerns; pertinent psychological, sociological, and anthropological frameworks are explored. (Fall only)

CSS 593 PR and Communications in Natural Resource Management (3 cr)
Key concepts, principles and practices of good public relations, clear communications, and proactive social marketing in the context of natural resource management; practical applications and skills development for increased effectiveness of resource management professionals through case studies and related exercises focused on communication skills, IT tools, media relations, social marketing, and public involvement.

CSS 597 (s) Practicum (cr arr)
Graded P/F.
Prereq: Permission

CSS 598 (s) Internship (cr arr)
Prereq: Permission

CSS 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

CSS 600 Doctoral Research and Dissertation (cr arr)
Prereq: Admission to the doctoral program in "natural resources" and permission of the department.

Core Science Courses

Rodney Frey, Director of General Education (Phinney Hall 116; phone 885-6268; rfrey@uidaho.edu).

CORS 205-297 Integrated Science (3 cr)
An interdisciplinary, thematically based course intended to provide the student with the skills to analyze and evaluate scientific claims and to make intelligent scientific and social decisions; among the topics addressed are the impact of science on society and the ethical dilemmas and moral consequences of scientific research; all themes/sections emphasize discussion, collaborative work, and the conduct of science, though not necessarily in a formal lab setting. See www.uidaho.edu/class/general-education for specific course titles and descriptions.

Counseling and Rehabilitation Counseling Courses

Jeffrey S. Brooks, Dept. Chair (208/667-2588; jsbrooks@uidaho.edu) (207 Educ. Bldg. 83843-3083; phone 208/885-5947; jfischer@uidaho.edu).

CRC 200 (s) Seminar (cr arr)

CRC 203 (s) Workshop (cr arr)

CRC 204 (s) Special Topics (cr arr)

CRC 299 (s) Directed Study (cr arr)

CRC 400 (s) Seminar (cr arr)

CSS 387 Environmental Communication Skills (3 cr)
Introduction to communications skills in the context of natural resources, including environmental and cultural interpretation; communication psychology and media applied to noncaptive audiences in natural resource situations. Field trip may be required. Special fee assessed.
Prereq: CSS 287 or Permission

CSS 398 (s) Internship (cr arr)

CSS 400 (s) Seminar (cr arr)

CSS 401 (s) Practicum in Tutoring (1-3 cr, max 3)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission

CSS 403 (s) Workshop (cr arr)

CSS 404 (s) Special Topics (cr arr)

CSS 462 Natural Resource Policy (3 cr)
Same as PolS 462. Political and institutional context for making natural resource policy; emphasis on interaction between private and public sectors and the federal, state, and tribal governments, including an examination of topical issues in natural resource politics.

CSS 475 Conservation Management and Planning II (4 cr)
Advanced theory, processes, and techniques for the management and planning of conservation systems including conservation organizations, natural areas, and their uses; focuses on resource and user management programs and techniques such as programming, budgeting, financing, contracting, and personnel management processes, as well as conservation planning processes including operational, strategic, and long-range planning for natural sites and larger landscapes. A required 2-day field trip, collaborative group projects and a Service-Learning project are required. (Spring only)
Prereq: CSS 385 and Junior or Senior standing; or Permission

CSS 481 Conservation Leadership (3 cr)
Generates essential understanding, insight, and skills into leadership of political and organizational systems designed to conserve natural resources. Field trip may be required. (Spring only)
Prereq: CSS 235, 287

CSS 483 Senior Project Presentation (1 cr)
See For 483.

CSS 485 Ecology and Conservation Biology Senior Project (1-3 cr, max 3)
See WLF 485.

CSS 486 Public Involvement in Natural Resource Management (3 cr)
Theoretical and applied concepts of public involvement in both public and private sectors of natural resource management; historical and legal mandates, government agency responsibilities, applied methods and techniques, case studies, and practical experience. Three lec and three hrs of lab a wk; field trip may be reqd. (Spring only)

CSS 487 Environmental Education (3 cr)
Concept and techniques of environmental education with emphasis on informal education settings such as residential and day-use environmental education centers, nature centers, visitor centers. Field trip may be required. (Spring only)

CSS 489 Personalities and Philosophies in Conservation (3 cr)
Lives and thinking of people who have significantly influenced conservation practice including issues of communication, public involvement, environmental education and environmental interpretation. (Spring only)

CSS 490 Wilderness and Protected Area Management (3 cr)
Historical and legal aspects of the wilderness and protected area concepts; conceptual and applied approaches, considering both ecological and sociological elements; recent research. (Spring, alt/yrs)

CSS 492 Ecotourism Principles and Issues (3 cr)
Critical examination of ecotourism emphasizing its ideology and conceptual foundations as well as major environmental and social issues affecting it. Recommended preparation: CSS 287 or equivalent. (Spring only)

CSS 493 International Land Preservation and Conservation Systems (3 cr)
Same as LAS 493. An examination of international approaches to land preservation and conservation; comparative analysis of philosophies, methods of implementation (Parks, Biosphere Reserves, RAMSAR sites, etc.), and associated issues and concerns with these social interventions; ramifications of conservation practices for biophysical and social systems. Field trip may be required. (Spring only)

CSS 496 Monitoring Impacts in Protected Areas and Wilderness (3 cr)
Theoretical and applied concepts of identifying, measuring, and monitoring changes in wilderness and protected area ecosystems caused by human influences, including recreation use, management practices, and both on-site and off-site development. Field trips may be reqd. (Spring, alt/yrs)

CSS 498 (s) Internship (cr arr)

CSS 499 (s) Directed Study (cr arr)
For the individual student; conferences, library, field, or lab work.
Prereq: Senior standing, GPA 2.5, and Permission

CSS 500 Master's Research and Thesis (cr arr)

CSS 501 (s) Seminar: Contemporary Issues in Society and Natural Resources (cr arr)
Major philosophy, management, and research problems of wildlands; presentation of individual studies on assigned topics.
Prereq: Permission

CSS 502 (s) Directed Study (cr arr)

CSS 503 (s) Workshop (cr arr)
Selected topics in the conservation and management of natural resources.
Prereq: Permission

CSS 504 (s) Special Topics (cr arr)

CSS 505 (s) Professional Development (cr arr)
Credit earned in 505 will not be accepted toward graduate degree programs.

CSS 506 Fundamentals of Research (4 cr)
Research approaches, designs, and methods as applied in natural resources, leisure, and tourism professions. (Fall only)
Prereq: Basic Statistics

CSS 510 Applications of Communication Theory in Natural Resource Management (3 cr)
Examination of communication theories and their applications in sustainable natural resource management; emphasis on social psychological approaches to understanding persuasive communication and applications in environmental interpretation and education, marketing, and sustainable development. (Alt/yrs)

CSS 559 Writing Research and Project Proposals (1 cr)
Structured instruction for developing a thesis/dissertation or project proposal. Role and importance of research goals and objectives, research questions, and project purpose statements. Justifying a study or project, based on literature and theory. Effective writing techniques to describe research designs, methodological and data collection issues for different types of research and projects. How to articulate data analysis and information processing processes used in qualitative and quantitative research and projects. Meets two hours per week for the first 8 weeks of the spring semester.

CSS 560 Community Ecology for Env. Educators (3 cr)
Cover plant and animal community ecology from both a qualitative and quantitative perspective. Topics will include: community interaction of plants and animals; community dynamics, succession, and disturbance; basic data collection and statistical analysis of habitat association data; and the effect of abiotic factors on community structure. (Fall only)

CSS 561 Ecological Inquiry for Environmental Educators (2 cr)
Address basic ecological concepts and natural resource management issues in the local ecosystem. Emphasis will be placed on developing critical thinking skills and exploring the effects of resource management policy and actions. Course direction will involve moving from a "known facts" way of thinking into the realm of questioning and evaluating the effects of human management of the system. Offered at the McCall Field Campus. (Spring only)

CSS 562 Field Science Teaching (2 cr)
Address basic natural history concepts for instructors involved in experiential environmental education with students 12 to 18 years old. Field activities, readings, and instructor modeling of teaching techniques will

CS 510 Programming Language Theory (3 cr)
Advanced topics in programming language theory including formal syntax, formal semantics, denotational semantics, and type theory; principles of programming language design are stressed; not a comparative language class. Cooperative: open to WSU degree-seeking students.
Coreq: CS 385 or Equivalent

CS 511 Parallel Programming (3 cr)
See CS J411/J511.

CS 512 Parallel Algorithms (3 cr)
See CS J412/J512.

CS 513 Concurrent Systems (3 cr)
Issues of parallel computer architecture considering a hardware/software approach; topics include convergence of parallel architectures, fundamental design issues, parallel programs, programming for performance, workload-driven evaluation, shared memory multiprocessors, snoopy-based multiprocessor design, scalable multiprocessors, cache coherence, hardware software tradeoffs, interconnection network design, latency tolerance, and future directions of concurrent systems.
Prereq: CS 150 and CS 240

CS 515 Computational Biology: Sequence Analysis (3 cr)
See CS J415/J515.

CS 520 Data Communication Systems (3 cr)
See CS J420/J520.

CS 524 Advanced Computer Graphics (3 cr)
Graphical user interfaces; rendering for realism including shading, shadows and textures; fractals; raster displays, pixmaps, and antialiasing; 3D curves and surfaces; color theory; hidden surfaces; ray tracing; games. Additional work required for graduate credit. (Spring only)
Prereq: CS 324, Math 175

CS 528 Multi-User Games and Virtual Environments (3 cr)
See CS J428/J528.

CS 536 Advanced Information Assurance Concepts (3 cr)
Advanced topics in design and analysis of network, database, and operating system security; current trends and research in mandatory and discretionary security policies. Recommended preparation: CS 336.

CS 538 Network Security (3 cr)
See CS J438/J538.

CS 539 Applied Security Concepts (3 cr)
See CS J439/J539.

CS 547 Computer and Network Forensics (3 cr)
See CS J447/J547.

CS 548 Survivable Systems and Networks (3 cr)
See CS J448/J548.

CS 549 Fault/Tolerant Systems (3 cr)
See CS J449/J549.

CS 551 Advanced Computer Architecture (3 cr)
See CS J451/J551.

CS 552 Real Time Operating Systems (3 cr)
See CS J452/J552.

CS 560 Database Management Systems Design (3 cr)
See CS J460/J560.

CS 570 Artificial Intelligence (3 cr)
See CS J470/J570.

CS 572 Evolutionary Computation (3 cr)
See CS J472/J572.

CS 576 Data Mining Topics and Techniques (3 cr)
This course will focus on the development of relevant tools, methods, and design of Knowledge from Data (KDD) Systems. Further, it will concentrate on the design and implementation of an advanced data mining system with expectations of optimal performance and flexibility.
Prereq: Graduate Standing or Permission

CS 578 Neural Network Design (3 cr)
See ECE 578.

CS 580 Graduate Project (1-6 cr, max 6)
Application of formal design and documentation techniques to the development of computer programming project; project selected in consultation with student's major professor.
Prereq: CS 383, CS 480 or Permission

CS 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation. (There is a limit on the number of credits in 599 that can be included on a study plan.)
Prereq: Permission

CS 600 Doctoral Research and Dissertation (cr arr)

Conservation Social Sciences Courses

Troy Elizabeth Hall, Dept. Head, Dept. of Conservation Social Sciences (19 CNR Bldg. 83844-1139; phone 208/885-7911; css@uidaho.edu; www.uidaho.edu/cnr/css).

CSS 200 (s) Seminar (cr arr)

CSS 203 (s) Workshop (cr arr)

CSS 204 (s) Special Topics (cr arr)

CSS 235 Society and Natural Resources (3 cr)
See For 235.

CSS 287 Foundations of Conservation Leadership and Management (3 cr)
Overview of conservation leadership and management from a political, economic, behavioral, and land use management perspective; philosophical, theoretical, historical, and managerial foundations of conservation as they relate to societal trends. Overview of applied communication methods necessary for the successful management of natural resources as well as an introduction to applied public involvement. Recommended Preparation: NR 101. (Fall only)

CSS 299 (s) Directed Study (cr arr)

CSS 304 Conservation Social Sciences Field Studies (3 cr)
Field site evaluation of conservation and social science cases. One hundred and twenty hours of instruction during a 12-day field excursion during summer session; pre- and post-visit written and oral assignments; special fee assessed. (Summer only)

CSS 310 Social Research Methods in Conservation (4 cr)
Quantitative, qualitative, and mixed approaches to studying social aspects of conservation and the environment; how to choose and apply selective research methods; design, collection, and statistical analysis of primary and secondary data; program evaluation; reporting results; interpreting research literature; lab exercises in research design, data collection, and analysis; and the communication of research issues and findings to lay and professional audiences. Special fee assessed. Three lec and 2 hrs of lab a wk. Recommended Preparation: Basic computer skills. (Fall only)
Prereq: Stat 251

CSS 364 Politics of the Environment (3 cr)
See PolS 364.

CSS 383 Natural Resource and Ecosystem Service Economics (3 cr)
The role and application of economic theories and methods in natural resource and ecosystem service decision-making. Economic tools are applied to the management of forests, fisheries, rangeland, recreation, wildlife, and other contemporary issues. (Spring only)
Prereq: For 235 or CSS 235; and Econ 202 or Econ 272; and Math 143

CSS 385 Conservation Management and Planning I (4 cr)
Intro to theory, processes, and techniques for the management and planning of conservation systems including conservation organizations, natural areas, and their uses; focuses on resource and user management programs and techniques such as programming, budgeting, financing, contracting, and personnel management processes as well as conservation planning processes including operational, strategic, and long-range planning for natural sites and larger landscapes. A required 2-day field trip, collaborative group projects and a Service-Learning project are required. (Fall only)
Prereq: Junior or Senior standing

CS J412/J512 Parallel Algorithms (3 cr)
Parallel algorithm design; formal analysis of parallel algorithmic complexity; measures of parallel efficiency; relationship between algorithmic structure and parallel mapping strategies; the consequences of spatial- and temporal-locality. Additional projects/assignments required for graduate credit.
Prereq: CS 395

CS J415/J515 Computational Biology: Sequence Analysis (3 cr)
Design and analyze algorithms that address the computational problems posed by biological sequence data, such as DNA or protein sequences. Topics may include: comparing sequences (from genes to genomes), database searching, multiple sequence alignment, phylogenetic inferencing, gene discovery and annotation, and genome assembly. Additional class presentation and/or paper required for graduate credit.
Prereq: Knowledge of high level programming language, basic probability theory, basic molecular biology, or Permission

CS J420/J520 Data Communication Systems (3 cr)
Concept and terminology of data communications, equipment, protocols (including ISO/OSI and TCP/IP), architectures; transmission alternatives, regulatory issues and network management. Additional projects/assignments reqd for grad cr.
Prereq: CS 150 and 240

CS J428/J528 Multi-User Games and Virtual Environments (3 cr)
Software design and programming issues involved in constructing multi-user computer games and virtual environments, incorporating networking and 3D graphics. Additional projects and assignments are required for graduate credit.
Prereq: CS 210, CS 324, and CS 328

CS J438/J538 Network Security (3 cr)
Practical topics in network security; policy and mechanism, malicious code; intrusion detection, prevention, response; cryptographic techniques for privacy and integrity; emphasis on tradeoffs between risk of misuse, cost of prevention, and societal issues; concepts implemented in programming assignments. Additional projects/assignments reqd for grad cr. Recommended Preparation: Knowledge of C or C++. CS 438 is a cooperative course available to WSU degree-seeking students.
Prereq: CS 336

CS J439/J539 Applied Security Concepts (3 cr)
Hands-on approach to computer security with emphasis on developing practical knowledge of how cyber attacks work and how to defend against them. Detailed exploration of attacks such as buffer overruns, string attacks, worms, trojan horses, and denial-of-service attacks, and development of defenses against them. Additional work reqd for grad cr. Recommended preparation: Good knowledge of C, operating system concepts and Unix.
Prereq: CS 336 or Permission

CS 445 Compiler Design (4 cr)
Algorithms used by the following system software: assemblers, macro-processors, interpreters, and compilers; compiler design options and code optimization; all concepts implemented in major programming assignments.
Prereq: CS 210 and 385

CS J447/J547 Computer and Network Forensics (3 cr)
Competence in using established forensic methods in the handling of electronic evidence; rigorous audit/logging and data archival practices; prevention, detection, apprehension, and prosecution of security violators and cyber criminals; identifying and correcting computer vulnerabilities in a way that is smart, prudent, and responsible. Additional work required for graduate credit.
Prereq: CS 336 and Permission

CS J448/J548 Survivable Systems and Networks (3 cr)
Computers and networks under malicious threat or attack. Attributes of survivability, trustworthiness, dependability and assurance. Threats to survivability, security, reliability and performance. Models and analytical methods to assess survivability, vulnerability, interdependence and risk. Systemic inadequacies and approaches for overcoming deficiencies. Literature review and case studies. Additional projects/assignments required for graduate credit. Recommended Preparation: CS J449/J549 or CS 438.

CS J449/J549 Fault-Tolerant Systems (3 cr)
Same as ECE J449/J549. Design, modeling, analysis and integration of hardware and software to achieve dependable computing systems employing on-line fault tolerance; theory and fundamental concepts of designing reliable systems; analytical evaluation techniques, faults and advances in ultra-reliable distributed systems, fault-tolerant software systems; case studies include the space Shuttle, Airbus, and Boeing fly-by-wire primary flight computers as well as systems in reliable data bases and financial markets. Additional projects and assignments reqd for grad cr.
Prereq: ECE 441 or Permission

CS J451/J551 Advanced Computer Architecture (3 cr)
Same as ECE J441/J541. Principles and alternatives in instruction set design; processor implementation techniques, pipelining, parallel processors, memory hierarchy, and input/output; measurement of performance and cost/performance trade-off. Additional work required for graduate credit.
Prereq: CS 150, Stat 301 or Permission

CS J452/J552 Real-Time Operating Systems (3 cr)
Topics of interest in the implementation of Real-Time Operating Systems, especially as applicable to embedded systems, including a relevant hardware review, interrupts and interrupt handling, real-time scheduling principles and implementation, latency, task management, shared data and synchronization, timers, message passing, tradeoffs between memory space and speed. Students will build a simple but relatively complete real-time operating system over the course of the semester. Additional projects and assignments are required for graduate credit. (Spring only)
Prereq: CS 240

CS J460/J560 Database Management Systems Design (3 cr)
Theory, analysis and implementation of database architecture, security, performance, query optimization, recovery and concurrency control, reliability, integrity, commit protocols, distributed processing, deadlock detection and management. Additional projects/assignments required for graduate credits.
Prereq: CS 360

CS J470/J570 Artificial Intelligence (3 cr)
Concepts and techniques involved in artificial intelligence, Lisp, goal-directed searching, history trees, inductive and deductive reasoning, natural language processing, and learning. Extra term paper reqd for cr in 570.
Prereq: CS 210

CS J472/J572 Evolutionary Computation (3 cr)
Solving computation problems by "growing" solutions; simulates natural evolution using analogues of mutation, crossover, and other generic transformations on representations of potential solutions; standard EC techniques such as genetic algorithms and evolutionary programming, mathematical explanations of why they work, and a survey of some applications; the focus is on solving real-world problems using projects. Graduate-level research and possible paper or presentation required for grad cr.
Prereq: CS 210

CS 480 CS Senior Capstone Design I (3 cr)
Capstone design sequence for computer science majors. Formal development techniques applied to definition, design, coding, testing, and documentation of a large software project. Projects are customer-specified, includes real-world design constraints, and usually encompasses two semesters. Students work in teams. Significant lab work required.
Prereq: CS 383, Engl 317, and Senior standing

CS 481 CS Senior Capstone Design II (3 cr)
Continuation of CS480. Application of formal design techniques to development of a large computer science project performed by students working in teams. Significant lab work required.
Prereq: CS 480

CS 499 (s) Directed Study (cr arr)

CS 500 Master's Research and Thesis (cr arr)

CS 501 (s) Seminar (cr arr)

CS 502 (s) Directed Study (cr arr)

CS 504 (s) Special Topics (cr arr)

tation per week. Recommended Preparation: two yrs of high school algebra.

CS 105 Computer Science as a Profession (2 cr)
Introduction to the computer science profession and curriculum; fields of study available; current topics in departmental research; curriculum planning; legal, ethical, and social issues in computing; academic ethics and responsibilities. (Fall only)

CS 112 Introduction to Problem Solving and Programming (3 cr)
Intro to fundamental problem solving techniques using the computer; use of a programming language, structured programming concepts; use of fundamental data types, including arrays and structures; basic concepts of computer organization, editing, and program execution; programming lab in which the student gains hands-on experience in problem solving with modern programming tools.
Prereq: Math 108 or sufficiently high ACT, SAT, or Math Placement Test score to qualify for Math 143

CS 120 Computer Science I (4 cr)
Fundamental programming constructs, Algorithms and problem-solving, Fundamental data structures, Overview of programming languages, Virtual machines, Introduction to language translation, Declarations and types, Abstraction mechanisms, Object-oriented programming. Three lec and one 2-hr lab a wk.
Prereq: Math 108 or sufficiently high ACT, SAT, or Math Placement Test score to qualify for Math 143

CS 121 Computer Science II (4 cr)
Abstract data types and data structures: linked lists, stacks, queues, trees, and graphs. Methods to implement and algorithms to manipulate these structures. Dynamic memory methods, sequential file processing, additional searching and sorting algorithms, recursion, and object-oriented programming. Three lec and one 2-hr lab a wk.
Prereq: CS 120
Coreq: Math 176

CS 127 (s) Programming Language (1-3 cr, max arr)
Introduction to computer programming in a selected language.
Prereq: Permission

CS 130 Programming with Visual Basic (3 cr)
Introduction to fundamental problem solving techniques using the computer and the object oriented, event driven language Visual Basic. The course introduces structured programming concepts; the use of fundamental data types, including arrays and database structures; and editing and program execution. Recommended Preparation: Math 143.

CS 150 Computer Organization and Architecture (3 cr)
Digital logic and digital systems, Machine level representation of data, Assembly level machine organization, Memory system organization and architecture, Interfacing and communication, Functional organization, Multiprocessing and alternative architectures.
Prereq: CS 120

CS 204 (s) Special Topics (cr arr)

CS 210 Programming Languages (3 cr)
Major features of good programming languages, with primary emphasis on language features and their role in writing good software; programming language design alternatives; various types of languages, including procedure, data-flow, functional, and object-oriented languages.
Prereq: CS 121

CS 240 Computer Operating Systems (3 cr)
Overview of operating systems, Operating system principles, Concurrency, Scheduling and dispatch, Memory management, Introduction to net-centric computing, OS security. Process management. Concurrent programming using threads.
Prereq: CS 121 and 150
Coreq: CS 270

CS 270 System Software (3 cr)
Programming productivity tools such as make. Debugging tools. Linking and loading. Shell programming and scripting languages. Process management and interprocess communication. Exception handling. Network concepts and network programming.
Prereq: CS 121

CS 299 (s) Directed Study (cr arr)

CS 324 Computer Graphics (3 cr)
Use of the computer to define, store, manipulate, and display 2-D and 3-D objects; 2-D curvefitting and 3-D surface development. Cooperative: open to WSU degree-seeking students.
Prereq: CS 121 and Math 330

CS 328 Introduction to Computer Game Development (3 cr)
An introduction to data structures, algorithms, and programming techniques useful in the development of computer games. Topics including 2D graphics, sound programming, user interfaces, game genres, computerization of classic board games and simulation games.
Prereq: CS 210 and CS 240

CS 336 Introduction to Information Assurance (3 cr)
Introduces the confidentiality, availability and integrity goals of information systems; resistance, recognition and response categories of assurance. Focus on computer security and survivability, including cryptography, network security, general purpose operating system security and dependability and special purpose systems for high assurance security and dependability.
Prereq: CS 240

CS 350 Intermediate Computer Architecture (3 cr)
Applied understanding of processor architecture. Design and construction of processor components, including the Arithmetic-Logic Unit (ALU), registers, datapath and control units. Memory interface to the processor. Performance optimizations, including pipelining techniques, cache memory. Portions of a processor will be constructed and simulated using a Hardware Description Language (HDL).
Prereq: CS 150 and CS 240

CS 360 Database Systems (3 cr)
Study of database design and implementation; comparison of basic models (entity-relationship, hierarchical, network, relational); study of query languages; discussion of issues of integrity, security, dependencies, and normal forms.
Prereq: CS 240 and 270

CS 383 Software Engineering (3 cr)
Current topics in development of software systems; software life cycle model, requirements definition, requirements analysis, software specification, software architectural design, engineering discipline in software development, software measurement, user interface design, legal and ethical issues in software product development. Projects are developed to demonstrate application of concepts. (Fall only)
Prereq: CS 210, CS 240 and CS 270 or Permission

CS 385 Theory of Computation (3 cr)
See Math 385.

CS 395 Analysis of Algorithms (3 cr)
See Math 395.

CS 398 (s) Computer Science Cooperative Internship (1-3 cr, max 3)
Supervised internship in professional computer science settings, integrating academic study with work experience; requires formal plan of activities before co-op assignment and final written report evaluated by on-campus faculty members. Graded P/F.
Prereq: Permission

CS 401 Contemporary Issues in Computer Science (1 cr)
Ethical, legal, and intellectual property issues; current research topics; and other issues of importance to the professional computer scientist. Graded P/F.
Prereq: Senior standing in CS

CS 404 (s) Special Topics (cr arr)

CS J411/J511 Parallel Programming (3 cr)
Analysis, mapping, and the application of parallel programming software to high-performance systems; the principles of spatial- and temporal-locality of data memory hierarchies in performance tuning; architectural considerations in the design and implementation of a parallel program; the tradeoff between threaded (shared memory) and message-passing (distributed memory) programming styles and performance. Additional projects/assignments required for graduate credit. Recommended Preparation: Proficiency in programming using a modern language such as C or C++.
Prereq: CS 395

CE 578 Highway Traffic Operations (3 cr)
Theory of two-lane highway and freeway operations, application of traffic simulation models for the design and operations of highway, development and assessment of freeway management and control strategies including Intelligent Transportation Systems applications, field data collection and analysis. (Alt/yrs)
Prereq: Permission

CE 597 (s) Practicum (cr arr)

CE 598 (s) Internship (cr arr)

CE 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

CE 600 Doctoral Research and Dissertation (cr arr)

Communication Courses

Traci Craig, Dept. Chair, Dept. of Psychology and Communication Studies (206 Student Health Ctr. 83844-3043; phone 208/885-6324).

Comm 101 Fundamentals of Public Speaking (2 cr)
Skills and techniques of effective speaking.

Comm 111 Introduction to Communication Studies (3 cr)
Introduction to historical and intellectual development of the primary subfields within communication; perspectives on interrelationships among the subfields of interpersonal, small group, visual, and organizational communication; exploration of institutional character and cultural implications of each subfield; build competence as critical consumers of communication content.

Comm 200 (s) Seminar (cr arr)

Comm 203 (s) Workshop (cr arr)
May be graded P/F.
Prereq: Permission

Comm 204 (s) Special Topics (cr arr)

Comm 233 Interpersonal Communication (3 cr)
Communication concepts and skills applied to relationship management; communication process, listening, self-disclosure, perception, conflict.

Comm 235 Organizational Communication (3 cr)
Philosophy, methods, and designs for studying communication system of a complex organization.

Comm 299 (s) Directed Study (cr arr)

Comm 332 Communication and the Small Group (3 cr)
Problem-solving methods; performing as a group leader or as a group member; small group behavior.

Comm 335 Intercultural Communication (3 cr)
Survey of current theories and research on intercultural communication; development of critical thinking skills in regard to intercultural interaction and communication styles.

Comm 340 Family Communication (3 cr)
This course provides an overview of family communication theories and applications by examining functional and dysfunctional family communication patterns and relationships, diverse family systems, roles and rules in the family, and power dynamics.

Comm 347 Persuasion (3 cr)
Theory and practice of effective persuasive techniques. Recommended Preparation: Comm 101.

Comm 400 (s) Seminar (cr arr)

Comm 403 (s) Workshop (cr arr)
May be graded P/F.
Prereq: Permission

Comm 404 (s) Special Topics (cr arr)

Comm 410 Conflict Management (3 cr)
Principles of effective conflict management in various settings; emphasis on styles of conflict, power, goals, strategies and intervention techniques as well as negotiation in the conflict process. Recommended Preparation: Comm 233.

Comm 421 Nonverbal Communication (3 cr)
Same as The 451. Current theories, research and applied principles of nonverbal communication; in-depth examination of human social and biological development of nonverbal codes, and the role of nonverbal expression in intercultural, interspecies, mediated and organizational contexts.

Comm 431 Applied Business and Professional Communication (3 cr)
Principles, skills development, and practical applications of public communication within business and other organizational contexts; emphasis on using media for creating business presentations and on the role of effective communication in career management and civic and community development. Recommended Preparation: Comm 101 and 235.

Comm 432 Gender and Communication (3 cr)
The nature of interpersonal communication and gender; identification, interpretation, and analyses of theories that offer explanations of gender and culture in interpersonal interactions. (Alt/yrs)

Comm 433 Organizational Communication Theory, Research, and Application (3 cr)
Overview of current theory and research in organizational communication; interpretive and critical perspectives on organizational culture, organizational change, organization and environment relationships, management systems and power relationships. Recommended Preparation: Comm 235.

Comm 455 Communication Research Methods (3 cr)
Aims and methods of quantitative and qualitative communication research.

Comm 456 Nonprofit Fundraising (3 cr)
Same as JAMM 456. Explores theory and practice of fundraising for nonprofit groups. Surveys public campaigns and communication strategies, fundraising methods, ethics of fundraising, and fundraising leadership/management. Students will develop methods of evaluation for fundraising, and do so by case studies and preparation for fundraising campaigns.

Comm 491 Communication and Aging (3 cr)
A communication perspective is adopted to examine the aging process and the ability of individuals to successfully adapt to aging; issues addressed are theory, research and factors associated with communication and aging.

Comm 492 Dark Side of Communication (3 cr)
Interdisciplinary study of how individuals cope with difficult, problematic, distressing, and disruptive social interaction. Topics included are the "hidden and forbidden" aspects of personal relationships that are often neglected by social scientists. Recommended Preparation: Comm 233.

Comm 494 (s) Research Experience (cr arr)
Supervised experience in conducting communication studies research. Available topics vary depending on current faculty research interests.
Prereq: Permission

Comm 497 (s) Practicum in Instruction (1-3 cr, max 6)
Tutoring and/or instructional services performed by advanced students under faculty supervision.
Prereq: Permission

Comm 498 (s) Internship (1-3 cr, max arr)
Graded P (pass)/ F (fail).
Prereq: Permission

Comm 499 (s) Directed Study (cr arr)

Computer Science Courses

Gregory W. Donohoe, Chair, Dept. of Computer Science (237 Janssen Engr. Bldg. 83844-1010; phone 208/885-6501).

Vertically-related courses in this subject field are: CS 120-121.

CS 101 Introduction to Computer Science (3 cr)
Survey of computer science and topics of importance to computer scientists; includes topics such as the nature of problems, unsolvability, hardware, human factors, security, social, ethical, and legal issues; exposure to practical aspects of computer networks. Three lectures and one reci-

tions in component and system design throughout the semester. Cooperative: open to WSU degree-seeking students.
Prereq: Permission

CE 542 Advanced Design of Steel Structures (3 cr)
Plate girder design; local and global buckling; plastic collapse analysis; shear and moment-resisting connections; eccentrically-loaded connections. Cooperative: open to WSU degree-seeking students.
Prereq: CE 444 or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 543 Dynamics of Structures (3 cr)
Equations of motion, free vibration, damping mechanisms, harmonic, impulse, and seismic loading; shock and seismic response spectra, time and frequency domain analysis, modal analysis, structural dynamics in building codes. Cooperative: open to WSU degree-seeking students.

CE 545 Matrix Structural Analysis (3 cr)
See CE J445/J545.

CE 546 Finite Element Analysis (3 cr)
Same as ME 549. Formulation of theory from basic consideration of mechanics; applications to structural engineering, solid mechanics, soil and rock mechanics; fluid flow. Cooperative: open to WSU degree-seeking students.
Prereq: ME 341 or CE 342. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 547 Advanced Reinforced Concrete (3 cr)
Composite design; slab design; limit state design; footings; retaining walls; deep beams; brackets and corbels; torsion; seismic design; shear walls. Cooperative: open to WSU degree-seeking students.
Prereq: CE 441. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 550 Experimental Methods in Fluid Dynamics(3 cr)
The objective of this course is to develop the knowledge and skills to be able to design and perform fluid dynamics experiments (and experiments in related areas) and to interpret and report the results. Learn the words, the concepts, and experimental skills in areas including dimensional analysis and scaling of experiments, flow visualization, velocity and flow rate measurements, turbulence measurements, and sediment sizing and transport measurements. Additional projects/assignments reqd for grad cr. One 1-1/2 hr lec and one 3-hr lab a wk. Recommended Preparation: Engl 317 and Engr 335.

CE 554 Environmental Hydrodynamics (3 cr)
The course analyzes solute transport and mixing in rivers. It provides the derivation and analysis of the equations governing solute mixing and transport and shows the connection between mixing and flow field. It presents molecular and turbulent diffusion, dispersion, vertical, lateral, and longitudinal mixing, and the effects of river irregularities and curved channels. The course includes individual projects.
Prereq: CE 428 or permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 556 Properties of Highway Pavement Materials (3 cr)
Physical and mechanical properties of asphalt and Portland cement concrete materials; design of asphalt concrete mixes; introduction to viscoelastic theory; characterization methods, emphasizing fatigue, rutting and thermal cracking; modification and upgrading techniques. Three 1-hr lec a wk and variable number of lab hrs for demonstration. Cooperative: open to WSU degree-seeking students.
Prereq: CE 357 or Equivalent, or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 561 Engineering Properties of Soils (3 cr)
Physical properties, compressibility and consolidation, shear strength, compaction, saturated and unsaturated soils, laboratory and field methods of measurement, relations of physical and engineering properties, introduction to critical-state soil mechanics. Cooperative: open to WSU degree-seeking students.
Prereq: CE 360. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 562 Advanced Foundation Engineering (3 cr)
Interpretation of in-situ tests for foundation design parameters, bearing capacity and settlement of axially loaded piles, pile groups, and drilled shafts, pile dynamics, laterally loaded deep foundations, downdrag and uplift of deep foundations, foundation load and integrity testing methods and data interpretation, mat foundations. Cooperative: open to WSU degree-seeking students.
Prereq: CE 360 or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 563 Seepage and Slope Stability (3 cr)
Same as GeoE 535. Principles governing the flow of water through soils; mechanics of stability analysis of slopes, landslides, and embankments for soil and rock masses; probabilistic analyses; stabilization methods. Cooperative: open to WSU degree-seeking students. (Alt/even yrs, Spring only)
Prereq: CE 360 or GeoE 436; or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 566 Geotechnical Earthquake Engineering (3 cr)
Faulting and seismicity; site response analysis; probabilistic seismic hazard assessment; dynamic soil properties; influence of soil on ground shaking; response spectra; soil liquefaction; seismic earth pressures; seismic slope stability; earthquake resistant design. Cooperative: open to WSU degree-seeking students.
Prereq: CE 360 or Equivalent, or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 571 Traffic Flow Theory (3 cr)
Introduction to elements of traffic flow theory including principles of traffic stream characteristics, capacity, queuing theory, and shock waves; application of traffic flow theory to freeway and arterial traffic flow problems. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Permission

CE 572 Intersection Traffic Operations (3 cr)
Application of traffic simulation models to the design and operations of traffic facilities, including intersection, arterials; assessment and design of traffic signal timing strategies. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Permission

CE 573 Transportation Planning (3 cr)
Concepts and methods of transportation planning, including network modeling, travel demand forecasting, and systems evaluation of multimodal transportation systems. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Permission

CE 574 Public Transportation (3 cr)
Concepts and principles of planning and operations of public transportation systems, including bus transit, rail transit, and paratransit modes. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Permission

CE 575 Advanced Pavement Design and Analysis (3 cr)
Design of new and rehabilitated asphalt and Portland cement concrete pavements; mechanistic-empirical design procedures; performance models; deflection-based structural analysis, overlay design, environmental effects; long-term pavement performance (LTPP), and introduction to research topics in pavement engineering. Cooperative: open to WSU degree-seeking students.
Prereq: CE 475 or Equivalent, or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 576 Highway Design and Traffic Safety (3 cr)
Geometric design of highways as related to operation and safety. Analysis of highway design alternatives and control strategies with respect to accident probabilities. Statistical models for safety analysis. Accident countermeasure selection and evaluation methodology. Risk management.
Prereq: Permission

CE 577 Pavement Management and Rehabilitation (3 cr)
Overview of Pavement Management Systems; PMS project and network levels; serviceability concepts and performance models; PMS data needs; rehabilitation and maintenance strategies; life cycle cost analysis; implementation of PMS in design, construction, maintenance, and research; examples of working PMS; maintenance and rehabilitation of asphalt and concrete pavements. Cooperative: open to WSU degree-seeking students.
Prereq: CE 475 or Equivalent, or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 491 Civil Engineering Professional Seminar (1 cr)
Employment and technical topics; preparation and presentation of professional paper. Course to be taken in last semester before graduation. Graded P/F.
Prereq: Senior standing in Civil Engineering.

CE 492 (s) Professional Society Project (1 cr, max 2)
May be used as a technical elective by CE majors. Active participation in a student project sponsored by one of the professional engineering societies; students schedule, manage, and complete the project, make written and oral presentations, and present the project results to the sponsoring professional engineering society.
Prereq: Junior standing in Civil Engineering and Permission

CE 494 Senior Design Project (3 cr)
Comprehensive civil engineering design project. Requires integration of skills acquired in civil engineering elective courses, written reports, and oral presentations.
Prereq: Senior standing in Civil Engineering and Permission

CE 499 (s) Directed Study (cr arr)

CE 500 Master's Research and Thesis (cr arr)

CE 501 (s) Seminar (cr arr)
Conferences and reports on current developments.

CE 502 (s) Directed Study (cr arr)

CE 503 (s) Workshop (cr arr)

CE 504 (s) Special Topics (cr arr)

CE 507 River Restoration (3 cr)
This course focuses on the principles and practices used in river restoration. The potential assumptions and errors with common restoration methodologies and possible ways to improve such channel designs are discussed. A number of case studies are used to evaluate the success of various restoration techniques. The course includes homework sets and individual projects and has a mandatory field trip to a local restored site. Recommended classes to take prior to this include at least one of the following: CE 535, CE 322, CE 428, or CE 520.
Prereq: Engr 335 or Instructor Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 510 Advanced Mechanics of Materials (3 cr)
See ME 539. Cooperative: open to WSU degree-seeking students.

CE 512 Advanced Topics in Waste Management and Treatment (3 cr)
Modeling, analysis, and design of advanced and emerging engineering technologies and processes for waste management/treatment and resource recovery.
Prereq: Instructor Permission

CE 516 River Restoration (3 cr)
This course focuses on the principles, assumptions and practices used in river restoration. The use of channel form, channel classification, reference reaches, sediment transport equations, hydraulic structures, 1-D and 2-D flow models, and aquatic habitat modeling to design restoration projects are discussed. The course also includes topics such as adaptive management, restoration evaluation and monitoring, basic ecological design goals, and a number of local case studies. The course has a mandatory field trip to a local restored site. Recommended classes to take prior to this include at least one of the following: CE 535, CE 322, CE 428, or CE 520.
Prereq: Engr 335 or Instructor Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 519 Fluid Transients (3 cr)
Same as ME 519. Development of concepts and modeling techniques for unsteady flow of liquid and gas in piping systems; extensive computer programming used to develop tools for analysis, design, and control of transients. (Alt/yrs)
Prereq: Math 310 and Engr 335. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 520 Fluid Dynamics (3 cr)
See ME J420/J520.

CE 521 Sedimentation Engineering (3 cr)
Intro to river morphology and channel responses; fluvial processes of erosion, entrainment, transportation, and deposition of sediment. Cooperative: open to WSU degree-seeking students.
Prereq: CE 428 or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 522 Hydraulic Structures Analysis and Design (3 cr)
See CE J422/J522.

CE 523 Water Resources Systems (3 cr)
Concepts in water development; coordination of development of other natural resources; systems approach and optimization techniques.
Prereq: Permission

CE 526 Aquatic Habitat Modeling (3 cr)
The course objective is to learn the underlying principles of all components required for aquatic habitat modeling, to be able to perform such projects in riverine ecosystems including project design, data collection, data analysis and interpretation of the results and to learn the use of computational aquatic habitat models. Students will be working on their own modeling projects using the simulation model CASiMiR.
Prereq: CE 322 and CE 325 or BAE 355; or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 528 Stochastic Hydrology (3 cr)
Analyses and evaluation of hydrologic data and time series; application of stochastic models to data generation and record extension (daily and storm precipitation, monthly and annual streamflows); regression and autoregression analyses; extensive computer applications for data analysis and synthesis.
Prereq: CE 325, introductory statistics course. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 531 Environmental Engineering Unit Operations (3 cr)
Analysis and design of physical and chemical operations of water and waste treatment; flow models, sedimentation, flocculation, filtration, and water conditioning. Cooperative: open to WSU degree-seeking students.
Prereq: Permission

CE 532 Design of Water and Wastewater Systems II (3 cr)
See CE J432/J532.

CE 533 Water Quality Management (3 cr)
See CE J433/J533.

CE 534 Environmental Engineering Unit Processes (3 cr)
Aeration system design, biological oxidations, growth kinetics, process design of suspended growth and fixed film aerobic and anaerobic systems, biological nutrient removal, land treatment systems. Cooperative: open to WSU degree-seeking students.
Prereq: CE 431 or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 535 Fluvial Geomorphology and River Mechanics (3 cr)
Hydraulic and morphologic processes of rivers. Drainage network development, channel hydraulics and shear stress partitioning via boundary layer theory, hydraulic geometry and cross-sectional form, sediment transport and bed material sampling, reach-scale morphologies and processes from headwater streams to lowland rivers, physical processes of forest rivers, sediment budgets, and river valley evolution. Field exercises emphasize quantitative analysis of fluvial processes and channel form, acquisition of field skills (measuring hydraulic and geomorphic variables, topographic surveying), and scientific writing. (Alt/yrs)
Prereq: CE 428 or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 536 Hydropower Systems (3 cr)
Design, construction and operation of low-head, medium and high-head hydropower plants, including run-of-river, storage and pumped storage plants. Design and analysis of hydraulic components, economic analysis, environmental aspects and low impact hydro schemes. (Alt/yrs, Fall only)
Prereq: CE 322, CE 325 or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 541 Reliability of Engineering Systems (3 cr)
Same as ME 583. Fundamentals of reliability theory, system reliability analysis including common-mode failures and fault tree and event tree analysis, time-dependent reliability including testing and maintenance, propagation of uncertainty, human reliability analysis, practical applica-

CE 342 Theory of Structures (3 cr)
Stresses and strains in statically determinate and indeterminate beam, truss, and rigid frame structures; effects of moving loads; matrix displacement method. Two lec and one 3-hr lab a wk.
Prereq: Engr 350, Math 275, Math 310, and Phys 211/211L. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 357 Properties of Construction Materials (4 cr)
Principles of construction materials, composition, physical and mechanical properties, test methods, data analysis and interpretations, and report writing; materials covered are aggregates, cements, concretes, metals, wood, and composites. Three lec and two hrs of lab.
Prereq: CE 215, Engr 350, Math 310. A minimum grade of 'C' or better is required for all pre/coreqs.
Coreq: Stat 301. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 360 Fundamentals of Geotechnical Engineering (4 cr)
Soil composition, descriptions, and classification systems; permeability and seepage; capillarity and suction; total, effective, and neutral stresses, compression and volume changes; shear strength; compaction. Three lectures, and 2 hours of lab a week.
Prereq: CE 215, Engr 335, Engr 350, and Math 310. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 372 Fundamentals of Transportation Engineering (4 cr)
Intro to planning, design, and operation of highway and traffic, public transportation, and airport systems. Three lec and one 3-hr lab a wk; periodic field data collection and one or two field trips.
Prereq: Stat 301 and CE 211. A minimum grade of 'C' or better is required for all pre/coreqs.
Coreq: Engl 317. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 400 (s) Seminar (cr arr)

CE 403 (s) Workshop (cr arr)

CE 404 (s) Special Topics (cr arr)

CE 411 Engineering Fundamentals (1 cr)
Review of basic engineering and science material covered in Fundamentals of Engineering exam. Offered for the nine to ten week period prior to the exam date. Graded P/F.
Prereq: Senior standing or Permission

CE 421 Engineering Hydrology (3 cr)
Same as BAE ID451. Hydrologic design including: statistical methods, rainfall analysis and design storm development, frequency analysis, peak discharge estimation, hydrograph analysis and synthesis, flow routing, and risk analysis.
Prereq: CE 325 or BAE 355. A minimum grade of 'C' or better is required for all pre/coreqs.

CE J422/J522 Hydraulic Structures Analysis and Design (3 cr)
Hydraulic design and stability analysis of hydraulic structures, such as dams, weirs, spillways, stilling basins, culverts, levees, fish ladders etc. Project oriented problems. Extra design projects or different design projects for grad cr. One field trip. CE 422 is a cooperative course available to WSU degree-seeking students.
Prereq: CE 322 or Equivalent, Engr 360, or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 428 Open Channel Hydraulics (3 cr)
Same as BAE 458. Hydraulics of uniform and varied flow in open channels with fixed and movable beds. Recommended Preparation: CE 322. Cooperative: open to WSU degree-seeking students.

CE 431 Design of Water and Wastewater Systems I (3 cr)
Application of fundamental engineering science to the design of systems for the treatment of domestic and industrial water supplies; treatment and re-use of domestic sewage and industrial wastes. Three lec a wk.
Prereq: CE 322, CE 330, or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE J432/J532 Design of Water and Wastewater Systems II (3 cr)
Application of unit operations and processes to design of integrated wastewater treatment systems; critical analysis of existing designs. Additional projects/assignments reqd for grad cr. CE 532 is a cooperative course available to WSU degree-seeking students.
Prereq: CE 431. A minimum grade of 'C' or better is required for all pre/coreqs.

CE J433/J533 Water Quality Management (3 cr)
Physical, chemical, and biological techniques for analysis of water quality management problems; development of design criteria for corrective systems. Additional projects/assignments reqd for grad cr.
Prereq: Permission

CE 441 Reinforced Concrete Design (3 cr)
Strength design method in accordance with latest ACI code. Two lec and one 2-hr lab a wk.
Prereq: CE 342. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 444 Steel Design (3 cr)
Structural steel design using latest AISC specifications. Two lec and one 2-hr lab a wk.
Prereq: CE 342. A minimum grade of 'C' or better is required for all pre/coreqs.

CE J445/J545 Matrix Structural Analysis (3 cr)
Formulation of the analysis of trusses, beams, and frames using the stiffness method of matrix structural analysis; development of element properties, coordinate transformations, and global analysis theory; special topics such as initial loads, member and joint constraints, and nonlinear analysis. Special project demonstrating mature understanding of materials reqd for grad cr.
Prereq: CE 342 or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 460 Geotechnical Engineering Design (3 cr)
Applications of soil mechanics in design of shallow and deep foundations, earth retaining structures, excavations, and soil exploration.
Prereq: CE 360; and CE 441 or CE 444; or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 473 Highway Design (3 cr)
Theory and practice in highway design, highway functional classification concepts, design controls and criteria, geometric design of highways and streets, cross section and roadside design, and highway safety manual applications.
Prereq: CE 211. A minimum grade of 'C' or better is required for all pre/coreqs.
Coreq: CE 372. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 474 Traffic Systems Design (3 cr)
Analysis and design of network traffic systems; system evaluation using computer optimization and simulation; development and testing of alternative system design. Two lec and one 3-hr lab a wk; field data collection and field site visits. Cooperative: open to WSU degree-seeking students.
Prereq: CE 372 or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 475 Pavement Design and Evaluation (3 cr)
Pavement design processes; stress-strain analysis in multi-layer elastic system; materials selection and characterization methods; traffic loads, design methods for flexible and rigid pavements; performance evaluation of existing pavements; condition survey and ratings; introduction to pavement maintenance and rehabilitation techniques.
Prereq: CE 357 or Equivalent, or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 482 Project Engineering (3 cr)
Modern project engineering techniques for planning, scheduling, and controlling typical engineering and construction projects; linear programming and other optimization techniques as applied to resource allocation; microcomputer applications are emphasized and appropriate software used throughout the course.
Prereq: Stat 251, Stat 301, or Equivalent, and Senior standing or Permission. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 484 Engineering Law and Contracts (3 cr)
Project engineering techniques for planning, scheduling, and controlling typical engineering and construction projects. Contract law and application to engineering services agreements and construction contracts; preparing technical specifications, torts, professional liability, and alternate dispute resolution.
Prereq: Senior standing in engineering

Chem 551 Electronic Spectrometry (2-3 cr, max 3)
A brief review of fundamental concepts, including electronic transitions, optical properties of materials, and laws of radiation absorption; detailed coverage of instrumentation used for ultraviolet and visible absorption spectroscopy, with regard to optical components, overall design strategy, and signal processing; analytical performance related to these aspects and presented from both theoretical and practical standpoints; in-depth coverage of luminescence spectroscopy, including phosphorimetry and fluorimetry; atomic spectroscopy (both flame and plasma-based versions), including principles of operation, instrumental requirements, and analytical application; survey of x-ray absorption and fluorescence spectroscopy. (Alt/yrs)
Prereq: Chem 454, 455 or Permission

Chem 553 Separation Theory and Chromatography (2-3 cr, max 3)
Gas and liquid chromatography and related fields. Students enrolled in Chem 553 are required to complete additional written assignments. (Alt/yrs)
Prereq: Chem 306

Chem 556 Molecular Spectroscopy (3 cr)
Interpretation of IR, UV, NMR, and mass spectra. Registration for Chem 556 requires completion of additional assignments.
Prereq: Chem 306 or Permission

Chem 558 Electrochemistry (2-3 cr, max 3)
Fundamental concepts of electrochemistry, including the principles of redox processes; in-depth treatment of electroanalytical techniques, especially voltammetric and potentiometric methods; advanced treatment of selected topics, including ultramicro and in vivo electrochemical techniques. (Alt/yrs)
Prereq: Chem 454, or 455, or Permission

Chem 564 Inorganic Chemistry (3 cr)
See Chem J464/J564.

Chem 571 (s) Topics in Organic Chemistry (1-9 cr, max 9)
Selected topics from the current literature.
Prereq: Chem 473, 476, or Permission

Chem 572 Medicinal Chemistry (3 cr)
See Chem J472/J572.

Chem 590 Doctoral Research Proposal (1 cr)
Taken no later than one semester after completion of cumulative exams; required for advancement to Ph.D. candidacy. Includes review of relevant literature and original research proposal describing the student's intended research project.

Chem 600 Doctoral Research and Dissertation (cr arr)

Chinese Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Chin 110 Elementary Chinese I (4 cr)
Writing system, pronunciation, vocabulary, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: Chin 110L

Chin 110L Elementary Chinese I Lab (1 cr)
Writing system, pronunciation, vocabulary, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: Chin 110

Chin 112 Elementary Chinese II (4 cr)
Writing system, pronunciation, vocabulary, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: Chin 112L

Chin 112L Elementary Chinese II Lab (1 cr)
Writing system, pronunciation, vocabulary, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: Chin 112

Chin 210 Intermediate Chinese I (4 cr)
Review and practice of basic language skills; increased emphasis on reading, writing, and free discussion. Four lec and one 1-hr lab a wk.
Coreq: Chin 210L

Chin 210L Intermediate Chinese I Lab (1 cr)
Review and practice of basic language skills; increased emphasis on reading, writing, and free discussion. Four lec and one 1-hr lab a wk.
Coreq: Chin 210

Chin 212 Intermediate Chinese II (4 cr)
Review and practice of basic language skills; increased emphasis on reading, writing, and free discussion. Four lec and one 1-hr lab a wk.
Coreq: Chin 212L

Chin 212L Intermediate Chinese II Lab (1 cr)
Review and practice of basic language skills; increased emphasis on reading, writing, and free discussion. Four lec and one 1-hr lab a wk.
Coreq: Chin 212

Civil Engineering Courses

Richard J. Nielsen, Dept. Chair, Dept. of Civil Engineering (104 Buchanan Engr. Lab. 83844-1022; phone 208/885-6782).

Prerequisites: All prerequisites for Civil Engineering (CE) courses must be completed successfully with a grade of C or better.

CE 115 Introduction to Civil Engineering (1 cr)
Introduction to civil engineering problem solving skills, development of software use skills, graphical analysis, data analysis, and oral and written communication skills. One weekly two hour laboratory with up to 3 out-of-class activities.
Prereq: Major in civil engineering

CE 200 (s) Seminar (cr arr)

CE 203 (s) Workshop (cr arr)

CE 204 (s) Special Topics (cr arr)

CE 211 Engineering Surveying (3 cr)
Theory of measurements, basic equations for survey computations, types of distribution of errors, topographical and land surveying introduction to geographic information systems and global positioning systems, coordinate geometry and coordinate transformations, site engineering projects using land development software, application of surveying methods to construction; site engineering, and civil engineering projects surveying instruments. Two lec and one 3-hr lab a week; periodic field data collection and one or two field trips.
Prereq: Math 143 or Math 170 or Math 175, and Engr 105. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 215 Civil Engineering Analysis and Design (3 cr)
Application of basic science, mathematics, and fundamental engineering principles to solution of civil engineering design problems; use of structured programming concepts in design; develop oral and written communication skills.
Prereq: CE 115, Engr 105, and Math 170. A minimum grade of 'C' or better is required for all pre/coreqs.
Coreq: Phys 211/211L. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 299 (s) Directed Study (cr arr)

CE 322 Hydraulics (3 cr)
Applied principles of fluid mechanics; closed conduit flow, hydraulic machinery, open channel flow; design of hydraulic systems. Laboratory exercises on closed conduit flow, hydraulic machinery, open channel flow and mixing process. Three lec a week and 4-6 labs a semester.
Prereq: CE 215, Math 310, Phys 211/211L, Engr 220 and Engr 335. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 325 Fundamentals of Hydrologic Engineering (3 cr)
Same as BAE 355. Principles of hydrologic science and their application to the solution of hydraulic, hydrologic, environmental, and water resources engineering problems.
Prereq: Math 310, Stat 301, and Engr 335. A minimum grade of 'C' or better is required for all pre/coreqs.

CE 330 Fundamentals of Environmental Engineering (3 cr)
Principles of engineered environmental systems, including physical, chemical, and microbiological processes; types and effects of pollutants; regulations; treatment of water, wastewater, sludges, and solid waste; control of air and agricultural pollution. Three lec and one 3-hr lab a wk.
Prereq: Engr 335, Chem 111, CE 215 and Math 310. A minimum grade of 'C' or better is required for all pre/coreqs.

Chem 306 Physical Chemistry (3 cr)
Kinetic theory, thermodynamics, quantum mechanics, and spectroscopy. (Spring only)
Prereq: Chem 112, and Math 275
Prereq or Coreq: Phys 212 or Phys 213

Chem 307 Physical Chemistry Lab (1 cr)
Lab to accompany Chem 305-306. One 3-hr lab a wk. (Fall only)
Prereq or Coreq: Chem 305

Chem 308 Physical Chemistry Lab (1 cr)
Lab to accompany Chem 305-306. One 3-hr lab a wk. (Spring only)
Prereq or Coreq: Chem 306

Chem 372 Organic Chemistry II (3 cr)
Continuation of Chem 277. (Spring only)
Prereq: Chem 277

Chem 374 Organic Chemistry II: Lab (1 cr)
Lab to accompany Chem 372; includes synthesis, structure determination, and mechanisms. One 3-hr lab a wk. (Spring only)
Prereq: Chem 278
Prereq or Coreq: Chem 372

Chem 400 (s) Seminar (cr arr)

Chem 404 (s) Special Topics (cr arr)

Chem 409 Proseminar (1 cr)
Current publications in chemistry and chemical engineering with reports on typical scientific papers. Preparation of application materials for graduate work and/or careers in chemistry.
Prereq: Chem 372 and junior standing

Chem J414/J514 Applications of Nanomaterials in Biomolecular Engineering (3 cr)
Interdisciplinary approach to the fundamental chemistry, physics, biology and engineering of matter and processes at the crossroads of microscopic and molecular scales; integration of the language and tools of multiple disciplines toward technological applications of nanomaterials in the life sciences and medicine. Additional projects/assignments required for graduate credit. (Spring only)
Prereq: Senior or Graduate standing in the Colleges of Science or Engineering

Chem J418/J518 Environmental Chemistry (3 cr)
Chemistry of atmosphere, soil, and water; pollution monitoring and remediation; treatment of waste in the environment. Additional projects/assignments reqd for grad cr. (Spring only)
Prereq: Chem 253, Chem 254 and Chem 275 or 277, or Permission

Chem J436/J535 Electronics for Scientists (2-4 cr, max 4)
Theory and application of analog and digital electronics used in scientific instrumentation. Registration for Chem 535 requires completion of an additional term paper or other assignment (Fall, alt/yrs).
Prereq: Permission

Chem 454 Instrumental Analysis (3-4 cr)
For students in chemistry and allied fields. Techniques in operating new and specialized instruments for qualitative and quantitative analysis and analytical methods of an advanced nature. Three lec and one 4-hr lab a wk. Permission required to register for 3 credits (Spring only)
Prereq: Chem 253, Chem 254, and Chem 305
Prereq or Coreq: Chem 306

Chem 455 Survey of Analytical Chemistry (3 cr)
Fundamentals of modern analytical chemistry. Open only to chemistry M.S. and Ph.D. students. Cr is not allowed in both Chem 454 and 455.
Prereq: Permission

Chem 463 Inorganic Chemistry (3 cr)
Principles, complex ions and coordination compounds, theory of acids and bases, bonding theory, non-aqueous solvents, familiar elements and their relationship to the periodic table. (Fall only)
Prereq: Chem 305 or Permission

Chem J464/J564 Inorganic Chemistry (3 cr)
Principles, complex ions and coordination compounds, theory of acids and bases, bonding theory, non-aqueous solvents, familiar elements and their relationship to the periodic table. Additional projects/assignments reqd for grad cr. (Spring only)
Prereq or Coreq: Chem 463, or 466, or Permission

Chem 465 Inorganic Chemistry Laboratory (1 cr)
Lab to accompany Chem 464. One 3-hr lab a wk. (Spring only)
Coreq: Chem 464

Chem 466 Survey of Inorganic Chemistry (3 cr)
Fundamentals of modern inorganic chemistry. Open only to chemistry M.S. and Ph.D. students. Cr is not allowed in both Chem 463 and 466.
Prereq: Chem 306 and Permission

Chem J472/J572 Medicinal Chemistry (3 cr)
Synthetic chemistry necessary for design and preparation of medicinal agents, and mechanistic chemistry germane to action of pharmaceuticals. Graduate students are required to write an original research proposal on a topic related to drug discovery. (Alt/yrs)
Prereq or Coreq: Chem 473 or 476; or Permission

Chem 473 Intermediate Organic Chemistry (3 cr)
Theories and mechanisms of organic chemistry. (Fall only)
Prereq: Chem 372
Prereq or Coreq: Chem 306

Chem 476 Survey of Organic Chemistry (3 cr)
Fundamentals of modern organic chemistry. Open only to chemistry M.S. and Ph.D. students. Cr is not allowed in both Chem 473 and 476.
Prereq: Permission

Chem 491 (s) Research (1-6 cr, max 12)
Submission of a report of the research done for placement in the permanent dept files is required.
Prereq: Permission of department

Chem 495 Statistical Thermodynamics (3 cr)
See Phys 433.

Chem 496 Survey of Physical Chemistry (3 cr)
Fundamentals of modern physical chemistry. Open only to chemistry M.S. and Ph.D. students. Cr is not allowed in both Chem 495 and Chem 496.
Prereq: Permission

Chem 498 (s) Internship (cr arr)

Chem 499 (s) Directed Study (cr arr)

Chem 500 Master's Research and Thesis (cr arr)

Chem 501 (s) Seminar (1 cr, max 2)

Chem 502 (s) Directed Study (cr arr)

Chem 504 (s) Special Topics (cr arr)

Chem 506 Introduction to Teaching and Research Skills (2 cr)
Skills required of teaching assistants in laboratory, recitations, office hours, help sessions; skills required for research; use of library; introduction to faculty research. Graded P/F. (Fall only)
Prereq: Permission

Chem 509 Advanced Physical Chemistry (3 cr)
Application of quantum theory to chemical bonding, molecular spectroscopy, and molecular structure. (Spring only)
Prereq: Chem 306, 495, 496, or Permission

Chem 511 Seminar (0 cr)

Chem 514 Applications of Nanomaterials in Biomolecular Engineering (3 cr)
See Chem J414/J514.

Chem 518 Environmental Chemistry (3 cr)
See Chem J418/J518.

Chem 542 Biochemistry II (3 cr)
See Biol J454/J554.

Chem 550 Radioanalytical Chemistry (2-3 cr, max 3)
Fundamental concepts of radiochemistry, including the principles of radioactive decay processes and counting techniques; in-depth treatment of radioanalytical techniques, especially neutron activation and isotope dilution methods; decay processes as sources of x-rays; the use of synchrotron radiation in analytical chemistry. (Alt/yrs)
Prereq: Chem 454, or 455, or Permission

ChE 515 Transport Phenomena (3 cr)
Same as ME 515. Advanced treatment of momentum, energy, and mass transport processes; solution techniques. Cooperative: open to WSU degree-seeking students.
Prereq: B.S.Ch.E. and Equivalent of ChE 340, ChE 341 or Permission

ChE 527 Thermodynamics (3 cr)
Thermodynamic laws for design and optimization of thermodynamic systems, equations of state, properties of ideal and real fluids and fluid mixtures, stability, phase equilibrium, chemical equilibrium, applications of thermodynamic principles. Cooperative: open to WSU degree-seeking students.
Prereq: B.S.Ch.E. and Equivalent of ChE 326 or Permission

ChE 529 Chemical Engineering Kinetics (3 cr)
Interpretation of kinetic data and design of reactors for heterogeneous chemical reaction systems; heterogeneous catalysis, gas-solid reactions, gas-liquid reactions; packed bed reactors, fluidized bed reactors. Cooperative: open to WSU degree-seeking students.
Prereq: B.S.Ch.E. and Equivalent of ChE 423 or Permission

ChE 536 Electrochemical Engineering (3 cr)
Application of chemical engineering principles to electrochemical systems; thermodynamics, kinetics, and mass transport in electrochemical systems; electrochemical process design. Recommended preparation: graduate engineering standing.

ChE 541 Chemical Engineering Analysis I (3 cr)
Mathematical analysis of chemical engineering operations and processes; mathematical modeling and computer applications. Cooperative: open to WSU degree-seeking students.
Prereq: B.S.Ch.E. and Equivalent of ChE 444 or Permission

ChE 545 Mass Transfer Operations I (3 cr)
Diffusional and equilibrium operations.
Prereq: B.S.Ch.E. and equivalent of ChE 341 or Permission

ChE 546 Mass Transfer Operations II (3 cr)
Diffusional and equilibrium operations.
Prereq: B.S.Ch.E. and equivalent of ChE 341 or Permission

ChE 560 Biochemical Engineering (3 cr)
See ChE J460/J560.

ChE 570 Hazardous Waste Management (3 cr)
See ChE J470/J570.

ChE 571 Advanced Plant Design (3 cr)
Design of process plants for optimum costs and economic return; scale-up of pilot plants.
Prereq: B.S.Ch.E. and Equivalent of ChE 453 or Permission

ChE 575 Air Pollution Control (2-3 cr)
See ChE J475/J575.

ChE 580 Engineering Risk Assessment for Hazardous Waste Evaluations (3 cr)
See ChE J480/J580.

ChE 581 Hazardous Waste Management Seminar (1 cr)
Environmental engineering and science topics related to hazardous waste characterization, cleanup, and regulations; includes case histories, paper, and oral presentation.
Prereq: Permission

ChE 590 Hydrogen Energy Systems (3 cr)
See ChE J490/J590.

ChE 600 Doctoral Research and Dissertation (cr arr)

Chemistry Courses

Ray von Wandruszka, Dept. Chair, Dept. of Chemistry (116 Malcolm M. Renfrew Hall 83844-2343; phone 208/885-6552; chemoff@uidaho.edu).

Vertically-related courses in this subject field are: Chem 111-Chem 112-Chem 253; Chem 101-Chem 275.

Chem 050 Chemistry Fundamentals (0 cr)
Chemical problem solving, SI unit conversion, mole concept, chemical stoichiometry, solution concentration problems, periodic table, chemical formulas and nomenclature, and equation balancing. Graded P/N/F. A special fee is charged for this course.

Chem 101 Introduction to Chemistry I (4 cr)
Full credit may be earned in only one of the following: Chem 101, or Chem 111. General treatment of the fundamentals of chemistry. Three lec and one 3-hr lab a wk. Does not satisfy the prereq for Chem 112.

Chem 111 Principles of Chemistry I (4 cr)
Full credit may be earned in only one of the following: Chem 101, or 111. Note that grades in Chem 111 will supersede any grades earned in Chem 101. Intensive treatment of principles and applications of chemistry. Three lec and one 3-hr lab a week. Recommended Preparation: A grade of 'B' or better in a high school chemistry course.
Prereq: Chem 050 or min 560 SAT math or min 25 ACT math or min 49 COMPASS College Algebra, or a grade of 'C' or better in Chem 101, Math 143, Math 160, or Math 170; or Permission

Chem 112 Principles of Chemistry II (5 cr)
Continuation of Chem 111. Some work in inorganic chemistry, kinetics, equilibrium, liquids, solids, acid-base, electrochemistry, nuclear chemistry, thermodynamics, and qualitative inorganic analysis. Three lec, one recitation, and one 3-hr lab a wk.
Prereq: Chem 111 or Permission

Chem 121 Glassblowing (1 cr)
Techniques used in constructing scientific apparatus from glass. Graded P/F. One 3-hr lab a wk.
Prereq: Permission of department

Chem 200 (s) Seminar (cr arr)

Chem 204 (s) Special Topics (cr arr)

Chem 253 Quantitative Analysis (3 cr)
Fundamental principles and techniques of chemical analysis; intro to sampling, standardization, data evaluation, gravimetric/volumetric methods, and instrumental techniques. (Fall only)
Prereq: Chem 112

Chem 254 Quantitative Analysis: Lab (2 cr)
Laboratory portion of Quantitative Analysis (Chem 253).
Prereq or Coreq: Chem 253

Chem 275 Carbon Compounds (3 cr)
Aspects of organic chemistry important to students in the life sciences.
Prereq: Chem 101, 111, or Permission

Chem 276 Carbon Compounds Lab (1 cr)
Lab to accompany Chem 275; for students who need only 1 cr of lab. One 3-hr lab a wk.
Prereq or Coreq: Chem 275 or 277

Chem 277 Organic Chemistry I (3 cr)
Principles and theories of organic chemistry; properties, preparation, and reactions of organic compounds.
Prereq: Chem 112

Chem 278 Organic Chemistry I: Lab (1 cr)
One 3-hr lab a wk.
Prereq or Coreq: Chem 277

Chem 299 (s) Directed Study (cr arr)

Chem 302 Principles of Physical Chemistry (3 cr)
Emphasis on topics important to biological and agricultural science. (Fall only)
Prereq: Chem 112, Math 160 or 170 or 175, and Phys 111/111L, or Permission

Chem 303 Principles of Physical Chemistry Lab (1 cr)
Lab to accompany Chem 302. One 3-hr lab a wk. (Fall only)
Prereq or Coreq: Chem 302

Chem 305 Physical Chemistry (3 cr)
Kinetic theory, thermodynamics, quantum mechanics, and spectroscopy. (Fall only)
Prereq: Chem 112, and Math 275
Prereq or Coreq: Phys 212 or Phys 213

ChE 223 Material and Energy Balances (3 cr)
Conservation of mass and energy calculations in chemical process systems.
Prereq: Chem 112 and Math 175

ChE 299 (s) Directed Study (cr arr)

ChE 307 Group Mentoring (1 cr, max 3)
Mentoring of student groups in engineering classes where a process education environment is used; students taking this course will improve their engineering skill in the area they are mentoring as well as improving their team, communication, and leadership skills. Students must attend all classes or labs where group activities in the process education environment are done (a minimum of 2 mentoring sessions per week).
Prereq: Permission

ChE 326 Chemical Engineering Thermodynamics (3 cr)
Behavior and property estimation for nonideal fluids; phase and reaction equilibria; applications to industrial chemical processes.
Prereq: ChE 223, Engr 320 and 335, Math 310. Coreq: Chem 305.

ChE 330 Separation Processes I (3 cr)
Equilibrium stagewise operations, including distillation, extraction, absorption.
Prereq: ChE 326, Chem 305.

ChE 340 Transport and Rate Processes I (4 cr)
Same as MSE 340. Transport phenomena involving momentum, energy, and mass with applications to process equipment design. Coordinated lec-lab periods.
Prereq: Engr 335, Math 310, and ChE 223 or MSE 201

ChE 341 Transport and Rate Processes II (4 cr)
Transport phenomena involving momentum, energy, and mass with applications to process equipment design. Coordinated lec-lab periods.
Prereq: ChE 340

ChE 393 Chemical Engineering Projects (1-3 cr, max 9)
Problems of a research or exploratory nature.
Prereq: Permission of department

ChE 398 (s) Engineering Cooperative Internship (3 cr)
Supervised internship in professional engineering settings, integrating academic study with work experience; requires written report; positions are assigned according to student's ability and interest. Graded P/F.
Prereq: Permission

ChE 404 (s) Special Topics (cr arr)
Prereq: Permission

ChE 415 Integrated Circuit Fabrication (3 cr)
Growth of semiconductor crystals, microlithography, and processing methods for integrated circuit fabrication. Recommended Preparation: ChE 223.

ChE 423 Reactor Kinetics and Design (3 cr)
Chemical reaction equilibria, rates, and kinetics; design of chemical and catalytic reactors.
Prereq: ChE 223, Math 310, Chem 305

ChE 433 Chemical Engineering Lab I (1 cr)
Senior lab experiments in chemical engineering.
Prereq: ChE 330, 341, 423

ChE 434 Chemical Engineering Lab II (1 cr)
Senior lab experiments in chemical engineering.
Prereq: ChE 330, 341, 423

ChE 444 Process Analysis and Control (3 cr)
Process modeling, dynamics, and analysis. Coordinated lecture-lab periods. Recommended Preparation: ChE 223, Math 310.

ChE 445 Digital Process Control (3 cr)
Same as ECE 477. Dynamic simulation of industrial processes and design of digital control systems. Coordinated lecture-lab periods. Recommended Preparation: ChE 444 (Recommended Preparation for EE majors: ECE 350).

ChE 451 Environmental Management and Design (cr arr)
Waste management application projects; projects require original design, working model, and report. May involve week-long trip to national competition. One lec and 3 hrs of lab a wk; weekly team status report meetings plus weekly task reviews with advisor.
Prereq: Permission (by invitation only).

ChE 452 Environmental Management and Design (cr arr)
Waste management application projects; projects require original design, working model, and report. May involve week-long trip to national competition. One lec and 3 hrs of lab a wk; weekly team status report meetings plus weekly task reviews with advisor.
Prereq: Permission (by invitation only).

ChE 453 Process Analysis and Design I (3 cr)
Same as MSE 453. Estimation of equipment and total plant costs, annual costs, profitability decisions, optimization; design of equipment, alternate process systems and economics, case studies of selected processes. ChE 453 and ChE 454/MSE 453 and MSE 454 are to be taken in sequence. (Fall only)
Prereq: ChE 330, ChE 341, and ChE 423; or MSE 201, MSE 308, MSE 313, MSE 340, and MSE 412

ChE 454 Process Analysis and Design II (3 cr)
Same as MSE 454. Estimation of equipment and total plant costs, annual costs, profitability decisions, optimization; design of equipment, alternate process systems and economics, case studies of selected processes. ChE 453 and 454 are to be taken in sequence. (Spring only)
Prereq: ChE 453 or MSE 453

ChE J460/J560 Biochemical Engineering (3 cr)
Application of chemical engineering to biological systems including fermentation processes, biochemical reactor design, and biological separation processes. Additional projects/assignments reqd for grad cr.

ChE J470/J570 Hazardous Waste Management (3 cr)
Principles and practices of management of hazardous and solid wastes with emphasis on CERCLA (Superfund) process for cleanup of uncontrolled hazardous waste sites and RCRA process as it applies to industrial waste treatment, storage, and disposal (TSD) facilities. Additional projects/assignments reqd for grad cr. Recommended Preparation: Stat 301.
Prereq: Senior or Graduate standing in science or engineering, and Permission

ChE J475/J575 Air Pollution Control (2-3 cr)
Analysis and design of physical and chemical methods of air pollution control; particulate and gas emission control methods, standards for sources. Additional projects/assignments reqd for grad cr. Recommended Preparation: Engr 335.

ChE J480/J580 Engineering Risk Assessment for Hazardous Waste Evaluations (3 cr)
Quantitative and qualitative approaches to assessing risks to public health and environment from chemical contaminants; toxicology, exposure assessment, risk characterization, and environmental modeling; critical reviews of specific toxins and actual waste site studies. Additional projects/assignments reqd for grad cr. Recommended Preparation: Biol 100 or 201, Stat 301, and ChE 470.
Prereq: Senior or Graduate standing in science or engineering

ChE J490/J590 Hydrogen Energy Systems (3 cr)
Introduction to hydrogen economy; hydrogen production, storage and utilization; fuel cells; distribution, infrastructure, safety and environmental considerations. Additional projects/assignments reqd for grad cr.
Prereq: Senior or Graduate standing in science or engineering

ChE 491 (s) Seminar (1 cr)
Recent developments and topics. Graded P/F.
Prereq: Senior standing

ChE 499 (s) Directed Study (cr arr)

ChE 500 Master's Research and Thesis (cr arr)

ChE 501 (s) Seminar (cr arr)

ChE 502 (s) Directed Study (cr arr)

ChE 504 (s) Special Topics (cr arr)

applied academics, and workplace readiness knowledge and dispositions.

CTE 475 LAN Technology (3 cr)
Advanced LAN technologies emphasizing design and implementation of most LAN technology systems. Three lec and 4 hrs of lab a wk. Recommended Preparation: CTE 428.

CTE 481 Computer-Integrated and Robotics Manufacturing Technologies (3 cr)
In-depth examination and implementation of advanced computer aided drafting, 3D solids modeling, computer numerical control, basic and advanced toolpath generation, virtual machining environments, and robotics applications. Enrollment per section limited to lab stations available.
Prereq: CTE 267 or Engr 105; and CTE 352

CTE 484 (s) Internship in Career and Technical Education Teaching (3-14 cr, max 28)
Guided observation, supervised instruction, and comprehensive team and independent teaching in school settings.
Prereq: Admission to teacher education program
Coreq: EDCI 401

CTE 492 Business and Marketing Education Methods (3 cr)
Teaching pedagogy, instructional materials and student evaluation strategies in Business and Marketing Education.
Prereq: Permission

CTE 494 Senior Project (3 cr)
In the last year of study, students select an individual design project related to their area of specialization within technology education. Some students may have the option of joining a Senior Design Team in the College of Engineering. Project must be approved by instructor.

CTE 495 Administrative Technology Management and Procedures (3 cr)
Administrative office procedures and management techniques, advanced business document preparation, intermediate/advanced keyboarding skills, and ARMA filing rules. Recommended Preparation: CTE 415 and keyboarding proficiency.

CTE 496 Directed Work Experience (1-3 cr, max 9)
Job analysis and descriptions; weekly work-experience reports and analysis coordinated with problems related to the student's employment in an approved work station.

CTE 499 (s) Directed Study (cr arr)

CTE 500 Master's Research and Thesis (cr arr)

CTE 501 (s) Seminar (cr arr)

CTE 502 (s) Directed Study (cr arr)

CTE 503 (s) Workshop (cr arr)

CTE 504 (s) Special Topics (cr arr)

CTE 505 Professional Development (cr arr)
See CTE J405/J505.

CTE 510 (s) Professional Problems (1-3 cr, max 9)

CTE 511 (s) Technical Problems (1-3 cr, max 6)

CTE 518 Advanced Input Technologies for the 21st Century (3 cr)
Advanced teaching methods and materials of inputting and computer technology, identified best practices will be emphasized as well as a review of research literature. This course will include a field experience as well as a unit on trouble shooting computer hardware.

CTE 519 Database Applications and Information Management (3 cr)
See CTE J419/J519.

CTE 521 Advanced Business, Marketing & Retailing Methods (3 cr)
Advanced methods and strategies for teaching general business, business math, entrepreneurship, business law, management, and marketing at the secondary or adult level; additional emphasis on teaching computerized and non-computerized accounting. (Fall only)

CTE 522 Issues in Business and Marketing Education (3 cr)
Philosophies, objectives, trends, and organization patterns of business and marketing education in secondary schools and colleges.

CTE 531 National Board Certification I (3 cr)
Support and development of exemplary teaching candidates seeking to complete the career and technical education portfolio required by the National Board for Professional Teaching Standards. Recommended Preparation: Meet NBPTS process minimum qualifications. (Fall only)

CTE 532 National Board Certification II (3 cr)
Support and development of exemplary teaching candidates seeking to complete the career and technical education portfolio required by the National Board for Professional Teaching Standards. Recommended Preparation: Meet NBPTS process minimum qualifications. (Spring only)

CTE 537 Integration of Academic and Professional-Technical Education (3 cr)
Examination of philosophical/theoretical underpinnings of integration; review of models, development of curricular and instructional materials.

CTE 539 Robotics Technologies for K-12 Environments (3 cr)
See EDCI J439/J539.

CTE 544 Idaho Leadership Institute (1-12 cr, max 12)
Institute for the preparation of the next generation of Idaho's leaders in professional-technical education.
Prereq: Accepted into the Idaho Leadership Institute

CTE 551 Principles and Philosophy of Career and Technical Education (3 cr)
See CTE J351/J551.

CTE 578 International and Cross-Cultural Workforce Development (3 cr)
Examination of international workforce development efforts at the secondary and postsecondary levels with emphasis on the relationships among economic, community, and workforce development. Adult education, training, and technical education considerations are integrated.

CTE 597 (s) Practicum (cr arr)
Application of theories and techniques; supervised field experiences in selected settings. Graded Pass/Fail.
Prereq: Permission

CTE 598 (s) Internship (cr arr)
Supervised experience in teacher education, administration, supervision, or ancillary services in professional-technical education. Graded Pass/Fail.
Prereq: Permission

CTE 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

CTE 600 Doctoral Research and Dissertation (cr arr)

Chemical Engineering Courses

Wudneh Admassu, Dept. Chair, Dept. of Chemical and Materials Engineering (305 Buchanan Engr. Lab. 83844-1021; phone 208/885-8918).

ChE 110 Introduction to Chemical Engineering (1 cr)
Introduction to chemical engineering career opportunities and process principles including problem solving and documentation skills. Graded P/F.

ChE 123 Computations in Chemical Engineering (2 cr)
Methods of analyzing and solving problems in chemical engineering using personal computers; spreadsheet applications, data handling, data fitting, material balances, experimental measurements, separations, and equation solving. Coordinated lec-lab periods.
Prereq: Min 520 SAT math or min 22 ACT math or 49 COMPASS Algebra or Math 143 or Math 170; or Permission
Coreq: Math 143, Math 170, or higher

ChE 204 (s) Special Topics (cr arr)

ChE 210 Integrated Chemical Engineering Fundamentals (1 cr)
Recitation support for fundamental STEM courses and process principles including problem solving and documentation skills. Twice a week, 2 hour recitation sessions. Graded P/F.
Prereq: ChE 110 and ChE 123

CTE 411 Web Graphics and Animation (3 cr)
This course involves study of the role of multi-media and animated graphic elements in supporting effective websites. Specific focus on the design and creation of animated graphics using industry standard applications is emphasized throughout the process of website development. Content is taught in the context of Professional-Technical Education.

CTE 412 Web Design using Dreamweaver (3 cr)
Use HTML editors to create web pages. There are process-oriented tutorials that teach core principles, techniques and tips in a hands-on training format. You will be expected to work on hands-on exercises and projects, problem solving, research, and thinking skills to produce a Web site.

CTE 413 Retail Merchandising for Marketing Education (3 cr)
Designed for marketing teacher preparation. Contemporary information and activities that address retail merchandising, including standards and curriculum resources for secondary and two-year technical college courses. Curriculum standards, educational resources, careers, the role of retail, and the operation of a retail business that includes market analysis, store layout, and merchandising. Recommended Preparation: Bus 321.

CTE 415 Microcomputer Applications (3 cr)
Advanced computer applications course designed primarily for business teacher education students; includes extensive hands-on experience using word processing, spreadsheet, and database programs used in both industry and business education programs; addresses methodology, curriculum development, and classroom management techniques. Recommended Preparation: CTE 111.

CTE 416 Website Design and Development (3 cr)
Basics of html, advanced use of web development applications for purposes of creating effective websites that incorporate accepted design principles, taught in the context of Professional-Technical Education.

CTE 417 Teaching & Learning through STEM Integration (3 cr)
Students examine a variety of approaches to teaching and assessment methods for technology educators at the secondary level. Instructional strategies best suited to learning technical skills, related academics, problem solving, and hands-on activities will be explored through the lens of Science, Technology, Engineering, and Mathematics (STEM) integration.
Prereq: EDCI 201, EDCI 301, and CTE 310

CTE 418 Teaching Economics and Personal Finance (3 cr)
In-depth examination and implementation of methods and materials for teaching economics and personal finance.
Prereq: Econ 201 or Equivalent

CTE J419/J519 Database Applications and Information Management (3 cr)
Teaching and training strategies for database applications. Includes database management principles and methods of information retrieval, processing, storage and distribution. Advanced project reqd for grad cr. Recommended Preparation: CTE 111.

CTE 420 Evaluation in Professional-Technical Education (3 cr)
Methods and techniques; construction and use of objective tests, performance tests, rating scales, check lists.

CTE 426 Occupational Analysis and Curriculum Development (3 cr)
Instructional design systems and curriculum development as a systematic method of designing, carrying out, and evaluating the total process of teaching and learning; based on research in human learning and communication, employing a combination of human and non-human resources to bring about effective instruction. Focus on secondary and post-secondary professional/technical education.

CTE 428 Computer Integrated Systems (3 cr)
PC maintenance fundamentals, an overview of various computer operating systems, fundamental networking applications, peripherals and integration of PC technology into the home and industry. Students will have the tools they need for further study and industry certification. Enrollment per section limited to computer stations available. Recommended Preparation: CTE 111.

CTE 430 Leadership and Student Organizations (2 cr)
Development of leadership skills; instruction in planning, implementation and supervision of professional-technical student organizations; and participation in regional leadership conferences.

CTE 431 Supervising CTE Career and Technical Student Organizations (1-3 cr, max 3)
Supervising CTE CTSOs involves active participation in career and technical student organization (CTSOs). Students assist in the administration and supervision of secondary regional and/or state CTSO conferences, and involve themselves with content area post-secondary CTSO competitive events program. Students are responsible for arranging and financing travel to appropriate CTSO events.

CTE 438 Digital Electronics (3 cr)
In-depth examination and implementation of logic circuits used in digital devices; included AND/OR gates. NAND, NOR, Exclusive-or gates, and application of the gates to construct flip-flops, counters, adders, and converters; includes characteristics of logic families and memory devices. Enrollment per section limited to lab stations available.

CTE J439/J539 Robotics Technologies for K-12 Environments (3 cr)
See EDCI J439/J539.

CTE 445 Professional Role Development in PTTE I (2 cr)
To acquaint the student to the unique dimensions of Professional–Technical teaching. The course is designed to cause the participant to reflect on, and examine through demonstration, an understanding of the principles and standards of Idaho's beginning teacher requirements. An 8 hour Saturday meeting for CPR and first aid training will be required.

CTE 447 Diverse Populations and Individual Differences (2-3 cr)
Examines the impact of individual differences on teaching and learning.

CTE 449 Appropriate Technology and Alternative Energy (3 cr)
Exploration of new and emerging technologies and energies with focus on social, cultural, economic, and political considerations. Students will also participate in hands-on lab activities allowing them to incorporate these technologies into their lives.

CTE 450 Occupational Safety (3 cr)
Overview of occupational safety in business, schools, and industry. Topics Include: Overview of OSHA, Worker's Compensation, Safety Program Organization, Hazard Identification and Elimination, and Safety Program Implementation.

CTE 455 Professional Role Development in PTTE II (1 cr)
Concurrent with the Internship will focus on developing a reflective stance to critically examine ones teaching for improvement and enhancement by linking prior knowledge and making informed decisions about needed change and learning.
Coreq: CTE 484

CTE 460 Desktop Publishing (3 cr)
Advanced desktop publication techniques, concepts, and applications through use of computer technology; planning, layout, and design of publications are highlighted. Recommended Preparation: CTE 111 and CTE 415.

CTE 461 Using Internet-Based Career Information in the Classroom (2-3 cr)
Preparation of new teacher candidates to utilize the vast array of career information on the Internet for assisting students in career planning.

CTE 462 Communication Technology (3 cr)
Investigation and laboratory activities associated with of a variety of communication technologies, including interpersonal, human to machine and machine to machine, through contemporary devices and materials. Recommended Preparation: CTE 415.

CTE 464 Career Guidance and Transitioning to Work (3 cr)
Designed for career development counselors and facilitators; establishment of the three pillars of career guidance and how to implement the steps for developing a comprehensive individualized career plan.

CTE 470 Technical Competence (1-32 cr, max 32)
Technical competence is gained from occupational credentials or passing of competency exams related to the bachelor of science degree in PTE education or technology. Grades for successful completion of CTE 470 will be transcripted as P (pass) normally during the student's last semester and completion of all degree requirements.

CTE 472 Teaching and Learning in Occupation Education (3 cr)
Students examine research-based approaches to facilitate learning outcomes for occupational educators in post-secondary, secondary and private sector contexts; Instructional strategies and materials will be considered and developed to facilitate learning in technical skills, related

Business Law Courses

Marla Kraut, Dept. Chair, Dept. of Accounting (127 J. A. Albertson Bldg. 83844-3161; phone 208/885-7116; marlam@uidaho.edu).

BLaw 265 Legal Environment of Business (3 cr)
Law and its relationship to society; legal framework of business enterprises; court organization and operation; private property and contracts as basic concepts in a free enterprise system. May involve evening exams.

BLaw 420 Commercial Law (3 cr)
Uniform commercial code and law of agency, partnerships, and corporations. May include evening exams.
Prereq: BLaw 265

BLaw 425 Law of Business Entities (3 cr)
Business law related to corporations, partnerships, and limited liability companies with emphasis on applying the law to various business entities and how it might be used in business and personal planning. The case method is used. May include evening exams. (Fall only)

Career and Technical Education Courses

Paul H. Gathercoal, Dept. Chair, Dept. of Curriculum and Instruction (405B Educ. Bldg. 83844-3082; phone 208/885-6587; teachered@uidaho.edu).

CTE 104 Input Technologies for the 21st Century (3 cr)
Skill development in microcomputer applications and input technologies. Course content is reflective of current trends in Business Education programs. Skills include but are not limited to document preparation, intermediate to advanced keyboarding, voice recognition, exposure to emerging technologies as well as review of foundational skills. Recommended Preparation: Minimum typing speed of 25 wpm.

CTE 111 Computer Skills (3 cr)
Fundamentals of computing; modules on telecommunications, hardware and software components, basic computing applications, and current computing trends.

CTE 120 Introduction to Computer Aided Drafting (1 cr)
This course has been designed to give students an introductory experience in sketching, drafting theory, and Computer Aided Drafting (CAD).

CTE 121 Introduction to Principles of Engineering and Technology (1 cr)
Students will be introduced to the principles of engineering and technology.

CTE 122 Introduction to Manufacturing and Construction (1 cr)
This course introduces students to safety, materials, and processes used in the manufacturing and construction industries.

CTE 123 Introduction to Power, Energy, and Transportation (1 cr)
Students will be introduced to the topics of power, energy, and transportation and their impact on technical societies.

CTE 130 Introduction to Electricity and Electronics (3 cr)
This introduction to electricity and electronics includes properties of resistors, capacitors, and inductors in electrical circuits; basics of power distribution systems and house wiring; and the use of meters and oscilloscopes in lab. Three 1-hr lec and one 2-hr lab a wk.

CTE 152 Manufacturing: Non-Metallic Materials and Processes (3 cr)
This course introduces and reinforces knowledge in the area of manufacturing and manufacturing processes of non-metallic materials such as wood and composites. The materials themselves, primary processing, and the systems of secondary processing will be studied. Recommended Preparation: CTE 120, CTE 267 or Engr 105.

CTE 200 (s) Seminar (cr arr)

CTE 203 (s) Workshop (cr arr)

CTE 204 (s) Special Topics (cr arr)

CTE 267 Computer Aided Drafting/Design (3 cr)
This course has been designed to give students an introductory experience in manual drafting and sketching, drafting theory and 2D and 3D computer aided drafting. Students may have to spend time in the CAD lab outside of class time to complete the required work.

CTE 298 (s) Internship (cr arr)

CTE 299 (s) Directed Study (cr arr)

CTE 306 Preservice for New Professional-Technical Teachers (3 cr)
Fundamental skills necessary for new teachers in secondary and postsecondary schools to be successful in meeting students.

CTE 307 Inservice for New Professional-Technical Teachers (3 cr)
Resolution of common problems faced by new teachers through seminars and observations/evaluations/perceptions by UI preceptor; course meets state certification requirements for 30 hrs of inservice for vocational specialist certification.
Prereq: Permission

CTE 310 Lab Safety, Management, and Liability (4 cr)
Overview of operations, use, and maintenance of laboratory tools and equipment, laboratory management and liability concerns.

CTE J351/J551 Principles and Philosophy of Career and Technical Education (3 cr)
Overview and interpretation of history, aims, and purposes of public education and professional-technical education; issues and programs comprising professional-technical education in Idaho and in the nation. Additional projects/assignments required for graduate credit.

CTE 352 Manufacturing: Metallic Materials and Processes (3 cr)
This course introduces and reinforces knowledge in the area of manufacturing and manufacturing processes of metallic materials (ferrous and nonferrous). The materials themselves, primary processing, and the systems of secondary processing will be studied in-depth. Recommended Preparation: CTE 152 or Work Experience.

CTE 353 Manufacturing Systems (3 cr)
In-depth examination and implementation of manufacturing theory and processes including research and development, product planning and controlling. Topics, such as Lean Manufacturing, Kanban, relating to manufacturing facilities and management of manufacturing processes will be discussed, studied and implemented in the manufacture of a designed product in quantity.
Prereq: CTE 267 and CTE 310

CTE 354 Construction Technology (4 cr)
Teaching techniques and methods of instruction for a systems approach to construction technology including residential, commercial, and civil. Recommended Preparation: CTE 310.

CTE 363 Fire Protection Safety (3 cr)
Basic industrial fire protection techniques; basic fire chemistry; basic fire suppression/sprinkler design.

CTE 370 Transportation & Engineering Technologies (4 cr)
Working in design teams, students will use the engineering design process to integrate scientific, technological, engineering, and mathematical concepts into their proposed solutions to power, energy and transportation issues. Students will research, design, build and evaluate their potential solutions in a hands-on laboratory environment. Recommended Preparation: Math 143 and Phys 111.

CTE 398 (s) Internship (cr arr)

CTE 400 (s) Seminar (cr arr)

CTE 403 (s) Workshop (cr arr)
Graded Pass/Fail.
Prereq: Permission

CTE 404 (s) Special Topics (cr arr)

CTE J405/J505 Professional Development (cr arr)
Cr earned in this course will not be accepted toward grad degree programs. Professional development and enrichment. Additional projects/assignments required for graduate credit.

CTE 410 Technology and Society (3 cr)
In-depth examination and implementation of the relationship between technology and social change; previous course work in technology is not essential.

Bus 454 (s) Issues in Information Systems (3 cr, max arr)
Discussion of major topics of current importance in information systems.
Prereq: Bus 350, Bus 353, or Bus 355

Bus 456 Quality Management (3 cr)
Same as Stat 456. Principles of total quality management, with emphasis on problem solving techniques to continually improve processes; customer-driven quality, management and employee participation, statistical process control, product/process design, and process capability. May include evening exams. May involve field trips.
Prereq: Stat 251 or Stat 301

Bus 460 Advanced Student Investment Fund Management (1 cr, max arr)
Open only to students participating in the A.D. and J.E. Davis Student Investment Program. "Hands on" experience in investment management; students manage a funded portfolio in terms of establishing objectives, security selection, asset allocation, and portfolio performance. Graded P/F.
Prereq: Permission

Bus 461 Retirement Planning and Employee Benefits (3 cr)
Study and analysis of the retirement planning process; topics include pensions, employee benefit plans and the regulatory and legislative environment for the retirement field, and the ethics of professional financial planners as it relates to retirement planning. The course is geared towards students who plan to pursue a career in the financial services industry. May involve evening exams. (Fall only)
Prereq: Econ 340

Bus 463 Portfolio Management (3 cr)
Application of security selection, portfolio theory and construction; financial futures; risk and return in investments; may involve management of actual portfolios.
Prereq: Bus 302

Bus 464 Derivatives and Risk Management (3 cr)
This course will cover methods used to establish the fair price of derivative securities and the creation of synthetic securities, demonstrate the practical uses of derivatives in speculation, hedging and arbitrage, and examine the process of measurement and management of financial risk. (Fall only)
Prereq: Bus 302

Bus 465 Introduction to Market Trading (3 cr)
Provides students practical experiences in the analysis of financial conditions and markets with the objective of developing trading and risk management strategies. Professional trading analysis software is used. The major topics covered include financial instruments, fundamental and technical analysis of markets, inter-market analysis, and risk management. Recommended Preparation: Econ 201 and Econ 202 or Econ 272; and Stat 251. (Fall only)
Prereq: Permission

Bus 466 Market Trading Strategies (3 cr)
Provides students practical experiences in the analysis of financial conditions and markets with the objective of developing trading and risk management strategies. Professional trading analysis software is used. Students in this class will develop strategies that can be submitted for funding by the Barker Trading Program. (Spring only)
Prereq: Bus 465 and Permission

Bus 467 Barker Capital Management Group (1 cr, max 6)
Graded P/F. The course is a 1-credit hour extra-curricular course taken on a Pass-Fail basis. Students in this course will function as a member of the Barker Capital Management Group (BCMG) and will work individually and in teams to manage a portion of the Barker Endowment Fund. The class will identify and research investment opportunities for the fund, develop and implement risk management strategies for the portfolio, monitor the results and make adjustments to the portfolio as required.
Prereq: Permission

Bus 468 Market Trading Lab (1 cr, max 6)
Graded Pass/Fail. This course is a lab to complement Bus 465 Introduction to Market Trading and Bus 466 Market Trading Strategies. Students who take this course will either trade a portfolio funded by the Barker Capital Markets and Trading Program endowment, or be actively working towards qualifying for a funded portfolio. Students will receive mentoring from the instructor and other faculty participating in the Barker Program. The students will also interact with other funded traders and, on occasion, provide mentoring to students in earlier stages of the program. Recommended Preparation: Stat 251 or equivalent, Econ 201 and Econ 202, or Econ 272 or equivalent.
Prereq: Bus 465, Bus 466 and Permission

Bus 469 Risk and Insurance (3 cr)
Examines risk and insurance, covering risk identification and measurement, risk reduction and hedging, and insurance pricing.
Prereq: Bus 302

Bus 470 Supply Chain Management (3 cr)
In-depth study and analysis of the supply chain management integrated approach to business with emphasis on the transportation, purchasing, packaging, inventory management, and international logistics functions, as well as issues in negotiation and relationship management. May involve evening exams.
Prereq: Bus 370

Bus 472 Operations Planning and Scheduling (3 cr)
In-depth study of planning and scheduling techniques with emphasis on material requirements planning. May involve evening exams and field trips.
Prereq: Bus 370

Bus 482 International Marketing (3 cr)
Foreign market operations; economic, cultural, and political aspects of international markets and how they interact with the marketing mix.
Prereq: Bus 321

Bus 490 Strategic Management (3 cr)
Capstone, integrative senior experience course focusing on the formulation and implementation of competitive strategy in both domestic and international contexts. Emphasizes approaches that executives take to provide ethical and strategic leadership to an organization as well as approaches used to achieve alignment of strategy with action across the various functional areas of the business. Application of strategy concepts in practice will be stressed. May involve evening exams.
Prereq: Bus 390 and Senior standing

Bus 495 Product Development and Brand Management (3 cr)
See RMat 495. (Fall only)

Bus 499 (s) Directed Study (cr arr)

Bus 502 (s) Directed Study (cr arr)

Bus 504 (s) Special Topics (cr arr)

Bus 505 (s) Workshop (cr arr)

Bus 513 Leadership and Organizational Behavior (3 cr)
Micro oriented treatment of areas including communication, motivation, group process, conflict, leadership style.

Bus 531 Design for Six Sigma and Lean Management (3 cr)
Same as Stat 511. Integration of management, statistics, and engineering principles driving design and development of, or innovation in products, processes, and systems; topics include Design for Six Sigma; lean management and manufacturing; transforming the voice of the customer from idea to reality; time-to-market compression in product development through quality function deployment.
Prereq: undergraduate degree in engineering or Permission

Bus 551 Managing Scientific Projects (3 cr)
Study of business principles needed to manage scientific projects with emphasis on accounting, financial, and scheduling concepts. Course topics include revenue and cost analysis, analysis of financial return, assessing project impact on financial statements, budgeting, project scheduling and capacity planning, risk management, and project control.
Prereq: Graduate student in science or engineering discipline

Bus 552 Management of Scientific Innovation (3 cr)
Study of business and economic principles needed to manage scientific innovation with emphasis on strategy, organizational leadership, and marketing concepts. Course topics include the role of innovation in strategy, the development of systems and processes that support innovation, the management of technical teams, the commercialization and regulation of scientific innovation, and the protection of intellectual property.
Prereq: Graduate student in science or engineering discipline

Bus 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Bus 414 Entrepreneurship (3 cr)
This course is intended to provide an overview of the entrepreneurship phenomenon and the process of identifying and commercializing an opportunity. Primary emphasis will be placed on recognizing and creating an opportunity, feasibility analysis, elements of the business plan, and sources of start-up funds. As such, this class will provide the foundation for developing a business plan for a real entrepreneurial venture in subsequent semesters.

Bus 415 New Venture Creation (3 cr)
The primary purposes of this course are to help diverse teams of students create business plans detailing the operational and financial aspects of a proposed product innovation, and where appropriate, prepare teams to compete in the VIEW-sponsored Business Plan Competition. In order to accomplish this, students will learn how to research and effectively communicate all aspects of a typical business plan, including, but not necessarily limited to: industry analysis, competitor analysis, target marketing, sales strategy, risk assessment, legal considerations, operational plan, management and staffing plan, financial plan and executive summary. The intention is to have the class be a practical-based "laboratory" much of the time, with occasional lectures, demonstrations, guest speakers, relevant videos, and student presentations throughout the term.
Prereq: Senior standing or Permission

Bus 416 Developing and Managing Reward Systems (3 cr)
A key factor in accomplishing organizational goals is the ability to retain and motivate talented human resources. This course addresses compensation and benefits practices and their theoretical underpinnings, including such topics as motivation theories (e.g., equity theory), learning theories, job evaluation, monetary-nonmonetary reward programs, individual, group and organizational incentives.
Prereq: Bus 290

Bus 417 Deploying and Developing Human Capital (3 cr)
Managers work with and through others to achieve organizational goals; therefore, managers must be able to assess and develop an organization's human resources. This course addresses training, development and performance management practices and their theoretical underpinnings, including such topics as motivation theories (e.g., goal setting theory, expectancy theory), learning theories, leadership, employee orientation, needs assessment, training and development methods, evaluating training effectiveness, performance measurement, the HR Scorecard and delivering performance feedback.
Prereq: Bus 290

Bus 418 Organization Design and Changes (3 cr)
A study of design and change in effective organizations, including: organization processes, and learning organizations.
Prereq: Bus 290 or Bus 311

Bus 420 Promotional Strategy (3 cr)
Marketing management point of view; objectives, methods, strategies, budgets, and measures of effectiveness; campaign management including advertising, public relations, sales promotion, reseller support, personal selling. May involve evening exams.
Prereq: Bus 321

Bus 421 Marketing Research and Analysis (3 cr)
Applied research focusing on marketing information needs for managerial decision making; includes research design, data collection methods, statistical analysis, and use of marketing information systems to forecast market and sales potential, measure effectiveness of promotions, and analyze new products and distribution of goods and services. May involve evening exams.
Prereq: Stat 251 or Stat 301; and Bus 321

Bus 422 Personal Selling and Sales Force Management (3 cr)
Personal Selling including prospecting, approaching customers, consultative sales presentations, closing techniques, and servicing the sale. Sales Management including recruiting, selecting, training, compensating, motivating, supervising, and directing selling efforts. May involve evening exams.
Prereq: Bus 321

Bus 424 Pricing Strategy and Tactics (3 cr)
Formulation of pricing strategies and tactics for new and existing products and services; survey of pricing dynamics; competitor response to pricing strategies at the firm and product level; assessment of buyer price sensitivity.
Prereq: Bus 321; and Econ 202 or Econ 272

Bus 425 Retail Distribution Management (3 cr)
Analysis of retail operations including location, market selection, capital and physical requirements, store layout, merchandise management, customer relations, channel structure, and channel member relations. May involve evening exams.
Prereq: Bus 321

Bus 426 Marketing Channels Management (3 cr)
Analysis of planning, organization, and control issues related to distribution of goods and services; topics include retail and wholesale institutions, channel member behavior patterns, and vertical marketing systems.
Prereq: Bus 321

Bus 427 Services Marketing (3 cr)
Survey of concepts addressing distinctive marketing problems and opportunities in service industries, as well as current issues and trends in the service sector; includes discussion of strategies for marketing services, emphasizing the distinctive challenges and approaches that make the marketing of services different from marketing manufactured goods. May involve evening exams.
Prereq: Bus 321

Bus 428 Marketing Management (3 cr)
Discussion of major marketing management functions, including market and environmental analysis, as well as marketing planning, strategy, implementation, and control concepts; special emphasis on application of such concepts by developing a marketing plan that identifies market opportunities and proposes relevant marketing programs for a given case study. May involve evening exams.
Prereq: Bus 324, 421, and one Tier 1 marketing elective

Bus 429 Vandal Solutions (1-6 cr, max 6)
In this class students learn business by doing business. Students will run a business that provides, for a fee, market research products to clients (both external and internal to the UI). Students will apply concepts learned in the business curriculum such as the selling process, the market research process, integrated marketing communications, marketing and business plans, human resource management, financial management, and cross-functional collaboration. Members of Vandal Solutions decide how profits generated are dispersed with the general guideline being that funds should be used to support student activities such as club activities, field trips, career planning, and scholarships. Recommended Preparation: Junior standing.
Prereq: Permission

Bus 439 Systems and Simulation (4 cr)
Distribution theory, random numbers, modeling concepts and simulation of queuing and inventory systems. Students must have access to a laptop computer for use in class. 3 lectures and one 3 hour lab a week. May involve evening exams. May involve field trips. (Spring only)
Prereq: Bus 370, ChE 453, ME 313, or MSE 453; or Permission

Bus 441 Maintaining Employee and Labor Relations (3 cr)
Effective employer-employee relationships contribute to successful productivity, motivation, morale and retention. This course addresses employee and labor relations practices and their theoretical underpinnings, including such topics organizational culture and climate, intergroup conflict, communication, conflict resolution, investigating and resolving complaints, unionization and collective bargaining, applying and interpreting employment and labor laws, and maintaining positive relationships.
Prereq: Bus 290 or Bus 311

Bus 446 Six Sigma Innovation (3 cr)
See Stat 446.

Bus 452 Business Telecommunications Management (3 cr)
Survey of telecommunications management issues in a business environment; topics include local and wide area networks, telephony, public networks, and application of telecommunications technology in strategic business management.
Prereq: Bus 350, Bus 353, or Bus 355

Bus 453 Database Design (3 cr)
Introduction to modern database management systems and their use in solving business problems. May involve evening exams.
Prereq: Bus 350, Bus 353, Bus 355, or CS 120

Bus 302 Intermediate Financial Management (3 cr)
Advanced course in managerial finance that addresses more complex issues such as risk in capital budgeting, working capital management, mergers, business failure and reorganization, and lease financing. May involve evening exams.
Prereq: Bus 301

Bus 311 Introduction to Management (3 cr)
Organization, planning, leadership, and control; evolution of philosophies of management, decision making, motivation, human relations, and communication; organizational behavior and theory; history and present management practices, showing interrelationships between the needs and expectations of the individual, the organization, and society. May involve evening exams.

Bus 321 Marketing (3 cr)
Explores marketing as an integrating function of the firm. Includes the study of product, price, place, and promotions in the creation of customer value, international marketing, and the roles of corporate social responsibility and ethics in marketing decision making. May involve evening exams.

Bus 324 Consumer Behavior (3 cr)
Behavioral science theories, concepts, and methods applied to the understanding and prediction of consumer behavior, including industrial buyer behavior; emphasis on structuring marketing policy to fulfill consumer requirements. May involve evening exams.
Prereq or Coreq: Bus 321

Bus 339 Spreadsheet Modeling (1 cr)
The course is focused on developing students' detailed understanding of modeling and managing data in a business environment. Hands-on material is presented in this course making use of spreadsheets to model and manage data.
Coreq: Econ 340

Bus 350 Managing Information (3 cr)
Introduction to use and management of data to support decision making. Includes discussion of relevant international and ethical issues.
Prereq: Stat 251 or Stat 301; and Bus 252

Bus 351 Introduction to Electronic Commerce (3 cr)
Introduction to the economic, technology and management of e-commerce. Discussion of economic basis for e-commerce, business models, information technology, and management of technology related to the operation of an e-commerce business. May involve evening exams.
Prereq: Acct 202 or 205

Bus 353 Application Development (3 cr)
Intro to the design and implementation of IS applications. Topics may include programming for mobile and distributed systems, usability, and security.
Prereq: Junior Standing

Bus 355 Systems Analysis & Administration (3 cr)
Introduction to analysis, development, and management of modern information systems. May involve evening exams.
Prereq: Junior Standing

Bus 370 Process Management (3 cr)
This course examines the concepts and tools used to design, implement, manage, evaluate and improve the business processes used to create and deliver value to customers. International and ethical issues associated with process management will also be considered. May involve evening exams.
Prereq: Acct 202, Bus 252, and Bus 290; and Stat 251 or Stat 301
Prereq or Coreq: Bus 301, Bus 321, and Bus 350

Bus 378 Project Management (3 cr)
Planning, organizing, staffing, controlling, and directing an organization's resources for special projects; topics include matrix organizations, cross functional teamwork, budgeting, work breakdown structures, critical path method (CPM), program evaluation and review techniques (PERT), capacity planning, and project control. May involve evening exams.

Bus 381 International Finance (3 cr)
Study of financial problems facing business engaged in international activities; foreign exchange risk management, international diversification, multinational capital budgeting, country risk analysis, financing foreign investments, international financial markets.
Prereq: Econ 201 or Econ 272; and instructor permission

Bus 385 PGA Golf Management III (2 cr)
This course will examine the golf industry and the golf professional's role within the industry. Attention will focus on Merchandising & Inventory Management and Supervising & Delegating. Other topics previewed will be an overview of the Final Experience. (Spring only)
Prereq: Bus 103, 150, and 251

Bus 386 Food & Beverage Hospitality with Lab (4 cr)
Introduction to hospitality and commercial leisure enterprises. The course will include food and beverage service operation, profit and cost accounting, techniques, marketing, advertising schemes and the relationship between business and leisure programs, services, and products. Field trips required.
Prereq: PGM Major or Permission

Bus 390 (s) Integrated Topics in Business (3 cr, max 6)
Each section of the course will offer an in depth study of an integrating topic spanning the business functions. International and ethical issues related to the topic will be explored. May be repeated once with a different topic for credit. See the current course schedule for specific section titles.
Prereq: BLaw 265, Bus 301, Bus 321, Bus 350, Bus 370, and Econ 201; and Engl 207, Engl 208, Engl 313, Engl 317, or Phil 201

Bus 398 (s) Internship (1-3 cr, max 6)
Open only to majors in the Dept of Business. Graded P/F.

Bus 400 (s) Seminar (cr arr)

Bus 404 (s) Special Topics (cr arr)

Bus 407 Financial Institutions (3 cr)
Examines management and regulation of financial institutions, including structure of global financial markets and the measurement and management of risk for these institutions.
Prereq: Bus 302

Bus 408 Security Analysis (3 cr)
Emphasis on theory and practice of security analysis and other techniques of financial analyses; may involve management of actual portfolios.
Prereq: Bus 302

Bus 409 Problems in Financial Management (3 cr)
Analysis of selected topics in financial management; asset allocation; capital budgeting and valuation; synthesis of financial management skills through case analysis; written and oral reports and computer simulations. May involve evening exams.
Prereq: Bus 302

Bus 411 Acquiring Human Capital (3 cr)
An organization's ability to develop and sustain a competitive advantage through human resources begins with successfully attracting and acquiring talented and motivated human capital. This course addresses recruitment and selection practices and their theoretical underpinnings, including such topics as individual differences theories, decision-making heuristics and biases, human perception, staffing strategies, human resource planning, strategic human resource management, EEO and legal issues, job analysis and competency modeling, recruitment methods, selection techniques, and selection validation.
Prereq: Bus 290

Bus 412 Human Resource Management (3 cr)
Human resource/personnel management functions including recruitment, training, compensation, performance appraisal, health and safety, labor relations, and legal issues.
Prereq: BLaw 265; and Bus 290 or Bus 311

Bus 413 Organizational Behavior (3 cr)
Micro oriented treatment of areas including communication, motivation, group process, conflict, leadership style.
Prereq: AgEc 278, Bus 290, or Bus 311

land-use with economic development, housing, historic preservation, agricultural viability. Includes lectures by practitioners and interdisciplinary faculty, and a service-learning project. (Fall only)

BioP 522 Bioregional Planning Methods (3 cr)
This is an overview course of the methods used in making evidence based decisions in regional planning. This course will focus on the scientific method, statistics, hypothesis testing, regression analysis, spatial analysis, qualitative analysis, and design methods; giving students a feel for power and limitations of each.

BioP 530 Public Planning Theory and Process (2-3 cr)
Seminar provides a historical and theoretical basis to address the application of knowledge to public and political decisions and the ethics of professional practice within public and non-governmental settings. Readings, discussions, and essays will focus on underlying traditions and assumptions, cultural contexts, social justice and "planner" roles. Non-majors may choose to take the course for two credits, which will not include a professional ethics segment.

BioP 560 Bioregional Planning Studio I (4 cr)
Students will work on one or more projects that target the needs of an Idaho community or regional agency. The projects will involve the application of various tools including GIS, comprehensive planning, physical design, economic development, transportation systems or other relevant methods in the creation of products or proposals. In this course, students will learn a variety of skills related to facilitation, negotiation, community politics, conflict management and assessment tools such as social impact or environmental impact assessments. (Spring only)

BioP 561 Bioregional Planning Studio II (4 cr)
This course is intended to allow students to integrate a number of skill sets by choosing a project that builds on their program specialization. Students work with faculty advisors to develop and complete final projects. Students will also have the opportunity to interact with first year students in BIOP 560 at regular intervals throughout the semester to discuss common readings, provide mutual assistance on projects and peer-to-peer evaluation of completed work. (Spring only)
Prereq: BioP 560

BioP 599 (s) Non-thesis Master's Research (cr arr)

Business Courses

Scott K. Metlen, Dept. Head, Department of Business (301F J. A. Albertson Bldg. 83844-3161; phone 208/885-7146).

Bus 100 The World of Business (1 cr)
Open only to freshmen and sophomores (less than 58 credits). Examines types of businesses, the management of businesses, and the creation of new businesses. Special focus is placed on the role of the entrepreneur. Introduces the impact of global and domestic economic forces. Considers legal and ethical issues. May involve field trips.

Bus 101 Introduction to Business Enterprises (3 cr)
May not be taken for credit after Bus 311. General overview of business enterprise, including key concepts and issues in production, human resources, management, marketing, information systems, finance, and accounting, as well as economic environment and ethical/social responsibilities. May involve evening exams.

Bus 103 Introduction to PGA Golf Management (2 cr)
This course will examine the golf industry and the golf professional's role within the industry. Attention will focus on the history of the game, PGA Constitution, career enhancement, and the rules of golf. (Fall only)
Prereq: PGM Major

Bus 110 PGA Golf Management Player Development (1 cr, max arr)
This course will assist PGA Golf Management students in their efforts to pass the PGA of America's Playing Ability Test (PAT) by providing access to a golf game tracking and improvement software along with individual and group golf instruction. All PGA Golf Management students must pass the PAT prior to graduation. Graded Pass/Fail.
Prereq: Marketing -PGA Golf Management major

Bus 150 PGA Golf Management I (2 cr)
This course will examine the golf industry and the golf professional's role within the industry. Attention will focus on Tournament Operations, Golf Car Fleet Management, Golf Club Repair and Design. Other topics previewed will be Business Planning and Operations and Customer Relations.
Prereq: Bus 103

Bus 190 Integrated Business and Value Creation (3 cr)
Explores the environment of business and the management of business systems to understand how an organization turns opportunity into value. This course uses an integrated, cross-disciplinary perspective including working in teams. Includes international and ethical issues. May involve evening exams.

Bus 200 (s) Seminar (cr arr)

Bus 204 (s) Special Topics (cr arr)

Bus 250 Introductory Systems Development (3 cr)
Introduction to event-driven and object-oriented systems development in a graphical user interface environment; significant hands-on demonstrations and uses of a variety of integrated application development tools.
Prereq: 30 credits

Bus 251 PGA Golf Management II (2 cr)
This course will examine the golf industry and the golf professional's role within the industry. Attention will focus on Business Communications, Business Planning & Operations, Customer Relations, and PGA/PGM Electives. Other topics previewed will be Merchandising & Inventory Management and Supervising & Delegating.
Prereq: Bus 103, Bus 150 and PGM major

Bus 252 Formal Models of Decision Making (3 cr)
Introduction to formal models of decision making including modeling and sensitivity analysis. Topics include psychology of problem solving, optimization, decision theory, simulation, regression, and related issues. May involve evening exams.
Prereq: Stat 251 or Stat 301

Bus 260 Student Investment Fund Management (1 cr, max arr)
Open only to freshman and sophomore students participating in the A.D. and J.E. Davis Student Investment Program. "Hands on" experience in investment management; students manage a funded portfolio in terms of establishing objectives, security selection, asset allocation, and portfolio performance. Graded P/F.
Prereq: Permission

Bus C262 Real Estate Finance (3 cr)
Analysis of sources and methods used in the financing of real estate property construction, development, and purchase. This course has been certified by the Idaho Real Estate Commission. Recommended Preparation: a course in essentials of real estate.

Bus C263 Real Estate Law (3 cr)
Study of Idaho real estate law. This course has been certified by the Idaho Real Estate Commission. Recommended Preparation: a course in essentials of real estate; BLaw 265.

Bus 290 Leading Organizations and People (3 cr)
Great leaders are made, not born. This course prepares students to effectively acquire and deploy human capital, lead individuals and teams, inspire and motivate people to perform the tasks needed to achieve ambitious goals, and inspire innovation. Includes international and ethical issues. May involve evening exams and presentation practices.
Prereq: Acct 201, Bus 190, Econ 201, or Econ 272; and Sophomore Standing

Bus 298 (s) Internship (1-3 cr, max 6)
Open only to majors in the Dept of Business. Graded P/F.
Prereq: Permission

Bus 299 (s) Directed Study (cr arr)

Bus 301 Financial Resources Management (3 cr)
This course examines the policies and practices involved in the allocation of financial resources in business organizations; develops the tools needed to use financial data for analysis and financial decision making. May involve evening exams.
Prereq: Acct 201 and Acct 202; and Stat 251 or Stat 301; and Econ 202 or Econ 272; and Bus 252 or Math 330

wall metabolism. Extra oral and/or written assignments required for graduate credit. (Spring only)
Prereq: Biol 250 and Biol 380

Biol J487/J587 Eukaryotic Molecular Genetics (3 cr)
Same as MMBB J487/J587. Molecular basis of genetics in eukaryotes. Extra oral and/or written assignments required for graduate credit. Recommended preparation: Biol J485/J585 and MMBB J488/J588.
Prereq: Biol 380; and Biol 310 or Gene 314

Biol 489 Herpetology (4 cr)
Evolution, systematics, physiology, and ecology of reptiles and amphibians. Three lectures and one 3-hr lab a wk; field trip. (Fall only)
Prereq: Biol 115 and 116

Biol 491 Practicum in Teaching (2 cr)
Same as MMBB 497. Teaching by advanced students under faculty supervision.
Prereq: Permission

Biol 493 Practicum in Physical Therapy (1 cr, max 4)
Minimum of two hrs a wk of practical experience in a PT clinic. Graded P/F.
Prereq: Biol 120, Biol 121, Jr standing, 3.0 GPA, and perm of UI allied health advisor.

Biol 495 Research in Molec/Cell/Dev Biology (cr arr)
Directed research in faculty laboratory.
Prereq: Permission

Biol 496 Research in Ecology and Evolution (cr arr)
Directed research in faculty laboratory.
Prereq: Permission

Biol 497 Research in Anatomy and Physiology (cr arr)
Directed research in faculty laboratory.
Prereq: Permission

Biol 499 (s) Directed Study (cr arr)

Biol 500 Master's Research and Thesis (cr arr)

Biol 501 (s) Seminar (cr arr)

Biol 502 (s) Directed Study (cr arr)

Biol 503 (s) Workshop (cr arr)

Biol 504 (s) Special Topics (cr arr)

Biol 505 Colloquium (1 cr)
Oral presentation reqd for cr. Graded P/F.
Prereq: Permission

Biol 508 Topics in Neuroscience (1 cr, max arr)
Same as Neur 508. Seminars and discussion of current topics in neuroscience.
Prereq: Graduate standing

Biol 521 Graduate Teaching Practicum (3 cr)
Organization, preparation, and teaching of lab experiments or demonstrations under faculty supervision. Graded pass/fail.
Prereq: Graduate standing and Permission

Biol 522 Molecular Evolution (3 cr)
Understanding evolutionary processes and patterns at the molecular level, techniques for using genetic and genomic data understand evolutionary history of organisms, 3 lectures per week.
Prereq: Undergraduates require permission of instructor

Biol 524 Research and Curriculum Progress (1 cr, max arr)
Same as MMBB 511. Required of all graduate students one semester per year. The grade is based on preparation of an oral and written presentation of research goals and coursework for the completion of the degree. A letter grade is assigned by committee members at the time of the student's graduate committee meeting. Recommended preparation: Undergraduate degree in Microbiology, Biochemistry, or related topic.
Prereq: Permission

Biol J432/J532 Immunology (3 cr)
Same as Biol J432/J532.Biol J432/J532 Immunology (3 cr)

Biol 533 Pathogenic Microbiology (3 cr)
Same as Biol J433/J533.

Biol 541 Cellular and Molecular Basis of Disease (3 cr)
Same as Biol J441/J541.

Biol 545 Principles of Systematic Biology (3 cr)
The inference of evolutionary trees (phylogeny) and the processes that generate biodiversity from analyses of morphological, molecular, and behavioral data; uses of phylogenies in testing evolutionary and other hypotheses at both inter and intraspecific levels. Two hrs of lec and one 3-hr lab a wk. (Spring, Alt/yrs)
Prereq: PlSc 205 or Biol 213 and Biol 310

Biol 547 Virology (3 cr)
Same as Biol J447/J547.

Biol 548 Evolutionary Ecology (3 cr)
This course develops the theoretical underpinnings for the field of evolutionary ecology and illustrates how this conceptual basis is used to address major questions of social and economic importance such as the spread of invasive species and the evolution of infectious disease. Cooperative: open to WSU degree-seeking students.

Biol 551 Seminar on Reproductive Biology (1 cr, max 5)
Current topics in reproductive biology. Cooperative: open to WSU degree-seeking students.
Prereq: Graduate standing

Biol 552 Professional Development for Biologists (3 cr)
Oral and written presentation skills for communicating scientific information, including grant writing and data presentation for manuscripts and seminars.
Prereq: Graduate standing

Biol 553 Ethical Issues in Biological Research (1 cr)
Practical ethical issues for biologists.
Prereq: Graduate standing

Biol J454/J554 Biochemistry II (3 cr)
See Biol J454/J554.

Biol 558 Reproductive Biology of Fishes (2 cr)
A graduate level course covering all aspects of the reproductive biology of fishes. The class will meet once per week for 2 hours; the first hour will be used for a formal lecture, the second hour will be used for informal student presentations/discussion of current literature topics or assigned readings in the field. Cooperative: open to WSU degree-seeking students. (Spring only, Alt/yrs)

Biol 562 Molecular Parasitology (3 cr)
Same as Biol J462/J562.

Biol 563 Mathematical Genetics (3 cr)
See Math 563.

Biol 582 Protein Structure and Function (3 cr)
Same as Biol J482/J582.

Biol 585 Prokaryotic Molecular Biology (3 cr)
Same as Biol J485/J585.

Biol 587 Eukaryotic Molecular Genetics (3 cr)
Same as Biol J487/J587.

Biol 600 Doctoral Research and Dissertation (cr arr)

Bioregional Planning and Community Design Courses

Steve Hollenhorst, Director (207 Art and Architecture Building 83844-2481; phone 208/885-7448; FAX 208/885-9428; bioregionalplanning@uidaho.edu; www.bioregionalplanning.uidaho.edu).

BioP 500 Master's Research and Thesis (cr arr)

BioP 520 Introduction to Bioregional Planning (3 cr)
This class introduces first semester Bioregional Planning and Community Design students to bioregional planning concepts and current implementation practices.

BioP 521 Local and Regional Comprehensive Planning (3 cr)
Provides an overview of the processes and methods for preparing comprehensive plans for local and county governments in the context of federal and state lands and regional growth management: Integrates

Biol 400 (s) Seminar (1 cr, max arr)
Same as MMBB 400. May be used as a science elective after 1 required credit, up to a maximum of 4 credits. Graded P/F.

Biol 401 Undergraduate Research (1-4 cr, max 8)
Same as MMBB 401. Individual Study.
Prereq: Permission of Instructor

Biol 404 (s) Special Topics (cr arr)

Biol 405 Practicum in Anatomy Laboratory Teaching (2-4 cr. Max 8)
Organization, preparation, and teaching of anatomy laboratory objectives under faculty supervision. (Fall only)
Prereq: Permission

Biol 407 Practicum in Biology Laboratory Teaching (2-6 cr, max 12)
Organization, preparation, and teaching of lab experiments or demonstrations under faculty supervision.
Prereq: Any four of the following courses: Biol 115, Biol 116, Biol 213, Biol 310, Biol 312, or Biol 314; and Permission

Biol 408 Practicum in Human Physiology Laboratory Teaching (2-4 cr, max 8)
Organization, preparation, and teaching of human physiology laboratory objectives under faculty supervision. (Spring only)
Prereq: Biol 121 and Permission

Biol 411 Senior Capstone (2 cr)
Application of biological principles and information to the analysis of societal and philosophical issues.
Prereq: Biol 213, Biol 310, Biol 312, Biol 314, and Sr standing

Biol 421 Advanced Evolutionary Biology (3 cr)
Macro and Micro evolutionary patterns and processes examined from molecular, ecological, and paleontological perspectives. (Fall only)
Prereq: Biol 314, For 221 or REM 221

Biol 423 Comparative Vertebrate Physiology (3 cr)
Comparative physiology of the major organ systems found in vertebrates. May involve some evening exams. (Fall only)
Prereq: Biol 213, and Chem 275 or 277

Biol 425 Special Topics: Experimental Field Ecology (3 cr)
Intensive course on diverse aspects of field ecology to be held off-campus. Various global locations (i.e. Costa Rica, Oregon coast, Hawaii) are possible. The course will be scheduled during an 8-10 day period preceding/following the Spring Term (i.e. January or May). Will involve travel and lodging costs at student expense.
Prereq: Biol 115, Biol 116, Biol 213, Biol 310, Biol 312, and Biol 314

Biol 428 Microscopic Anatomy (4 cr)
Basic principles of histology and advanced microscopic anatomy of vertebrate tissues and organs. (Fall, alt/even yrs)
Prereq: Biol 213 or Biol 312

Biol J432/J532 Immunology (3 cr)
Same as MMBB J409/J509. Theory and mechanisms of the cellular basis of immune response; antibody structure, function, and synthesis; cell-mediated immunity; complement; hypersensitivity; immunologic diseases; transplantation; tumor immunity. Extra oral and/or written assignments required for graduate credit. (Fall only)
Prereq: Biol 300 or Biol 380

Biol J433/J533 Pathogenic Microbiology (3 cr)
Same as MMBB J412/J513. Epidemiology, host-parasite relationships, pathology, host response; treatment, prevention, and control of pathogenic microorganisms. Extra oral and/or written assignments required for graduate credit. (Fall only)
Prereq: Biol 250

Biol J441/J541 Cellular and Molecular Basis of Disease (3 cr)
Same as MMBB J422/J522. Basic principles of cell biology explored in the context of human diseases. Emphasis on molecular mechanisms of cancer, Alzheimer 's disease and prion diseases. Extra oral assignment required for grad cr. Recommended Preparation for 422: MMBB 475. Recommended Preparation for 522: MMBB 575. (Fall only)
Prereq: Biol 310 or Gene 314; and Biol 380

Biol 444 Genomics (3 cr)
Structural, functional, and comparative genomics of animals, plants, fungi, and microbes. Case studies illustrating a genomic approach to questions of fundamental biological and societal relevance will be drawn from diverse fields such as human medicine, evolutionary biology, agriculture, and bioterrorism. (Fall, alt/yrs)
Prereq: Biol 116 and Biol 310; or Biol 250

Biol J447/J547 Virology (3 cr)
Same as MMBB J432/J532. A survey of virology, with special emphasis on the molecular basis of replication, host-pathogen interactions and diseases associated with animal viruses. Extra oral and/or written assignments required for grad credit. Recommended preparation: Biol 250. (Fall, alt/yrs)
Prereq: Biol 380; and Biol 310 or Gene 314; or Permission

Biol 448 Plant-Animal Interactions (3 cr)
Principles of interactions between plants and animals; interactions and diversification, coevolution; pollination, fruit and seed dispersal, herbivory, ant-plant and ant-plant-fungal interactions, importance of interactions in conservation biology. One field trip. Biol 314 recommended. (Fall, Alt/yrs)
Prereq: Biol 116

Biol J454/J554 Biochemistry II (3 cr)
Biol 554 same as Chem 542. Intermediate biochemistry; areas of emphasis include molecular biology, nitrogen and lipid metabolism. Extra oral and/or written assignments required for grad credit. (Spring only)
Prereq: Chem 372; Biol 380 or Chem 302 or Chem 306; or Permission

Biol 456 Computer Skills for Biologists (3 cr)
Management and analysis of complicated datasets such as those in molecular evolution, systematics, and genomics. Demonstrations, exercises, and student projects to teach advanced Unix skills, programming (e.g. Perl and R), and data management. (Fall, alt/even yrs)
Prereq: Biol 310 and Stat 251 or Stat 301; or Permission

Biol 461 Neurobiology (3 cr)
Study of the nervous system, with an emphasis on mechanisms of neuronal signaling, the function of sensory and motorsystems, and neural development. Recommended: Phys 111, Phys 112, and Chem 275 or Chem 277. Cooperative: open to WSU degree-seeking students. (Fall, Alt/yrs)
Prereq: Biol 213, Biol 312, Biol 310, Gene 314, Biol 300, or Biol 380

Biol J462/J562 Molecular Parasitology (3 cr)
Same as MMBB J463/J563. Survey course exploring the cellular and molecular mechanisms utilized by human and animal parasites to develop, interact with their hosts and cause disease. Graduate students will have to produce a final written report or presentation on a research article. Recommended preparation: Biol 310 or Gene 314, and MMBB J475/J575 or Biol J432/J532. (Spring only)
Prereq: MMBB 154 or Biol 250; and Biol 300 or Biol 380; or Permission

Biol 474 Principles of Developmental Biology (3 cr)
Analysis of mechanisms at cellular and molecular level during metazoan development. (Spring, Alt/yrs)
Prereq: Biol 115 and Biol 116 or Biol 312

Biol 478 Animal Behavior (3 cr)
Evolution, causation, development, and function of behavior in vertebrates and invertebrates. (Spring only)
Prereq: Biol 115 and 116

Biol 481 Ichthyology (4 cr)
Anatomy, taxonomy, physiology, genetics, and zoogeography of fishes. Three lec and one 3-hr lab a wk. (Spring only)
Prereq: Biol 115 and 116

Biol J482/J582 Protein Structure and Function (3 cr)
Same as MMBB J482/J582. Detailed analysis of protein structure and function including enzyme activity, binding, folding and stability, and techniques for structure determination. Additional projects/assignments required for graduate credit. (Fall, alt/yrs)
Prereq for 482: Biol 380
Prereq for 582: MMBB 541

Biol 483 Mammalogy (3 cr)
Evolution, systematics, distribution, and biology of mammals. Two lec and one 3-hr lab a wk; one field trip. (Fall only)
Prereq: Biol 115 and 116

Biol J485/J585 Prokaryotic Molecular Biology (3 cr)
Same as MMBB J485/J585. Current theory and experimental basis for prokaryotic DNA, RNA, and protein synthesis, gene regulation and cell

groundwater outflow and base flow, stream flow generation, and elements of frequency analysis in hydrology.
Prereq: BAE 450 and Math 310; or Permission

BAE 552 Environmental Water Quality (3 cr)
See BAE J452/J552.

BAE 558 Fluid Mechanics of Porous Materials (3 cr)
Statics and dynamics of multiflow systems in porous materials; properties of porous materials; steady and unsteady flow. Cooperative: open to WSU degree-seeking students.

BAE 585 Fundamentals of Bioenergy and Bioproducts (3 cr)
See BAE J485/J585.

BAE 592 Biofuels (3 cr)
See BAE J492/J592.

BAE J494/J594 Thermochemical Technologies for Biomass Conversion (3 cr)
See BAE J494/J594.

BAE 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

BAE 600 Doctoral Research and Dissertation (cr arr)

Biology Courses

James J. Nagler, Interim Dept. Chair, Dept. of Biological Sciences (252 Life Sc. Bldg. 83844-3051; phone 208/885-6280).

Exception to regulation D-4: Students who transfer in a course for which the UI requires Biol 115 or 116 as a prerequisite (but who have not yet taken Biol 115 or 116), may take Biol 115 and 116 for credit.

Note: Enrollment in lab sections of departmental courses will be limited to the number of stations available in that section.

Biol 101 Perspectives in Biology (1 cr)
Open only to majors. Intro to the disciplines in the fields of biology; current research topics. (Fall only)

Biol 102 Biology and Society (3 cr)
Not open to Biology majors or for minor cr. Principles of biology and their relationship to social issues. Three lec and one 3-hr lab a wk.

Biol 102L Biology and Society Lab (1 cr)
Not open to Biology majors or for minor cr. Principles of biology and their relationship to social issues. Three lec and one 3-hr lab a wk.

Biol 115 Cells and the Evolution of Life (4 cr)
The cell, heredity and evolutionary processes. Three lec and one 3-hr lab a wk.
Coreq: Chem 101 or Chem 111

Biol 116 Organisms and Environments (4 cr)
The evolution of diversity, the biology of plants and animals, and their environments. Three lec and one 3-hr lab a wk.
Prereq: Biol 115 and Chem 101 or 111

Biol 120 Human Anatomy (4 cr)
Study of the anatomy of the major organ systems of the human body; lab consists of studying human gross anatomy models and prosected cadavers. Three lec and one 3-hr lab a wk. (Fall only).

Biol 121 Human Physiology (4 cr)
Study of the physiology of the major organ systems of the human body. Three lec and one 3-hr lab a wk. (Spring only)
Prereq: Biol 120

Biol 155 Introductory Microbiology Laboratory (1 cr)
Same as MMBB 155. May be taken by microbiology majors but carries no credit after Biol 255. Introductory laboratory training in basic microbiology; includes sterile technique, bacterial enumeration methods, culturing techniques, yogurt preparation and analysis, recombinant DNA techniques. Three hrs lab a wk. (Spring only)
Coreq: MMBB 154

Biol 213 Principles of Biological Structure and Function (4 cr)
Principles of physiology in plants and animals (homeostasis, hormonal and neural control systems, organismal physiology). Three lec and one 3-hr lab a wk. (Spring only)
Prereq: Biol 115

Biol 250 General Microbiology (3 cr)
Introduction to nature and activity of bacteria and other microorganisms; their importance in all life systems. Three hrs of lec per wk. (Fall only)
Prereq: Chem 101 or Chem 111

Biol 255 General Microbiology Lab (2 cr)
Same as MMBB 255. Training in the handling of microscopes, basic lab equipment, and manipulation of microbes. Two 2-hr labs per week.
Prereq or Coreq: Biol 250

Biol 299 (s) Directed Study (cr arr)

Biol 300 Survey of Biochemistry (3 cr)
Carries no credit after Biol 380. Survey of biochemical principles and the molecular structure and function that describe the chemical basis of life. (Fall only)
Prereq: Chem 101 or Chem 111
Coreq: Chem 275 or Chem 277

Biol 310 Genetics (3 cr)
Genetic mechanisms in animals, plants, and microorganisms. Three hours of lec per wk. (Fall only)
Prereq: Biol 115 or Biol 250

Biol 312 Molecular and Cellular Biology (3 cr)
Current theory and experimental basis of the structure/function of eukaryotic cells. Topics include plasma membrane, organelles, cytoskeleton and cell mobility, the nature of genes, gene expression, DNA replication and cellular reproduction, and signal transduction. Three lec and one 1-hr recitation a wk. (Fall only)
Prereq: Biol 115

Biol 313 Molecular and Cellular Laboratory (1 cr)
Laboratory experiments and techniques related to molecular and cellular biology. One 3-hr lab per week.
Coreq: Biol 312

Biol 314 Ecology and Population Biology (4 cr)
Nutrient cycling and energy flow, populations, population genetics, use and construction of phylogenies, communities and biodiversity. Three lec and one 3-hr lab a wk. (Spring only)
Prereq: Biol 115 and Biol 116; and Math 143, Math 160, or Math 170.

Biol 315 Genetics Lab (1 cr)
Laboratory on genetic mechanisms in animals, plants, and microorganisms. One three hr. lab per wk.
Prereq: Biol 115 or Biol 250
Coreq: Biol 310

Biol 324 Comparative Vertebrate Anatomy (4 cr)
Evolution of vertebrates and their organ systems with an emphasis on structure - function relationships. Two lectures and two 3-hour labs a week. (Fall only, alt/yrs)
Prereq: Biol 115, Biol 116, and Biol 213; or Permission

Biol 380 Biochemistry I
Carries one credit after Biol 300. Introduction to the structure and function of major molecular constituents of living systems. Emphasis on proteins, enzyme kinetics and catalysis, carbohydrate metabolism. Three hrs lecture and one hr with interactive problem solving. (Fall only)
Prereq: Chem 112 and Chem 277

Biol 382 Biochemistry I Laboratory (2 cr)
Lab training in modern methods. One 3-hr lab and one 1-hr recitation a wk. (Fall only)
Coreq: Biol 380 or equivalent

Biol 398 (s) Internship (1-3 cr, max 3)
Supervised internship in professional biological, non-university settings, integrating academic study with work experience; requires formal written plan of activities to be approved by academic advisor and department chair before engaging in the work; a final written report will be evaluated by on-campus faculty. Graded P/F.
Prereq: Permission

BAE 242 Engineering Analysis and Design (2 cr)
Methods of analyzing and solving engineering problems and introduction to elements of design; use of computers in engineering problem solving. Recommended Preparation: computer science elective in a programming language.
Prereq: Math 170
Coreq: Math 175

BAE 299 (s) Directed Study (cr arr)

BAE 355 Fundamentals of Hydrologic Engineering (3 cr)
See CE 325.

BAE 398 (s) Engineering Cooperative Internship (cr arr)
Supervised internship in professional engineering settings, integrating academic study with work experience; details of the co-op to be arranged with supervising professor before the start of the co-op; requires written report. Graded P/F. Cannot be used for technical elective.
Prereq: Permission

BAE 404 (s) Special Topics (cr arr)

BAE J433/J533 Bioremediation (3 cr)
Theory and practice of bioremediation as applied to toxic and hazardous wastes, including reaction kinetics, reaction stoichiometry, microbiology, and design of ex- and in-situ processes. Graduate credit requires additional design project. One-two field trips.
Prereq: Biol 115 and Math 170, or Permission

BAE J441/J541 Instrumentation and Measurements (3 cr)
Sensing elements, signal conditioning, data output and control. Additional projects/assignments reqd for grad cr. Two lec and one 3-hr lab a wk. Recommended Preparation: BAE 462. Cooperative: open to WSU degree-seeking students.

BAE 450 Environmental Hydrology (3 cr)
Carries no credit after BAE 355 or CE 325. The objective of this course is to provide a comprehensive understanding of the hydrologic processes associated with the environmental processes. Includes components of the hydrologic cycle, analysis of precipitation and run off, evapotranspiration, routing, peak flow, infiltration, soil and water relationships, snowmelt, and frequency analysis. (Spring only)
Prereq: Math 170

BAE ID451 Engineering Hydrology (3 cr) WSU BSysE 451
See CE 421.

BAE J452/J552 Environmental Water Quality (3 cr)
Engineering design to monitor, evaluate, and minimize non-point pollution from agriculture, environmentally acceptable disposal of wastes, bioremediation. Graduate credit requires an additional project and report. Two lec and one 3-hr lab a wk.
Prereq: Chem 112 and Soil 205 or Biol 250, and BAE 355 or BAE 450

BAE 458 Open Channel Hydraulics (3 cr)
See CE 428.

BAE 459 Irrigation System Design (3 cr)
Crop water requirements, irrigation scheduling and water management, selection and design of irrigation systems, pump selection. Two lec and one 3-hr lab a wk; one 1-day field trip.
Prereq: Engr 335

BAE 461 Bioprocess Engineering (3 cr)
Carries 2 credits after ME 345. Processing principles and transport processes applied to the analysis and design of handling, processing, and producing of biomaterials and bioprocesses. Two lec and one 3-hr lab a wk. (Spring only, alt/yrs)
Prereq: Math 310, Engr 320 and 335, or Permission

BAE 462 Electric Power and Controls (3 cr)
Design, selection, and use of electrical equipment and electric power systems for application to biological systems; design and use of electrical, electronic, and other feedback control systems for use with biological systems. Two lec and one 3-hr lab a wk.
Prereq: Engr 240
Coreq: Math 310

BAE 478 Engineering Design I (3 cr)
The capstone design sequence for biological and agricultural engineering majors. Course topics include research, design, experimental methods, specifications, prototyping, and verification; report writing, documentation and oral presentations. Topics, from industrial sponsorship, are considered in the context of a major design project involving a team of students. Projects incorporate realistic engineering constraints including environmental concerns, sustainability, ethical, safety, manufacturability, social and political considerations.
Prereq: BAE 242, Engr 320, Engr 335, and Engr 350

BAE 479 Engineering Design II (3 cr)
Continuation of the capstone design sequence for biological and agricultural engineering majors. Course topics include research, design, experimental methods, specifications, prototyping, and verification; report writing, documentation and oral presentations. Topics, from industrial sponsorship, are considered in the context of a major design project involving a team of students. Projects incorporate realistic engineering constraints including environmental concerns, sustainability, ethical, safety, manufacturability, social and political considerations
Prereq: BAE 478

BAE J485/J585 Fundamentals of Bioenergy and Bioproducts (3 cr)
Review of current technology for producing energy and products from biological materials. Discussion of economic, social, and political aspects and future prospects for petroleum displacement. Additional projects/assignments required for graduate credit. Recommended Preparation: Organic Chemistry.
Prereq: Chem 111
Coreq: Engr 320 or Permission

BAE 491 Senior Seminar (1 cr)
Professional aspects of the field, employment opportunities and preparation of occupational inventories. Graded P/F.
Prereq: Senior standing.

BAE J492/J592 Biofuels (3 cr)
Basic principles for the production and utilization of biobased fuels; processing techniques and chemistry; fuel properties and utilization. Additional projects/assignments required for graduate credit. Recommended Preparation: Organic Chemistry.
Prereq: Chem 111
Coreq: Engr 320 or Permission

BAE J494/J594 Thermochemical Technologies for Biomass Conversion (3 cr)
Introduce the fundamentals of biomass conversion technologies for biofuels and bioenergy. Specific topics include biomass preparation / pretreatment, pyrolysis, gasification, direct liquefaction, and economic factors in thermochemical conversion of biomass. Advances of the technologies will be brought to current through literature reviews. A semester long course project is required if taken as a graduate level course. Recommended Preparation: Organic Chemistry, Chemical Reaction Engineering, Engineering Thermodynamics. (Fall, odd numbered/years)
Prereq: Chem 277 and Chem 278
Coreq: Engr 320 or Permission

BAE 499 (s) Directed Study (cr arr)

BAE 500 Master's Research and Thesis (cr arr)

BAE 501 (s) Seminar (cr arr)
Graded P/F.
Prereq: Permission

BAE 502 (s) Directed Study (cr arr)

BAE 504 (s) Special Topics (cr arr)

BAE 533 Bioremediation (3 cr)
See BAE J433/J533.

BAE 534 Applied Bioremediation (3 cr)
Application of theory and design learned in prerequisite BAE 433/533 including conducting treatability studies, transportation and fate modeling in the subsurface, and hydrologic testing. Students required to complete laboratory, numerical modeling, and field-testing modules in addition to a subsurface modeling project.
Prereq: BAE 433/533

BAE 541 Instrumentation and Measurements (3 cr)
See BAE J441/J541.

BAE 551 Advanced Hydrology (3 cr)
Principles of the hydrologic cycle including precipitation, lower atmosphere, evaporation, fluid mechanics of free surface flow, overland flow, stream flow routing, water transport in porous media, infiltration,

AT 630 Current Issues in Clinical Practice I (3 cr)
This course explores current topics in clinical practice that influence quality care and methods of measurement and evaluation for quality assessment. Exploration to common instrumentation utilized by clinicians will be discussed and compared to literature utilizing the instruments for research purposes.
Prereq: Permission

AT 631 Current Issues in Clinical Practice II (3 cr)
This course explores current topics and causes of musculoskeletal injuries to the extremities. An in-depth look at epidemiology, biomechanics and other topics related to musculoskeletal injuries of the extremities will be emphasized.
Prereq: Permission

AT 632 Current Issues in Clinical Practice III (3 cr)
This course explores current topics of interest areas of practicing professionals. An in-depth look at theory, research, and art of the chosen interest area will be explored. Focus will be in critically analyzing areas such as; anatomy, pathophysiology, biomechanics, theoretical framework or ethical principles to explain the students chosen topic.
Prereq: Permission

AT 633 Current Issues in Clinical Practice IV (3 cr)
This course explores current topics of interest areas of practicing professionals. An in-depth look at theory, research, and art of the chosen interest area will be explored. Focus will be in critically analyzing areas such as; anatomy, pathophysiology, biomechanics, theoretical framework or ethical principles to explain the students chosen topic.
Prereq: Permission

AT 640 Clinical Residency I (6 cr)
This course is designed to improve the clinical skills of the practicing Athletic Training professional in a mentor guided model. Improvement in a selected area of clinical practice will be measured via formative and summative assessment that employs quantitative measures. Impact of the skill improvement to the organization and profession will be demonstrated.
Prereq: Permission

AT 641 Clinical Residency II (6 cr)
This course is designed to improve the clinical skills of the practicing Athletic Training professional in a mentor guided model. Improvement in a selected area of clinical practice will be measured via formative and summative assessment that employs quantitative measures. Impact of the skill improvement to the organization and profession will be demonstrated.
Prereq: Permission

AT 642 Clinical Residency III (6 cr)
This course is designed to improve the clinical skills of the practicing Athletic Training professional in a mentor guided model. Improvement in a selected area of clinical practice will be measured via formative and summative assessment that employs quantitative measures. Impact of the skill improvement to the organization and profession will be demonstrated.
Prereq: Permission

AT 643 Clinical Residency IV (6 cr)
This course is designed to improve the clinical skills of the practicing Athletic Training professional in a mentor guided model. Improvement in a selected area of clinical practice will be measured via formative and summative assessment that employs quantitative measures do demonstrate improved patient care. Impact of the skill improvement to the organization and profession will be demonstrated. Summary of all impact of clinical residencies will be presented to the participant's organization
Prereq: Permission

Bioinformatics and Computational Biology Courses

Eva Top, Program Director (414 Brink.. 83844-1104; phone 208/885-5015; bcb@uidaho.edu; www.bcb.uidaho.edu).

BCB 500 Master's Research and Thesis (cr arr)

BCB 501 (s) Seminar (cr arr)

BCB 502 (s) Directed Study (cr arr)

BCB 503 (s) Workshop (cr arr)

BCB 504 (s) Special Topics (cr arr)

BCB 506 Laboratory Experience in the Biological Sciences (cr arr)
Hands-on activities in an active research laboratory whose central research interests are in the biological or biochemical sciences.
Prereq: Admission to BCB program.

BCB 507 Laboratory Experience in the Computational Sciences (cr arr)
Hands-on activities in an active research laboratory whose central research interests are in the computational sciences.
Prereq: Admission to BCB program.

BCB 508 Laboratory Experience in Mathematics or Statistics (cr arr)
Hands-on activities in an active research laboratory whose central research interests are in the mathematics or statistics.
Prereq: Admission to BCB program.

BCB 509 Evolutionary Biology for non-Life Scientists (3 cr)
This course is offered by Michigan State University as part of the National Science Foundation BEACON Science and Technology Center on 'evolution in action'. Life-scientists in general, and evolutionary biologists in particular, have a particular way of looking at the world that may seem unfamiliar or unusual to non-biologists. In this class, students learn to 'think' like an evolutionary biologist. This course builds a working understanding of biological evolution, enabling effective collaboration with evolutionary biologists. (Fall only)
Prereq: Graduate Standing

BCB 510 Computational Science for Biologists (3 cr)
This course is offered by Michigan State University as part of the National Science Foundation BEACON Science and Technology Center on 'evolution in action'. This course develops computational skills and quantitative reasoning abilities, computational thinking, and exposure to computational research in evolutionary and molecular biology. We introduce the Python programming language, scripting and pipelining, simulations, and data analysis. We also introduce the Avida artificial life program as a platform for in silico evolution experimentations. (Fall only)
Prereq: Biol 421 or Instructor Permission

BCB 511 Applied Bioinformatics (3 cr)
A data driven approach to the computational and statistical understanding required to solve bioinformatics problems encountered in genome scale research. Recommended Preparation: CS 120, Stat 301, or Biol 456. (Spring, alt/yrs)

BCB 512 Multidisciplinary Approaches to the Study of Evolution (3 cr)
This course is offered by Michigan State University as part of the National Science Foundation BEACON Science and Technology Center on 'evolution in action'. This project-based course prepares students for team-based, multi-disciplinary and multi-institutional research into the evolutionary dynamics of biological and computational systems. The course objective is to recognize and overcome challenges such as discipline-specific languages, customs and world views. Students will also learn fundamentals of experimental design and statistical analysis. (Spring only)
Prereq: Graduate Standing

BCB 597 (s) Practicum (cr arr)

BCB 598 (s) Internship (cr arr)

BCB 599 (s) Non-thesis Master's Research (cr arr)

BCB 600 Doctoral Research and Dissertation (cr arr)

Biological and Agricultural Engineering Courses

Tom Hess, Dept. Head, Department of Biological and Agricultural Engineering (421 Engineering/Physics Bldg. 83844-0904; phone 208/885-6182; fax 208/885-7908; baengr@uidaho.edu).

BAE 142 Engineering for Living Systems (2 cr)
Introduction to engineering principles used to solve agricultural and biological systems problems, including use of computers. One lec and one 3-hr lab a wk; two half-day field trips.

AT 520 Clinical Education I (2 cr)
Practice of athletic training clinical skills under the direct supervision of an Approved Clinical Instructor with emphasis on the Level I clinical educational competencies. 4 hours lab.

AT 521 Clinical Experience I (4 cr)
Clinical practice in athletic training under the direct supervision of an Approved Clinical Instructor/ Clinical Instructor with emphasis on patient care and the safe and appropriate use of skills and techniques.

AT 522 Clinical Education II (2 cr)
Practice of athletic training clinical skills under the direct supervision of an Approved Clinical Instructor with emphasis on the Level I clinical educational competencies. 4 hours lab.

AT 523 Clinical Experience II (4 cr)
Clinical practice in athletic training under the direct supervision of an Approved Clinical Instructor/ Clinical Instructor with emphasis on patient care and the safe and appropriate use of skills and techniques.

AT 531 Clinical Anatomy II (3 cr)
Theory and practice of clinical anatomy as it pertains to the head, neck and upper extremity through the thoracic spine. 2 hours lecture/ 2 hours lab.

AT 532 Evaluation and Diagnosis of Injuries and Illnesses II (4 cr)
Theory and practice of musculoskeletal evaluation and diagnosis as it pertains in the lower extremity through the thoracic spine. 3 hours lecture/ 3 hours lab.

AT 533 Applied Rehabilitation Techniques (3 cr)
Theory and practice of rehabilitation techniques as applied to individual physical pathologies. 2 hours lecture / 2 hours lab.

AT 534 Therapeutic Modalities II (2 cr)
Theory and practice of therapeutic modalities including electrotherapy. 2 hours lecture/ 2 hours lab.

AT 535 Seminar in Athletic Training (1 cr)
Seminar addresses a year one comprehensive exam process. All topics learned in the first year of the program are eligible for testing.

AT 536 Research Methods & Statistics II (3 cr)
Advanced research methods and statistics will be discussed.

AT 538 Advanced Human Biomechanics (3 cr)
Advanced biomechanics theory and practice related to injury pathology and functional performance. (3 hours lecture).

AT 539 Advanced Exercise Physiology (3 cr)
Advanced exercise physiology as related to training, conditioning, prevention of injuries and illnesses, as an adjunct to treatment of certain disease states. 2 hours lecture / two hours lab.

AT 540 Pharmacology for Athletic Trainers (3 cr)
Clinical pharmacology for athletic trainers as it relates to athletic training educational competencies. 3 hours lecture.

AT 541 Seminar in Athletic Training II (2 cr)
Seminar addresses a year two comprehensive exam process. All topics learned in both years of the program are eligible for testing.

AT 542 Research Presentation (1 cr)
MSAT students will present their research findings to the group of faculty and students. All presentations will be graded by the faculty and be accepted or rejected.

AT 547 Critical Issues in Athletic Training Clinical Practice (3 cr)
This course prepares students to recognize challenges and develop strategies for solving issues common in AT clinical practice.
Prereq: Permission

AT 550 Clinical Education III (2 cr)
Practice of athletic training clinical skills under the direct supervision of an Approved Clinical Instructor with emphasis on the Level II clinical educational competencies. 4 hours lab.

AT 551 Clinical Experience III (4 cr)
Clinical practice in athletic training under the direct supervision of an Approved Clinical Instructor/ Clinical Instructor with emphasis on patient care and the safe and appropriate use of skills and techniques. 4 credits.

AT 552 Clinical Education IV (2 cr)
Practice of athletic training clinical skills under the direct supervision of an Approved Clinical Instructor with emphasis on the Level II clinical educational competencies. 4 hours lab.

AT 553 Clinical Experience IV (4 cr)
Clinical practice in athletic training under the direct supervision of an Approved Clinical Instructor/ Clinical Instructor with emphasis on patient care and the safe and appropriate use of skills and techniques.

AT 587 Prevention and Health Promotion in Athletic Training (3 cr)
This course prepares AT students to develop and implement strategies to prevent the incidence and/or severity of injuries and illnesses and optimize patients overall health quality of life.
Prereq: Permission

AT 606 Professional and Post-Professional Education in Athletic Training (3 cr)
This course is designed to introduce historical background of professional and post-professional education for health care professions. Theoretical foundations and models of health care education will be compared and contrasted. The impact of educational models to health care will be explored. Development of criteria to govern the practicing professional in their chosen residency will be accomplished.
Prereq: Permission

AT 610 Seminar in Athletic Training I (3 cr)
Selected readings from peer reviewed articles will be examined and discussed. Translation of research findings to current clinical practice will be emphasized.
Prereq: Permission

AT 611 Seminar in Athletic Training II (3 cr)
Selected readings from peer reviewed articles will be examined and discussed. Translation of research findings to current clinical practice will be emphasized.
Prereq: Permission

AT 620 Research Methods in Athletic Training I (3 cr)
This course introduces common research performed in Athletic Training. Development of in-depth understanding in areas and types of research underlying quantitative research design will be explored. Introduction to critiquing literature for the purpose of developing a theoretical framework will be included.
Prereq: Permission

AT 621 Research Methods in Athletic Training II (3 cr)
This course introduces Statistical methods employed in clinical research. Topics including statistical terminology, measures of central tendency, Hypothesis testing and common parametric tests will be the content for the course.
Prereq: Permission

AT 622 Advanced Action Research in Athletic Training (3 cr)
This course is a continuation of clinical research in athletic training and advances the students understanding of research methods in action research.
Prereq: AT 620 and AT 621

AT 623 Qualitative Methods and Research Design in Athletic Training (3 cr)
This course introduces common qualitative methodologies and survey research design in AT.
Prereq: AT 620, AT 621, and AT 622

AT 624 Quantitative Methods and Statistics in Athletic Training (3 cr)
This course is a continuation of clinical research in athletic training and advances the students understanding of quantitative research methods and statistics utilized in health professions.
Prereq: AT 620, AT 621, AT 622, and AT 623

AT 625 Dissertation of Clinical Practice Improvement: Analysis and Dissemination of Action Research Project (3 cr)
This continues the process of action research in clinical practice. Data analysis of the student's research will be performed. Introduction to manuscript writing, dissemination of knowledge in written, oral and poster presentation and a focus on journal review will be the context for this course. Student will successfully present their findings and prepare manuscript in journal ready format.
Prereq: AT 620, AT 621, AT 622, AT 623, and AT 624

Art 488 Faculty Directed Internship (1-3 cr, max 6)
Open only to art majors. Art faculty directed work on a professional project.
Prereq: successful completion of one 300-level studio sequence (6 cr), and advisor and directing faculty approval.

Art 490 BFA Art/Design Studio (6 cr, max 12)
Open only to BFA Studio Art and Design majors. Intensive tutorial studio closely monitored by all the faculty, culminating in development of a portfolio and a professional exhibition. Outside lec and special events may be assigned. Twelve formal hrs of studio a wk plus outside work to equal 18 hrs of involvement a wk; field trips and guest lectures may be required.
Prereq: Senior standing and completion of 15 cr in 300-level art courses with a minimum grade of C and a minimum GPA of 2.75

Art 491 Information Design (3 cr, max 9)
Project-based course in theory and practice of the design of information and information visualization for use in research, teaching, and outreach. Interdisciplinary teams of students, faculty and staff will develop and produce systems that communicate complex ideas with clarity, precision, and efficiency, using the most appropriate presentation tools.
Prereq: Junior standing

Art 495 BFA Senior Thesis (2 cr, max 4)
Open only to B.F.A. Art and Design majors who have been admitted to the professional program through the BFA Art and Design Review. BFA majors take 2 semesters. Preparation of thesis, portfolio, and senior exhibition.
Prereq: Senior standing and completion of 15 cr in 300-level art courses with a minimum grade of C and a minimum GPA of 2.75

Art 497 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission

Art 498 (s) Internship (1-12 cr, max 12)
Graded P/F. Open to art majors only; no more than 6 cr may be counted toward art degree requirements. Work with professional artists.
Prereq: One 300-level studio sequence (6 cr) and permission of deptartment chair

Art 499 (s) Directed Study (1-3 cr, max 9)
Individual study areas selected by the student and approved by the faculty; it is the student's responsibility to select a study area and prepare a semester study program; the student contacts one of the art faculty who agrees to direct the study; it is the student's responsibility to initiate the study program and to maintain regular contact with the faculty member who has agreed to direct the study.
Prereq: Completion of one 300-level studio sequence (6 cr) and Permission

Art 500 Master's Research and Thesis (cr arr)

Art 504 (s) Special Topics (cr arr)

Art 505 (s) Professional Development (cr arr)
Professional development and enrichment of certificated school personnel. Credit earned will not be accepted toward grad degree program, but may be used in a fifth-year program. Additional projects/assignments reqd for grad cr.

Art 507 (s) Art Seminar (3 cr, max 6)
Open only to art majors. Seminar in professional art concerns: guest artist programs, University Gallery activities, including field trips. One 2-hr seminar a wk and assigned work.

Art 508 (s) Readings in Art and Design (3 cr)
Exploration and analysis of issues surrounding contemporary and historical practices of artistic production. Open to all graduate students. Seniors with a sufficient GPA or higher may enroll per UI catalog and College of Graduate Studies requirements with instructor permission.

Art 510 Gallery (1-3 cr, max 6)
Descriptive analysis of gallery functions; hands-on student participation installing, packaging art works for shipping, lighting, promotions, advertising and marketing; speakers series of professionals in the field or allied areas; e.g., gallery directors, artists as presenters/installers, professional art movers.
Prereq: Permission of UI Gallery director

Art 515 (s) Art Faculty Studio (3-6 cr, max 12)
Open only to art majors. Studio research taken from the entire art faculty; students are required to arrange at least two studio critiques/faculty each semester.

Art 516 (s) MFA/MAT Art Studio (3-6 cr, max 9)
Open only to MFA/MAT art majors. Studio research taken from two or more art faculty members.

Art 520 (s) Studio Workshops (1-3 cr, max 6)
Open only to art majors. Specialized studio experience; offered by art faculty members, faculty groups, and/or guest artists.

Art 521 (s) MFA/MAT Individual Critique (3 cr, max 9)
Open only to MFA/MAT art majors. Studio research taken from individual art faculty members; individual instruction and critiques. One hr a wk critique session and 8 hrs a wk of individual studio research.

Art 570 Internet Portfolio Development (3 cr)
Preparation of an online portfolio suitable for critiques and reviews. Limited to students admitted to a graduate Art & Design degree program.

Art 590 (s) MFA Thesis Exhibition (4-8 cr, max 20)
Open only to MFA majors. Studio research directly related to preparation of MFA "Exhibition and Statement."

Art 597 (s) Practicum (3 cr, max 6)
Open only to art majors. Classroom assistance in teaching and preparation of course materials; conducted under faculty supervision. Normally requires 4-6 hrs a wk in class and assigned work.
Prereq: Permission of individual faculty and art graduate coordinator

Art 598 (s) Internship (1-6 cr, max 6)
Open only to art majors. Work with professional artists.
Prereq: Permission of major professor and department chair

Athletic Training Courses

Damon D. Burton, Interim Dept. Chair, Dept of Movement Sciences (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

AT 506 Clinical Anatomy I (3 cr)
Theory and practice of clinical anatomy as it pertains to the lower extremity through the thoracic spine. 2 hours lecture/ 2 hours lab.

AT 507 Care and Prevention of Injuries and Illnesses (3 cr)
Theory and practice of recognition, treatment, and prevention of injuries and illnesses. 2 hours lecture/ 2 hours lab.

AT 508 Evaluation and Diagnosis of Injuries and Illnesses I (4 cr)
Theory and practice of musculoskeletal evaluation and diagnosis as it pertains in the lower extremity through the thoracic spine. 3 hours lecture/ 3 hours lab.

AT 509 Principles of Rehabilitation (3 cr)
Theory and practice of the scientific foundations of musculoskeletal rehabilitation. 2 hours lecture / 2 hours lab.

AT 510 Therapeutic Modalities (2 cr)
Theory and practice of therapeutic modalities including thermotherapy, cryotherapy, and mechanical modalities. 2 hours lecture/ 2 hours lab.

AT 511 Ethics and Administration in Athletic Training (3 cr)
Theory and practice of ethics and administration in athletic training.
Prereq: Permission

AT 512 Research Methods & Statistics I (3 cr)
Theory and application of research methods for the health professions including basic statistical analysis. 3 hours lecture.

AT 513 General Medicine for Athletic Trainers (3 cr)
Theory and practice of general medical conditions related to athletic training. 3 hours lecture.

AT 514 Psychology of Injury and Referral (3 cr)
Theory and practice of the psychology of injury and referral in Athletic Training.

AT 515 Research Proposal (3 cr)
Students will submit a master's project proposal with an authorized faculty mentor and will be approved by a faculty committee.

Art 271 Interaction Design I (3 cr)
Introduction to interactive design methodologies, including usability strategies and best practices for interaction design. Various industry standard software and Open Source Tools will be introduced. Relevant industry standard programming languages will be covered throughout semester. Exercises and projects assigned will address production project workflows including: project proposal, mind mapping, wireframes & flowcharts, layout design, and technical development. Recommended Preparation: Basic knowledge of digital design software or Art 216 (strongly recommended).

Art 272 Interaction Design II (3 cr)
Introduction to time-based (narrative) design strategies and how they are utilized as tools of communication in interaction design. Analysis of various case studies that use narrative story telling as a means to communicate information. Industry standard Digital Design and Motion Design software will be introduced. Demos and topic discussion including a wide variety of time-based mediums (video, animation, motion design, stop-motion). Recommended Preparation: Basic knowledge of digital design software or Art 216 (strongly recommended).

Art 280 Understanding Photography (3 cr)
Basic skills of camera operation; emphasis on image design and creative techniques; lec topics include exposure, lenses, composition, filters, and films. 35mm adjustable camera required, plus additional costs for photographic materials. Two lec and one 3-hr recitation a wk.

Art 299 (s) Directed Study (cr arr)

Art 302 Modern Art and Theory (3 cr)
study of the principal artistic movements and theories in modern art from c. 1880 to World War II. Beginning with late-nineteenth-century modernism, the course closely examines the historical, societal, cultural, philosophical, and theoretical frameworks from which modern art and theory emerged. Modernist movements to be considered include, Neo-impressionism, Symbolism, Fauvism, German Expressionism, Futurism, Cubism, Dada, and Surrealism, among others.

Art 303 Contemporary Art and Theory (3 cr)
A survey of the principal artists, movements, theories, and artistic strategies since World War II in Europe and America. Important movements examined include the New York School, Neo-dada, Post-Painterly Abstraction, British and American Pop, Minimalism, Conceptual art, Earthworks and Environments, Performance Art, Neoexpressionism, and the various approaches within contemporary art.

Art 313 History and Theory of Modern Design II (3 cr)
Study, analysis, and critique of design history and theory from 1945 to the present. Historical and theoretical analysis of the emergence of the industrial, product, graphic, and information design professions in America and Europe, and the relationship between design, corporations, and global products. Other topics under consideration include Swiss design, the New York School and the American poster movement; the emergence of Japanese design; semiotics and design; postmodernism and design; and design and new media.
Prereq: Art 213

Art 321 Graphic Design Concepts (3 cr, max 6)
Advanced design problems that center on individual development and the exploration of contemporary design issues. The conceptual potential of words and images is emphasized. Two 3-hr studios a wk and assigned work.
Prereq: Art 221 and 222, or Permission

Art 322 Graphic Design Studio (3 cr, max 6)
Graphic problem solving in the community environment; client interaction, project presentation and production techniques for the graphic designer. Two 3-hr studios a wk and assigned work.
Prereq: Art 221 and 222, or Permission

Art 323 History of Typography (3 cr)
History and Theory of Typography: Historical and theoretical survey of typography and graphic technologies from the invention of writing to the present. The course begins with the study of writing before the printing press and continues detailing the origin of European typography and design for printing through the Industrial Revolution and the invention of photography. The study of typography in the modernist era follows, including close examination of Bauhaus and *Neue Typographie*, the Swiss *Neue Graphik* and subsequent developments in America and abroad. A detailed study of the practical, historical, and theoretical implications of digital typography will conclude the course.

Art 330 Intermediate/Advanced Painting (3 cr, max 9)
Intermediate painting in oil or acrylic; emphasis on color assignments and aesthetic problems. Advanced students emphasize individual conceptual approaches. Two 3-hr studios a wk and assigned work.
Prereq: Art Core and Art 231 or Permission

Art 340 Intermediate/Advanced Sculpture (3 cr, max 9)
Intermediate level studio environment with emphasis on promoting tool safety, material exploration, creative autonomy, portfolio development, and comprehension of historical and contemporary issues relevant to studio projects and sculpture discourse. Two 3-hr studios a wk and assigned work.
Prereq: Art Core, Art 241 or Permission

Art 350 Intermediate/Advanced Printmaking (3 cr, max 9)
Advanced printmaking; further exploration of printmaking methods and materials; emphasis on individual development in conceptual and technical abilities. Two 3-hr studios a wk and assigned work.
Prereq: Art Core and Art 251 or Permission

Art 370 Intermediate/Advanced Interaction Design (3 cr, max 9)
Advance analysis of both design and development techniques, and strategies used in various interactive mediums. Relevant industry standard programming languages will be introduced throughout semester. Discussions, exercises and projects assigned will address interactive design best practices, trends and current industry standards.
Prereq: Art 271 or Art 272 or Permission

Art 380 Digital Imaging (3 cr)
Computer imaging with emphasis on visual problem solving and design; development of professional techniques with industry standard software.
Prereq: Art 216

Art 382 History of Photography (3 cr)
History and development of photography in its various forms; photography as a creative art form and a reflection of society; selected slide lecs.

Art 390 Mixed Media (3 cr, max 9)
Understanding synthesis of different media in context to a work of art by using two or more techniques; tutorial-based studio, production to occur outside of class. Outside lec and special events may be assigned.
Prereq: Art Core, 9 cr of 200-level art studios, and 6 cr of 300-level art studios or Permission

Art 400 (s) Art Seminar (1-3 cr, max 6)

Art 404 (s) Special Topics (cr arr)

Art 407 New Media (3 cr)
Study, analysis, and critique of the cultural, technological, and aesthetic dimensions and practices of new media. The course entails a detailed examination of the genealogy, historical and cultural ramifications of the computer as an expressive medium. We will study the history of the computer and the digital, from its pre-conception in literature and science, to its various manifestations today in information, political, aesthetic, technological, and cultural contexts. Throughout the course students will analyze and evaluate the constantly changing provocations of new media in terms of communication, language, art, design, architecture, and the general ontological issues of time and space.

Art 409 Visual Studies (3 cr)
Examination, evaluation, and critique of the expanding interdisciplinary field of visual studies. Visual practices, technologies, communicative, and epistemological models and structures are studied in terms of their implications for art, design, architecture, and cultural and scientific practices and production in general. The historical, theoretical, and aesthetic provocations of visualization in such varied fields as biology, medicine, law, forensics, genetics, and information technologies is addressed as well as the cultural dimensions of the social ubiquitousness of the visual in general. Recommended preparation: Art 205.
Prereq: 12 credits of Art History/Visual Culture courses

Art 410 Professional Practices (2 cr)
Professional issues for studio artists and designers including obligations, duties, and responsibilities in practice, self-promotion, and career planning. Includes analysis of gallery operations.
Prereq: Advanced standing or Permission

case studies students will interpret the physical structure of urban contexts and forces that impact their formal transformation over time. Field Trip and field documentation activities required. Recommended preparation: Arch 483, background in architecture or the related fields of landscape architecture, geography and anthropology. (Spring only)

Arch 597 (s) Practicum (cr arr)

Arch 598 (s) Internship (1-3 cr, max 6)
Work in an architectural office under the supervision of a licensed architect.
Prereq: Permission

Arch 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Art Courses

Sally G. Machlis, Coordinator, Art and Design (116 Art and Arch. 83844-2471; phone 208/885-7837)

Note: On registering for a studio course offered in this department, the student agrees that the department may retain work completed by the student.

Vertically-related courses in this subject field are: Art 111-112-211-390, Art 221-222-321-322, Art 231-330, Art 241-340, Art 251-350, Art 271-272-370.

Art 100 World Art and Culture (3 cr)
An introductory historical survey of art and culture in Western and non-Western contexts. Major cultural sites, monuments, image traditions and technologies will be examined alongside the historical, religious, political, economic, and aesthetic contexts which produced them. Cultures studied include China, Islam, Pre-Columbian civilizations in North and South America, Africa, India, Japan, Oceania, the ancient Near-East, Greece and Rome, Western Medieval, the European Renaissance, and Western and non-Western Modernism. A theoretically comparative approach will be followed, towards an understanding of both similarities and differences between Western and non-Western cultural production. 2 hours of lecture with one 2-hour lab/recitation.

Art 110 Integrated Art and Design Communication (2 cr)
Introduction to the history, theory, language, principles and processes of art and design. Lectures, readings and writing assignments are connected to the studio experiences in Art 121.

Art 111 Drawing I (2 cr)
Freehand drawing; emphasis on expressive use of materials. Two 2-hour studios a wk.

Art 112 Drawing as Integrated Design Thinking (2 cr)
Emphasis on drawing as a form of thinking and communication in art and design disciplines; studio problems to familiarize students with strategies using drawing for analogy, translation, imagination and abstraction. Two 2-hour studios a week.

Art 121 Integrated Design Process (2 cr)
Introduction to design process as it relates to art and design disciplines; studio problems to familiarize students with basic design process, principles and elements of design. Studio experiences, readings, and written analysis challenge students to explore basic two- and three-dimensional design and color. Two 2-hour studios a week and assigned work; attendance at outside events (lectures, symposiums, Prichard and University Gallery openings).
Prereq or Coreq: Art 110

Art 122 Design Process II (3 cr)
Continuation of study of design process; studio problems challenge students to apply elements and principles of design to studio problems that include traditional and experimental concepts of design. Studio experiences, readings, and written analysis allow for further exploration of two- and three-dimensional design as well more complex concepts such as context, time, and light. Two 3-hr studios a wk and assigned work; attendance at outside events (lecs, symposiums, Prichard and Univ Gallery openings).
Prereq: Art 121
Prereq or Coreq: Art 110

Art 200 (s) Seminar (cr arr)

Art 204 (s) Special Topics (cr arr)

Art 205 Visual Culture (3 cr)
An introduction to the interdisciplinary approaches in art history, visual studies, film and media studies, sociology, and the general field of cultural studies that constitute the field of visual culture. Visual Culture addresses the societal, cultural, economic, aesthetic, and political dimensions and provocations of images and the visual in our contemporary world. This course offers a broad introduction to the most important critical and theoretical methods for the analysis, critique, and evaluation of visual culture.

Art 208 Italian Renaissance Art and Culture (3 cr)
Same as RelS 208. A study of painting, sculpture, architecture, and art theory in Italy from c. 1350-1600. The art of Giotto, Duccio, Brunelleschi, Ghiberti, Alberti, Donatello, Fra Angelico, Fra Filippo Lippi, Andrea Mantegna, Botticelli, Leonardo da Vinci, Raphael, Michelangelo, Bramante, Palladio, Giorgione and Titian, among others, is examined along with the broader components of Italian Renaissance culture.

Art 211 Drawing III (3 cr)
Life drawing, work with various media to develop an understanding of the human figure. Two 3-hr studios a wk and assigned work.
Prereq: Art 111-112 or Permission

Art 213 History and Theory of Modern Design I (3 cr)
This course explores the historical and theoretical components of design from the Industrial Revolution to WWII. Products, furniture, textiles, packaging, advertising, industrial design, and graphic design will be studied in terms of their historical development, theoretical components, and their translation and application within contemporary concepts of design in various professional fields. Throughout the course we will critically examine and address the theoretical and critical vocabulary of contemporary design. Topics considered include industrialization and modernism; design and propaganda; design and the modernist avant-garde; design and nationalism; design, multinational corporations, and global economics; design, promotion, profession, and management; the politics and economics of design, and design and advertising.

Art 216 Digital Tools (3 cr)
Introduction to professional design, development, and production workflows related to various aspects of digital design. Demos and lectures cover various industry standard design software. Two 2-hr studios a week and assigned work.
Prereq: Art 110 and Art 121; or Permission

Art 221 Introduction to Graphic Design (3 cr)
Creative problem solving with emphasis on 2-D solutions to conceptual problems; translation of concept into form using word, image, and layout; introduction to graphic design theory. Two 3-hr studios a wk and assigned work.
Prereq: Art 121-122 or Permission

Art 222 Introduction to Typography (3 cr)
Continued translation of concept into form with emphasis on typography, letterforms, and typographic syntax. The potential of type as image is emphasized; introduction to history and theory of typography. Two 3-hr studios a wk and assigned work.
Prereq: Art 121-122 or Permission

Art 231 Painting I (3 cr)
Intro to basic fundamentals of painting; investigating color and techniques. Two 3-hr studios a wk and assigned work.
Prereq: Art 111 or Permission

Art 241 Sculpture I (3 cr)
Introductory studio environment with emphasis on basic design principles and techniques, tool safety, material exploration, and the development of unique personal expressions in three dimensions. Two 3-hr studios a wk and assigned work.

Art 251 Printmaking I (3 cr)
Intro to basic printmaking techniques, relief, intaglio, and monotype; emphasis on sensitivity to materials and individual development.

Art 261 Ceramics I (3 cr)
Intro to clay-forming techniques, wheel-thrown and hand-built forming methods, ceramic design concepts, development and articulation of individual design criteria, glaze experimentation; fundamental types of ceramic ware; kiln and studio procedures. Two 3-hr studios a wk and assigned work.

Arch 498 (s) Internship (cr arr)

Arch 499 (s) Directed Study (cr arr)

Arch 500 Master's Research and Thesis (cr arr)

Arch 501 (s) Seminar (cr arr)

Arch 502 (s) Directed Study (cr arr)

Arch 503 (s) Workshop (cr arr)

Arch 504 (s) Special Topics (cr arr)

Arch 510 Graduate Project Seminar (3 cr)
Specialized research and program writing in preparation for Arch 556 as well as schematic design proposals.
Prereq or Coreq: Arch 553

Arch 511 Native American Architecture (3 cr)
See Arch J411/J511.

Arch 512 Identity and Place in Global Space (3 cr)
A seminar focused on contemporary issues related to architecture in an increasingly globalized world. Themes, theories, and issues may include symbolic architecture and identity, colonization/postcolonialism/neocolonialism, modernity and tradition, space and power, themed spaces/simulacra, ethnoburbs and globurbs, and transnational planning processes. Recommended Preparation: Arch 386.

Arch 513 Architectural Theory: Modernism into Postmodernism (3 cr)
This seminar provides an overview of architectural theory focusing primarily on work done after 1968. Reading and discussion will center on topics such as structuralism, post-structuralism, phenomenology, semiology, Marxism, as well as other cultural perspectives as they prove germane to understanding Modern, Postmodern, and contemporary architectural discourse and practice. Recommended Preparation: Graduate standing.

Arch 520 Architectural Research Methods (3 cr)
Philosophy of research in architecture, research design, data gathering and interpretation, and thesis preparation.

Arch 521 China Program Preparation Seminar (2 cr)
See Arch J421/J521.

Arch 522 China's Urbanization Seminar (2 cr)
See Arch J422/J522.

Arch 523 Cultural & Ethical Issues in Global Architectural Practice (2 cr)
See Arch J423/J523.

Arch 552 Alternative Graduate Design Experience (4-6 cr)
Independent exploration of specific issues in architecture and/or urban design. An application, including Independent study plans and credits must be approved by the Department during the semester before the proposed study. Recommended Preparation: Bachelor of Science in Architecture.

Arch 553 Architectural Design VII (6 cr)
Comprehensive design of an architectural project including pre-design, schematic design and design development. Demonstration of ability to develop details and systems in support of design concepts. Three 3-hr studios a wk and assigned work; field trips reqd at student expense outside of scheduled hours; some class critique sessions will meet outside of scheduled hours.
Coreq: Arch 568

Arch 554 Architectural Design VIII (6 cr)
Topical studio will explore specific questions in architecture/ urban design in depth. Three 3-hr studios a wk and assigned work; field trips may be required at student expense outside of scheduled hours; some class critique sessions will meet outside of scheduled hours.

Arch 556 Architectural Design IX (6 cr)
Graduate terminal project - a self-directed architectural design study with faculty consultation within a studio context. Students demonstrate their capacity to apply appropriate programming and research methods in pursuit of a focused design topic. The project culminates with a project book prepared by the student.
Prereq: Arch 510 and Arch 553

Arch 568 Technical Integration in Design (2 cr)
Strategies for integrating structure, enclosure, services, site and interior systems in the design and development of an architectural concept. Recommended preparation: completion of required building and environmental technologies courses.
Prereq or Coreq: Arch 553

Arch 570 Natural Lighting (3 cr)
Natural lighting seminar/workshop including hands-on experience with physical and digital modeling techniques. The course includes a term-long investigation of the nature of Palouse light, and a redesign problem of a real space on-campus or nearby, which will be measured, modeled, redesigned, predicted, redesigned, and evaluated.

Arch 571 Building Performance Evaluation (3 cr)
This case-study based course focuses on evaluation methods for occupied buildings. A full-range of physical measurement and user surveying techniques are presented and employed on local buildings.

Arch 572 Integrated Design Seminar (1 cr, max 4)
This course is modified each semester by hosting outside expert lecturers in topics related to integrated energy design in buildings and inviting professionals and students together for an interactive learning experience. Every other week, the instructor hosts a discussion session with students based upon the presented content from the previous week.

Arch 573 Daylight Design and Simulation (3 cr)
This course teaches the fundamental principles for daylighting design in buildings through building tours, case studies, geometric approaches, as well as physical modeling and digital simulation methods. Students will understand implications of design decisions on visual comfort, thermal comfort and performance, energy efficiency and will have the skills to scientifically asses these factors during design stages.

Arch 574 Building Performance Simulation for Integrated Design (3 cr)
Same as ME 571. This course focuses on design decisions that impact energy, thermal, visual and acoustic comfort with a strong emphasis on building simulation tools. This course provides students with the understanding of the nature of building thermal comfort, building envelope behavior, ventilation requirements, indoor air quality, passive cooling systems, energy conservation, and the importance of iterative building simulation in achieving high performance buildings.

Arch 575 Professional Practice (3 cr)
See Arch J475/J575.

Arch 580 British Green Architecture (2 cr)
Preparation for students who will participate in the summer studies abroad program in London, including basic research on green building in the UK, helping plan the itinerary. All logistical preparations for studies abroad will be discussed and students are familiarized with both green approaches to design and British culture. (Spring only)

Arch 581 Eco Urban Design (3 cr)
Introduction to urban design including urban space and form, building configuration and form, transportation, ecological, environmental and social considerations and issues. Three hours per wk and assigned work; field trips may be reqd at student expense; some class sessions will meet outside of scheduled hours. Recommended Preparation: Arch 483. (Fall only)

Arch 582 Housing Typologies and Issues (3 cr)
Introduction to housing typologies and issues in the urban context, considering aspects of physical, infrastructural, sociological, economic, cultural, historical, political, regulatory environments and construction. Three hours per wk and assigned work; field trips may be reqd at student expense; some class sessions will meet outside of scheduled hours. Recommended Preparation: Arch 483.

Arch 583 Sustainable Development (3 cr)
This seminar explores concepts and strategies for sustainable development that are holistic, transdisciplinary, and integrated. Scale and scope of critical inquiry ranges from the local Palouse region to global contexts with particular emphasis on impacts imposed by developed nations. Weekly readings, student led discussion and team research projects require active engagement. (Spring, alt/yrs)

Arch 584 Urban Design and Morphology (3 cr)
Seminar style course that explores the theory, research, documentation and interpretive practices of urban morphology (study of urban form) and application to the design and planning of urban environments. Through

Arch 354 Architectural Design IV (6 cr)
Continued development of architectural projects and design process that cultivate understanding of the properties of materials and building tectonics. Three 3-hr studios a wk and assigned work; field trips will be reqd at student expense outside scheduled hours; some class critique sessions will meet outside of scheduled hours.
Prereq: Arch 353

Arch 367 Building Technology I - Steel Structures (3 cr)
Steel structures. Expansion of basic statics and bending theory to include two-dimensional systems and loading as well as more complicated beam loading and support configurations. Analysis of statically determinate steel structures by ASD and LRFD.
Prereq: Math 143 and Phys 111/111L

Arch 385 History of Architecture I (3 cr)
A survey of global architecture and urban design through the seventeenth century, considered within its diverse climatic, ecological, technological, socioeconomic, public health, and cultural contexts. Recommended Preparation: Arch 151.

Arch 386 History of Architecture II (3 cr)
A historical survey of global modern architecture from the late Eighteenth and Nineteenth-centuries to the development of the Modern Movement in the Twentieth-Century in relation to rapid industrialization and the intellectual culture of the Enlightenment, Romanticism, Historicism, Modernism, and Post-Modernism; Topics include: the architecture of Neoclassicism, Victorian Gothic, industrial technology, the Arts & Crafts movement, and the Modern Movement.

Arch 400 (s) Seminar (cr arr)

Arch 403 (s) Workshop (cr arr)

Arch 404 (s) Special Topics (cr arr)

Arch 410 Sketching for Architecture (2 cr)
Instruction in intermediate through advanced architectural sketching, painting, and place-recording techniques. A variety of media techniques will be employed, including graphite, charcoal, colored pencil, pen & ink, and watercolor. The majority of work will be completed in class, with additional homework assignments outside class and on field trips. Recommended Preparation: Basic sketching abilities, as developed in Arch 154 and subsequent architectural design studios.

Arch J411/J511 Native American Architecture (3 cr)
Same as AIST 411. An exploration of Native American architecture in North America, including ancient, historic, and contemporary buildings and settlements within their diverse social, cultural, and physical contexts. Additional assignments required for graduate credit. (Spring only)

Arch J421/J521 China Program Preparation Seminar (2 cr)
Seminar course preparing students for summer study abroad program in China. This course will introduce travelling, money management, safety, visa application, and some basic cultural introductions. Also, this class will introduce the academic courses to be undertaken in China and prepare research data collection. Required for all students enrolled in the China program. (Spring only)
Prereq: Arch 353 or LArc 353

Arch J422/J522 China's Urbanization Seminar (2 cr)
Seminar course conducted in China, focusing on understanding the complicated challenges of China's urbanization and design strategies for urban development.
Prereq: Arch 354 or LArc 365

Arch J423/J523 Cultural & Ethical Issues in Global Architectural Practice (2 cr)
Study of the phenomenon of architectural practice under the impact of globalization using the market of China as an example. Focus on the development of model architectural practice in China as well as the associated social and cultural issues of global architectural practice.
Prereq: Arch 354 or LArc 365

Arch 430 Rome Preparatory Seminar (2 cr)
Seminar preparing students for summer study abroad in Rome, Italy. Introduces academic courses to be taken in Rome, and begins research and information-gathering tasks for Design Studio and Rome Design History courses. Also includes practical matters such as travel planning, money, safety, and basic language skills. (Spring only)

Arch 431 Rome Design History (2 cr)
Lecture course conducted in Rome, Italy, focused on the essential eras of Roman history related to design (art, architecture, urban planning, etc.): Republican & Imperial Rome; Early Christian Rome; Renaissance & Baroque Rome; the "Third Rome" of the Risorgimento and Mussolini; Contemporary Rome of the late-20th and early-21st Centuries.
Prereq: Arch 430

Arch 450 Architectural Programming (2 cr)
Introduction to basic principles and techniques of building programming. Recommended Preparation: Third or fourth year standing.
Prereq: Arch 353

Arch 453 Architectural Design V (6 cr)
Application of urban theory and appropriate responses to climatic factors to the resolution of architectural and planning and design problems in community or urban contexts. Interdisciplinary design encouraged. Three 3-hr studios a wk and assigned work; field trips reqd at student expense outside scheduled hours; some class critique sessions meet outside of scheduled hours.
Prereq: Arch 353 and Arch 354; or Permission

Arch 454 Architectural Design VI (6 cr)
Large architectural and/or urban design projects explore and integrate urban theory sustainable design, environmental control systems technology, human and cultural factors, and construction assemblies. Design in team/collaborative settings encouraged. Three 3-hr studios a wk and assigned work. Field trips at student expense are required and meet outside scheduled hours; some class critique sessions meet outside of scheduled hours.
Prereq: Arch 353 and Arch 354; or Permission

Arch 462 Building Technology II - Concrete (2 cr)
Concrete Structures. Statics/strengths, allowable stresses and `prescriptive' and `engineered' design approaches, factors of safety, ductility, Strength Design (LRFD) as applied to reinforced concrete structures.
Prereq: Arch 367 and RMat 365

Arch 463 Environmental Control Systems I (3 cr)
Principles and design of sustainable passive energy systems, mechanical heating and cooling systems, air quality, fire suppression and vertical transport. Three 1-hr lec a wk.
Coreq: Arch 463L

Arch 463L Environmental Control Systems I Lab (1 cr)
Laboratory to accompany the Arch 463 lecture. One 2-hour lab a week.
Coreq: Arch 463

Arch 464 Environmental Control Systems II (3 cr)
Principles and design of integrated natural and electrical lighting systems, water use and conservation systems, storm and waste water treatment and management, and acoustic systems as well as principles for and evaluation of sustainable architecture. Three 1-hr lec a wk.
Coreq: Arch 464L

Arch 464L Environmental Control Systems II Lab (1 cr)
Laboratory to accompany the Arch 464 lecture. One 2 hour lab a week.
Coreq: Arch 464

Arch 466 Building Technology III - Seismic Design (2 cr)
Lateral and dynamic loads on architectural structures, principles of design for wind and seismic resistance, high-rise structural systems.
Prereq: Arch 367 and RMat 365

Arch 567 Wellness and Design (2-3 cr)
Principles and exploration of the designed environment's impact on our health and sense of wellness. Special focus on how physical and aesthetic design elements can affect the body and mind. (Fall only)

Arch J475/J575 Professional Practice (3 cr)
Overview of professional standards and practices in the architecture and interior design professions. Including duties and responsibilities in practice (construction documents and contracts, code analysis, ethics, and professional organizations and alliances), project management, office administration, and comprehensive services; specification writing, unit costs, and building estimation. Additional assignments/projects required for graduate credit.

Arch 483 Urban Theory and Issues (3 cr)
History and theory of city planning and problems associated with urban growth.

analysis and beyond. Recommended Preparation: Anth 415 and 430. (Alt/yrs)
Prereq: Anth 231, 431, 432 and 449

Anth J462/J562 Human Issues in International Development (3 cr)
Anth 462 same as LAS 462. Interdisciplinary analysis of complex interaction between tradition and modernity in Third World society, and its attendant human predicament. Additional projects/assignments reqd for grad cr. (Alt/yrs)

Anth 496 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission

Anth 498 (s) Internship (cr arr)

Anth 499 (s) Directed Study (cr arr)

Anth 500 Master's Research and Thesis (cr arr)

Anth 501 (s) Seminar (cr arr)

Anth 502 (s) Directed Study (cr arr)

Anth 503 (s) Workshop (cr arr)

Anth 504 (s) Special Topics (cr arr)

Anth 509 Anthropological Field Methods (1-8 cr, max 8)
Individual field work in approved areas.
Prereq: Permission

Anth 510 Research Methods in Anthropology (3 cr)
See Anth J410/J510.

Anth 511 Human Evolution (3 cr)
See Anth J411/J511.

Anth 512 Human Races (3 cr)
See Anth J412/J512.

Anth 518 Anthropology of Tourism (3 cr)
See Anth J418/J518.

Anth 521 Contemporary Issues in Anthropological Theory (3 cr)
In-depth exploration of contemporary theoretical issues within anthropology.
Prereq: Anth 420 or equiv, or Permission

Anth 522 Plateau Indians (3 cr)
See Anth J422/J522.

Anth 528 Social and Political Organization (3 cr)
See Anth J428/J528.

Anth 530 Introduction to Archaeological Method and Theory (3 cr)
See Anth J430/J530.

Anth 531 Historical Archaeology (3 cr)
See Anth J431/J531.

Anth 532 Historical Artifact Analysis (3 cr)
See Anth J432/J532.

Anth 533 Applied Cultural Resource Management (3 cr)
See Anth J433/J533.

Anth 536 North American Prehistory (3 cr)
See Anth J436/J536.

Anth 543 Plateau Prehistory (3 cr)
See Anth J443/J543.

Anth 549 Lithic Technology (3 cr)
See Anth J449/J549.

Anth 551 Forensic Anthropology (3 cr)
See Anth J451/J551.

Anth 562 Human Issues in International Development (3 cr)
See Anth J462/J562.

Anth 597 (s) Practicum (cr arr)

Anth 598 (s) Internship (cr arr)

Anth 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Architecture Courses

Anne L. Marshall, Interim Program Head of Architecture (207 Art and Arch. South 83844-2451; phone 208/885-6781; arch@uidaho.edu).

Note: On registering for a studio course offered in this department, the student agrees that the department may retain work completed by the student. The department will make retained work available to the student for photographing.

Arch 141 Design Discovery Program (1 cr)
The University of Idaho Design Discovery Summer Program is an intensive one week experience that offers prospective students a chance to experience the world of design. During the program, students gain a broad view of various design disciplines while developing graphic and design skills and building their portfolios. (Summer only)

Arch 151 Introduction to the Built Environment (2 cr)
Introduction to the built environment and the role of architecture, interior design, landscape architecture, urban design and planning in helping to shape its layers. Lectures, guest speakers, and readings will discuss the power of design to nourish the human spirit, support functional needs, and contribute to ecological and cultural sustainability. Attendance required at evening lectures by guest speakers and (3) topical seminars during the semester.

Arch 154 Introduction to Architectural Graphics (3 cr)
Introduction to architectural graphics; two 1-hour lecture sessions per week, plus two 1-hour studio sessions per week; weekly assigned drawing projects, readings, and sketchbook projects; periodic quizzes.

Arch 200 (s) Seminar (cr arr)

Arch 203 (s) Workshop (cr arr)

Arch 204 (s) Special Topics (cr arr)

Arch 243 Digital Design Tools for Architecture and Interior Design (2 cr)
Introduction to software programs for use in designing the built environment. Including but not limited to 3-D modeling. (8 weeks)
Prereq: Arch 154

Arch 244 Computer Aided Drafting and Modeling (2 cr)
Introduction to computer-aided drafting and modeling techniques and applications.
Prereq: Arch 154

Arch 253 Architectural Design I (3 cr)
Exploration and design of basic architectural components and ordering systems and creative resolution of basic architectural design problems while developing and refining presentation techniques. Two 2-hr studios a wk for the semester, accompanied by two 1 hr lectures/recitations a wk for the first quarter of the semester.
Prereq: Arch 154 or Permission

Arch 254 Architectural Design II (4 cr)
Same as ID 254. Basic integration of principles and concepts for architectural design, both interior & exterior. Two 3-hr studios a wk and assigned work.
Prereq: Arch 253 or Permission

Arch 266 Materials and Methods (3 cr)
Introduce physical and performance characteristics of material s; and concepts, conventions and processes of construction methods. Provide a foundation for subsequent courses in architectural technology and design.

Arch 299 (s) Directed Study (cr arr)

Arch 353 Architectural Design III (6 cr)
Architectural building design process with emphasis on structural technology, historic influences, universal design, basic code and site related issues. Three 3-hr studios a wk and assigned work; field trips will be reqd at student expense outside scheduled hours; some class critique sessions meet outside of scheduled hours.
Prereq: Arch 254 and 266, and by permission

Anth 251 Introduction to Physical Anthropology (3 cr)
Evidence for primate and human evolution; processes of racial diversification; techniques of physical anthropology; human population biology.

Anth 261 Language and Culture (3 cr)
Language as an aspect of culture; the relation of habitual thought and behavior to language.

Anth 299 (s) Directed Study (cr arr)

Anth 301 Introduction to Diversity and Stratification (3 cr)
See Soc 301.

Anth C323 Introduction to Museology (3 cr)
Theory and practice of science, history, and art museums. One 1-day and two 1/2-day field trips.

Anth 327 Belief Systems (3 cr)
Same as RelS 327. Method and theory of comparative anthropological study of religion.

Anth 329 North American Indians (3 cr)
Origins, physical types, languages, and cultures of North American Indians.

Anth 350 Food, Culture, and Society (3 cr)
See Soc 350.

Anth 400 (s) Seminar (cr arr)

Anth 403 (s) Workshop (cr arr)

Anth 404 (s) Special Topics (cr arr)

Anth 409 Anthropological Field Methods (1-8 cr, max 8)
Field training in archaeology and/or social anthropology.

Anth J410/J510 Research Methods in Anthropology (3 cr)
Designing, conducting, and reporting research in anthropology. (Spring only)
Prereq: Anth 420

Anth J411/J511 Human Evolution (3 cr)
Human origins in light of the fossil record and evolutionary theory. Additional projects/assignments reqd for grad cr. Recommended Preparation: Anth 100. Cooperative: open to WSU degree-seeking students.

Anth J412/J512 Human Races (3 cr)
Human population biology, dynamics of evolution, human ecology, and their relationship to problem of human racial variation. Additional projects/assignments reqd for grad cr. Recommended Preparation: Anth 100.

Anth J418/J518 Anthropology of Tourism (3 cr)
Across the globe, tourism has been touted as a route to economic sustainability and both national and local prosperity. As one of the largest and fastest growing industries in the modern world, tourism can supply wealth and growth opportunities to poverty stricken communities - but at what cost? In this course, we will examine both the advantages and disadvantages to a variety of forms of tourism: sex tourism, "primitive" tourism, heritage tourism, ecotourism, and nature tourism, to name a few. Additional work required for graduate credit.

Anth 420 Anthropological History and Theory (3 cr, max 9)
Historical development of anthropology along with theoretical debates as presented in the anthropological literature.
Prereq: Upper-Division standing

Anth J422/J522 Plateau Indians (3 cr)
Same as AIST 422 and RelS 422 An overview of historic and contemporary Indian cultures of the Plateau; oral traditions, ceremonial life, social organization, and subsistence activities; history of contact with Euro-American society. Two 1 to 2-day field trips reqd. Additional projects/assignments reqd for grad cr. Anth 422 is a cooperative course available to WSU degree-seeking students.

Anth 425 Society and Popular Culture (3 cr)
Same as Soc 425. An advanced interdisciplinary survey of the contemporary study of popular culture and its forms. Reviews contemporary theoretical approaches, empirical studies, and representative examples of critical issues and various forms including texts, cultural practices, and material culture. Focus on critical analysis and understanding the significance of popular culture to society and students' everyday lives.
Prereq: Soc 101

Anth 427 Racial and Ethnic Relations (3 cr)
See Soc 427.

Anth J428/J528 Social and Political Organization (3 cr)
Bases of social and political organization; kin based units; non-kin units; political units through primitive states. Additional projects/assignments reqd for grad cr.
Prereq: Upper-Division standing

Anth J430/J530 Introduction to Archaeological Method and Theory (3 cr)
Archaeological theory in anthropological perspective; current trends in method and theory of American archaeology. Additional projects/assignments reqd for grad cr.
Prereq: Anth 231 or Permission

Anth J431/J531 Historical Archaeology (3 cr)
Investigation of the techniques of historical archaeology as well as an introduction to historic material culture and the theories that inform historical archaeology research. Additional projects/assignments reqd for grad cr. Anth 531 is a cooperative course available to WSU degree-seeking students.
Prereq: Anth 100

Anth J432/J532 Historical Artifact Analysis (3 cr)
An overview and detailed study of the major classes of material culture commonly recovered on historical sites. Course emphasizes the identification of historical materials and introduction of a variety of analytical tools used in historical archaeology.
Prereq: Anth 230 or Anth 431 or Permission

Anth J433/J533 Applied Cultural Resource Management (3 cr)
Introduction to the practice of archaeology in the field of Cultural Resource Management. This course emphasizes and exposes students to skills needed in today's world of CRM. Additional projects/assignments reqd for grad cr.

Anth J436/J536 North American Prehistory (3 cr)
Theories, methods, and findings of prehistoric North American archaeology. Additional projects/assignments reqd for grad cr.
Prereq: Anth 231

Anth J443/J543 Plateau Prehistory (3 cr)
Prehistoric cultures, chronologies, and interrelationships within the interior Northwest. Additional projects/assignments reqd for grad cr.
Prereq: Anth 231 or Permission

Anth J449/J549 Lithic Technology (3 cr)
Manufacture and analysis of stone implements, theory of rock fracture, nonhuman productions of pseudo-artifacts. Additional projects/assignments reqd for grad cr.
Prereq: Anth 231 or Permission

Anth J451/J551 Forensic Anthropology (3 cr)
Observations and measurements of the human skeleton; variations based on age, sex, and race, and pathologies; identification of human skeletal material and other mammals. Additional projects/assignments reqd for grad cr. Three lec/lab sessions a wk. Recommended Preparation: Anth 251.

Anth 453 Archaeological Lab Techniques (3 cr)
This class is designed to offer students a complete range of archaeological laboratory techniques from analysis to final curation. All students will be involved in either curating a small archaeological collection, or processing artifacts for analytical purposes using basic laboratory skills. In addition, students will be expected to become knowledgeable about contemporary and/or ethical issues in conservation, e.g., whether or not to clean lithics and metal, deaccessioning collections, and NAGPRA, among other issues. Lastly, students will be encouraged to determine their role within the archaeological/anthropological community and develop a long term plan for how they will impact their respective fields in the future. Two lectures and 1 hour of lab a week. Recommended Preparation: Anth 231, 431, 432 and 449. (Alt/yrs)

Anth 454 Archaeological Field Techniques (Professional Internship) (1-6cr, max 6)
Internships will be arranged with Cultural Resource Management firms or Federal/State agencies and are designed to introduce students as professionals to the field of Cultural Resource Management in an extra-academic environment. Students will be expected to participate in all aspects of resource management from site documentation to artifact

Field trips may be incorporated should teaching opportunities arise though most instruction will be confined to the Physiology and Anatomy laboratory and classroom. (Fall only)
Prereq: AVS 109, Biol 115, and Animal and Veterinary Science major
Coreq: AVS 371

AVS J409/J509 Growth Physiology Inquisition (2 cr, max arr)
This course will develop skills in critical review of literature in Growth Physiology. Students will study set journal articles describing original research and present their review to the study group in a team participation format. Active participation of the study group, led by the primary reviewer is an essential component of the course. Graduate students are encouraged to take the course multiple times (e.g., each semester). Student performance is evaluated using a six criterion Rubric. For undergraduate credit, students are evaluated across 2-3 achievement levels per criterion. For graduate credit, students are evaluated across 4 achievement levels per criterion as shown in the Course Outline. Recommended Preparation: AVS J451/J551.

AVS J411/J511 Ruminant Nutrition (3 cr)
Intro to anatomy of digestive tract of ruminant; focus on ruminal and postruminal carbohydrate, protein, and lipid metabolism; ruminal bacteria, protozoa and fungi, microbe-microbe interactions and their role in nutrients utilization; compartmentation of the rumen and microbial protein synthesis; practical aspects of ruminant nutrition and intro to current feeding systems; research techniques in studying ruminal degradation and digesta kinetics. Additional projects/assignments reqd for grad cr. (Alt/yrs)
Prereq: Permission

AVS 450 Issues in Animal Agriculture (1 cr)
The capstone experience for seniors in AVS; students will present information on selected topics and propose solution to current problems; emphasis on problem solving using integration of information across disciplines.
Prereq: Senior standing

AVS J451/J551 Endocrine Physiology (3 cr)
Structure and physiology of glands of internal secretion and their hormonal effects on processes of growth, development, metabolism, and production of vertebrates; minor emphasis on invertebrates. Completion of term paper reqd for grad cr. Recommended Preparation: Biol 380. Cooperative: open to WSU degree-seeking students.

AVS 452 Physiology of Reproduction (4 cr)
Physiology of reproduction; growth, structure, development, endocrinology, and control of reproductive function with emphasis on farm animals. Three lec and one 2-hr lab a wk. Cooperative: open to WSU degree-seeking students.

AVS J463/J563 Growth and Lactation (3 cr)
Principles of growth and lactation. Hormonal, nutritional, and metabolic control of bone, muscle, adipose, and mammary tissue development; regulation of lactation. Additional projects/assignments reqd for grad cr.

AVS 466 Equine Science and Management (3 cr)
Study of the industry as well as basic principles of equine science and management, including conformation and selection, anatomy, form to function, nutrition and feeding, behavior, health, reproduction, marketing, facilities and business management. Two lec, and one 2-hr lab a wk. Cooperative: open to WSU degree-seeking students.
Prereq: Junior standing and AVS 222, AVS 371 and AVS 305 or Permission

AVS 468 Companion Animal Biology & Management (3 cr)
Application of the principles of reproduction, nutrition, genetics, health, and economics to the production and management of companion animals – dogs, cats, birds, small mammals, and fish. Three 1-hr lec per week. (Fall only)
Prereq: Junior standing and AVS 222, AVS 371 and AVS 305 or Permission

AVS 471 Animal Disease Management (3 cr)
Principles of immunity and disease resistance, transmission, and prevention; clinical signs, pathogenesis, and control of major diseases of economic importance in domestic animals.
Prereq: Junior standing

AVS 472 Dairy Cattle Management (3 cr)
Establishing a dairy farm, housing and managing large dairy herds, selection of breeding cattle, and marketing quality milk. One 4-day field trip. Recommended Preparation: AVS 222 or equiv. Cooperative: open to WSU degree-seeking students.

AVS 474 Beef Cattle Science (3 cr)
Breeding, feeding, and management; commercial and purebred enterprises; management of beef cattle on ranges, pasture, and in the feedlot. One 1-day field trip. Recommended Preparation: AVS 222 or equiv. Cooperative: open to WSU degree-seeking students.

AVS 475 Advanced Dairy Management (3 cr)
Application of concepts of dairy cattle management to practical situations. One lec and 1-2 hrs of lab a wk. Recommended Preparation: AVS 472. Cooperative: open to WSU degree-seeking students.

AVS 499 (s) Directed Study (1-6 cr, max arr)

AVS 500 Master's Research and Thesis (cr arr)

AVS 501 (s) Seminar (cr arr)

AVS 502 (s) Directed Study (cr arr)
Graded P/F.
Prereq: Permission

AVS 503 (s) Workshop (cr arr)

AVS 504 (s) Special Topics (cr arr)

AVS 509 Growth Physiology Inquisition (2 cr, max arr)
See AVS J409/J509.

AVS 511 Ruminant Nutrition (3 cr)
See AVS J411/J511.

AVS 551 Endocrine Physiology (3 cr)
See AVS J451/J551

AVS 563 Growth and Lactation (3 cr)
See AVS J463/J563.

AVS 567 Advanced Physiology (4 cr)
An advanced review of physiology designed to emphasize the interaction between structure and function of specialized cells, tissues, organs and systems. The systems to be covered will include but are not limited to, the mammalian cell, hematology neurophysiology, muscle physiology, cardiovascular physiology, pulmonary physiology, renal physiology and whole animal metabolism. Recommended preparation: undergraduate physiology, biology, cell biology, and/or biochemistry. (Spring, alt/odd yrs)

AVS 598 (s) Internship (cr arr)

AVS 600 Doctoral Research and Dissertation (cr arr)

Anthropology Courses

Mark S. Warner, Dept. Chair, Dept. of Sociology & Anthropology (101 Phinney Hall 83844-1110; phone 208/885-6751).

Anth 100 Introduction to Anthropology (3 cr)
Basic theories, methods, and findings of human paleontology, prehistory, and culture.

Anth 200 (s) Seminar (cr arr)

Anth 203 (s) Workshop (cr arr)

Anth 204 (s) Special Topics (cr arr)

Anth 220 Peoples of the World (3 cr)
Societies of Eurasia, Africa, Americas, Australia, and islands of the Pacific.

Anth 230 World Prehistory (3 cr)
Prehistoric cultures of Old and New Worlds; techniques of excavation; methods of archaeological analysis.

Anth 231 Introduction to Archaeology (3 cr)
Archaeological techniques for interpreting past lifeways from material remains; includes both prehistoric and historical archaeology.

Anth 241 Introduction to the Study of Language (3 cr)
See Engl 241.

ASM 498 (s) Internship (1-6 cr, max 6)
Graded P/F.
Prereq: Permission

ASM 499 (s) Directed Study (cr arr)

American Indian Studies Courses

Rodney P. Frey, American Indian Studies Program (116 Phinney Hall 83844-1110; phone 208/885-6268; rfrey@uidaho.edu; www.webpages.uidaho.edu/~rfrey/aist.htm).

AIST 320 The Celluloid Indian: American Indians in Popular Film (3 cr)
Examines the representation of American Indians in film from early-mid 20th century Hollywood westerns to late 20th and early 21st century films made by Indians themselves. Traces changes in the cinematic depictions of Indian peoples and historical and cultural reasons for those changes. Emphasizes Indian-made film as extension of oral tradition, as well as indigenous aesthetics. (Spring only)

AIST 401 Contemporary American Indian Issues (3 cr)
Identifies and addresses key cultural, economic, educational, legal, resource, and sovereignty issues facing Indian communities today; an essential component involves presentations by representatives from the Indian communities. (Spring only)

AIST 404 (s) Special Topics (cr arr)

AIST 411 Native American Architecture (3 cr)
See Arch 411.

AIST 420 Native American Law (3 cr)
See Law 949. Graded Pass/Fail.

AIST 422 Plateau Indians (3 cr)
See Anth 422.

AIST 478 Tribal Nation Economics and Law (3 cr)
See Law 928.

AIST 484 American Indian Literature (3 cr)
See Engl 484.

AIST 498 (s) Internship (cr arr)
Supervised internship in an Indian community setting, integrating academic study with work experience; requires formal plan of activities to be approved by the on site supervisor and assigned faculty member; a final written report will be evaluated by the assigned faculty member.
Prereq: Permission

AIST 499 (s) Directed Study (cr arr)

American Studies Courses

Patricia S. Hart, Coordinator (337 Administration Bldg 83844-3178; phone 208/885-6012); Walter A. Hesford, Co-Coordinator.

AmSt 301 Studies in American Culture (3 cr)
In-depth exploration of a significant theme or issue in American society from a variety of disciplinary perspectives; specific focus may vary, but includes consistent incorporation of a historical dimension, attention to inequalities and diversity, and analysis of aspects of contemporary American culture including a global context.
Prereq: Engl 102; Jr standing or Permission

AmSt 404 (s) Special Topics (cr arr)

AmSt 499 (s) Directed Study (cr arr)

Animal and Veterinary Science Courses

Mark A. McGuire, Dept. Head (213 Ag. Sc. Bldg. 83844-2330; phone 208/885-6345).

AVS 105 Survey of the Science of Livestock Production and Management (1-3 cr, max 3)
This course is designed to introduce the student to the principles of animal production and management through knowledge and skills pertaining to nutrition, reproduction, diseases, breeding, genetics, anatomy, and physiology in livestock. Course will be offered for 1 credit in the Fall and 2 in the Spring.

AVS 109 The Science of Animals that Serve Humanity (4 cr)
Role of animal agriculture in providing food, work, and pleasure for mankind; intro to animal genetics, physiology, endocrinology, nutrition, and other disciplines essential for an understanding of the contributions of animals in the expanding human population. Cooperative: open to WSU degree-seeking students.

AVS 172 Principles and Practices of Dairy Science (2 cr)
An overview of the dairy industry and the science of producing milk and reproduction, udder health and mastitis, milk marketing, and dairy product quality and safety; approved management practices for dairy enterprise. Cooperative: open to WSU degree-seeking students.

AVS 209 Science of Animal Husbandry (4 cr).
Fundamental concepts of animal husbandry and its foundation in the science of animal production; introduction to the technical subject matter of animal production. Three lec and one 2-hr lab a week.
Prereq: AVS 109

AVS 222 Animal Reproduction and Breeding (3 cr)
Provides fundamental information about reproduction, lactation, and breeding of domestic animals; topics include functional anatomy, basic physiology, and endocrinology relating to reproduction and lactation; animal breeding involves the mathematical and conceptual framework of genetic evaluation.

AVS 263 Live Animal and Carcass Evaluation (3 cr)
Evaluation and selection of cattle, sheep, and swine for herd replacement; evaluation of market animals; carcass evaluation and grading, slaughter procedures, and factors that affect quality and quantity of meat; visual and objective appraisals. One lec and two 3-hr lab a wk; four 1-day and four 1/2-day field trips or equiv time. Cooperative: open to WSU degree-seeking students.

AVS 299 (s) Directed Study (1-6 cr, max 6)
Graded P/F.
Prereq: Permission of department

AVS 305 Animal Nutrition (3 cr)
Introduction of the concepts and principles of animal nutrition; fundamentals of nutrients and their digestion and metabolism; various biochemical pathways and processes for nutrient utilization; nutrition fundamentals for a range of monogastric and ruminant animals. Recommended Preparation: Biol 115 and Chem 111. Cooperative: open to WSU degree-seeking students.
Prereq: AVS 109

AVS 306 Feeds and Ration Formulation (4 cr)
Application of principles of nutrition to ration formulation for poultry and livestock; evaluating feedstuffs for use in ration formulation. Three lec and one 2-hr lab a wk. Recommended Preparation: AVS 305. Cooperative: open to WSU degree-seeking students.

AVS 330 Genetics of Livestock Improvement (3 cr)
Genetic principles applied to breeding of farm animals. Cooperative: open to WSU degree-seeking students.
Prereq: AVS 109

AVS 363 Animal Products for Human Consumption (4 cr)
Same as FS 363. The meat, dairy, and egg industries, including product produced, processed, safety (HACCP), nutrition, distribution, quality, quantity, palatability, health, cooking, home storage, and consumer concerns. Special clothing and equipment required. Three lecture credits and one 3-hour lab per week. Recommended Preparation: Biol 115. Cooperative: open to WSU degree-seeking students.

AVS 371 Anatomy and Physiology (3 cr)
Structure and function of tissues and organ systems of domestic and wild animals.
Prereq: Biol 115

AVS 398 (s) Internship (cr arr)
Cooperative programs with producers, allied industry and food processing industries within the state. Graded P/F.
Prereq: Permission

AVS 373 Anatomy and Physiology Lab (1 cr)
Students will perform dissections and examine the relationship between the organization of tissues and their distinct function within the animal.

AgEd 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Agricultural Science and Technology Courses

James J Connors, Dept. Chair, Dept. of Agricultural and Extension Education (Agricultural and Extension Education Bldg., 1134 West 6th- 83844-2040; phone 208/885-6358; lriesenb@ uidaho.edu).

Ag 299 (s) Directed Study (cr arr)
Prereq: Departmental Permission

Ag 398 (s) Internship (1-6 cr, max 6)
Graded P/F.
Prereq: Permission

Ag 400 (s) Seminar (cr arr)
Prereq: Departmental Permission

Ag 404 (s) Special Topics (cr arr)
Prereq: Departmental Permission

Ag 494 CALS Peer Mentors (1 cr)
The CALS Peer Mentors provides students the opportunity to further develop leadership and mentoring skills through a variety of activities involving recruitment, campus outreach, and new student mentoring. The objective is to welcome new students to college life; create awareness of the academic programs; and be available to guide students. Graded A/Pass/Fail.
Prereq: Departmental Permission

Ag 495 (s) CALS Ambassadors (cr arr)
Student ambassadors are selected through an application and interview process to represent CALS to future students at recruiting activities and functions. Students will learn skills in leadership, communication, networking, public speaking, and time management. Students will be responsible for visiting high schools, attending college and career fairs, recruiting events on campus.
Prereq: Departmental Permission

Ag 499 (s) Directed Study (cr arr)
Prereq: Departmental Permission

Agricultural Systems Management Courses

Tom Hess, Interim Dept. Head, Dept. of Biological and Agricultural Engineering (421 Engineering/Physics Bldg. 83844-0904; phone 208/885-6182; fax 208/885-7908; baengr@uidaho.edu).

ASM 105 Survey of Agricultural Mechanics (1-3 cr, max 3)
This course is designed to introduce the student to the principles of technology in agriculture. It includes the development of knowledge and skills pertaining to agricultural mechanics, welding, power technology, electricity, and structures. It will provide introductory learning experiences for students in the areas of agricultural systems management.

ASM 107 Beginning Welding (2 cr)
Principles of operation, use, and care of arc and acetylene welding equipment. One lec, one 2-hr lab, and two hrs of individual practice a wk. Enrollment limited to 12 per section. Cooperative: open to WSU degree-seeking students.

ASM 112 Introduction to Agricultural Systems Management (3 cr)
Application of basic engineering principles to solving problems dealing with farm machinery, buildings, processing, irrigation, and energy use. Recommended Preparation: high school algebra.

ASM 200 (s) Seminar (cr arr)

ASM 202 Agricultural Shop Practices (2 cr)
Primarily for agricultural mechanization and agricultural education students. Operation, use, and care of shop tools and equipment. One lec and one 3-hr lab a wk.

ASM 204 (s) Special Topics (cr arr)

ASM 210 Small Engines (2 cr)
Principles of engine operation, tune-up, and maintenance; repair and overhaul of small engines. One lec, one 2-hr lab, and two hrs of individual practice a wk. Enrollment limited to 12 per section.

ASM 240 Computer Applications in Biological Systems (3 cr)
Application of computers in production agriculture; microcomputer principles and operation, disk operating systems; word processing; spreadsheets, database management and other application programs; introduction to one program language. Two lec and one 2-hr lab a wk. Recommended Preparation: three credits of college math.

ASM 299 (s) Directed Study (cr arr)

ASM 304 Agricultural Fluid Power Systems (2 cr)
Fundamentals of hydraulic power and control as applied to agricultural machines and processing equipment; component function and sizing; schematic diagrams. One 3-hr lab a wk.
Prereq: Math 108, 143, or 160

ASM 305 GPS and Precision Agriculture (3 cr)
This course will cover the fundamentals of global positioning, yield monitors, and variable rate applications. Instrumentation used in agriculture, environmental science, and industry will be discussed. Two Lec. and one 3-hr lab a wk. Cooperative: open to WSU degree-seeking students.

ASM 315 Irrigation Systems and Water Management (3 cr)
Irrigation methods, irrigation management, water rights, conveyance and measurement, pumps, soil-water-plant relationships, and drainage. Two lec and one 3-hr lab a wk. Cooperative: open to WSU degree-seeking students.
Prereq: Soil 205, Math 108, 143, 160 or 170 or Permission

ASM 331 Electric Power Systems for Agriculture (3 cr)
Basic circuits; wiring and the code; motors and controls; heating, lighting, and power. Two lec and one 3-hr lab a wk. Cooperative: open to WSU degree-seeking students.

ASM 398 Internship (1-6 cr, max 6)
Graded P/F.
Prereq: Permission

ASM 400 (s) Seminar (cr arr)

ASM 404 (s) Special Topics (cr arr)

ASM 407 Advanced Welding (1 cr)
This course provides the student an opportunity to learn various advanced welding theories, practices and applications for ferrous and non-ferrous metals, which include Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW) and Plasma Arc Cutting (PAC). These are only introduced in ASM 107, Beginning Welding, and will be covered in depth in this course. This course will also provide the student with a technical understanding of calculating material and use of proper procedures for the completion of project manufactured in the lab. Student presentations and demonstrations are required. This course will introduce emerging technologies in welding and fabrication industries.
Prereq: ASM 107 and Permission

ASM 409 Agricultural Tractors, Power Units and Machinery Management (4 cr)
This course focuses on the selection, operation, adjustment, and servicing of farm tractors and power units. Fuels, lubrication, cooling, and electrical systems will also be covered. Machinery operation, power transmission systems, hitching, traction, and safety are also discussed. The course will conclude with discussions on depreciation and machinery replacement. Three 1-hr lec and one 3-hr lab a week.

ASM 412 Agricultural Safety and Health (2 cr)
Covers a broad variety of items related to agricultural safety and health: identification of safety and health hazards, maximizing capabilities of farmers and ranchers with disabilities, grain and livestock handling, chemical and gases handling, and fire safety; corrective measures to eliminate hazards and application of information learned to student's own situation. (Alt/yrs)

ASM 433 Agricultural Processing Systems (3 cr)
Grain cleaning, mixing, and drying; materials handling, heat transfer, pumps, fans, refrigeration, and instrumentation. Two lec and one 3-hr lab a wk; one 1-day field trip. Recommended Preparation: Math 160.

AgEd 181 Introduction to Extension Education (1 cr)
Overview of goals, mission and purpose of Cooperative Extension System. Career opportunities in the Extension System; role of Cooperative Extension faculty; basic principles and practices of the Cooperative Extension System including related legislation. (alt/yrs)

AgEd 252 Developing Community and Collegiate Organizations (3 cr)
Assisting community, collegiate, or social organization members, officers, or committee chairs to better serve the organization and to acquire practical organizational and management skills that will help them throughout their academic and professional careers. Basic knowledge and skills related to parliamentary procedure and the orderly conduct of meetings will also be covered. (Alt/odd yrs)

AgEd 299 (s) Directed Study (cr arr)

AgEd 351 Principles and Philosophy of Professional-Technical Education (3 cr)
Overview and interpretation of history, aims, and purposes of public education and professional-technical education, issues and programs comprising professional-technical education in Idaho and the U.S.

AgEd 358 Supervising FFA and SAE Programs (3 cr)
Role of secondary agriculture instructors in supervising FFA and Supervised Agricultural Experience programs. One lecture and one 2-hr lab a week. (Fall only)
Prereq: Agricultural Education major, and Permission
Prereq or Coreq: AgEd 180

AgEd 359 Developing 4-H Youth Programs (2 cr)
Planning, development, and leadership principles of 4-H/youth program; role of 4-H/youth educator and volunteer leader. Web-based course.

AgEd 400 (s) Seminar (cr arr)

AgEd 404 (s) Special Topics (cr arr)

AgEd 406 Exploring International Agriculture (3 cr)
General overview of agriculture around the world and the opportunity to develop an in-depth knowledge of agriculture in a country or region of student's choice. (Spring only)
Prereq: Junior or Senior standing; and AgEd 180, ASM 112, or Soil 205; or Permission

AgEd J447/J547 Adult Education in Agriculture (2 cr)
Opportunity to study some of the basic problems and values in working with adult groups. Attention given to problem of fitting adult educational programming into public school programs and other educational programs as well as to methods of teaching adults. Credit earned in AgEd 547 by completing an in-depth project. (Spring, alt/yrs)

AgEd J448/J548 Foundations of Extension Education (2 cr)
Philosophy and principles, social and economic significance of extension education in agricultural and life sciences and the examination of behavioral science concepts in organization, development, and management of extension programs. Credit earned in AgEd 548 by completion of in-depth paper or project on some aspect of extension programming. (Fall, alt/yrs)

AgEd J450/J550 Developing Leaders (2 cr)
An action-oriented, participatory examination of aspects of "leadership." Designed to stir students' excitement about becoming leaders in school, home, and community; help students develop enthusiasm and interest in focusing on their vision for the future; individual and group activities allow students to identify their leadership philosophy, enhance their strengths, and improve on their weaknesses. Additional projects/assignments reqd for grad cr. (Alt/yrs, Spring only)

AgEd 451 Communicating in Agriculture (3 cr)
Principles and practices of disseminating knowledge and information related to agricultural sciences, environment, and natural resources to clients and the general public; communications concepts, technology, and presentation skills that will help agricultural and natural resource professionals communicate effectively within their chosen profession. (Alt/yrs, spring only)

AgEd 452 Methods of Teaching Agriculture (4 cr)
Procedures of identifying and selecting instructional methods and materials, planning, and student evaluation criteria to effectively teach agriculture. (Fall only)
Prereq: AgEd 180, Agricultural Education major, and Permission
Prereq or Coreq: AgEd 358

AgEd 453 Program Planning in Secondary and Adult Agricultural Education (1 or 3 cr)
Planning, organizing, and implementing secondary and adult programs in agriculture. Includes only the adult section of the course when taken for 1 cr. Class taught on an accelerated schedule. This course is to be taken during the student teaching semester. (Spring only)
Prereq: AgEd 180, Agricultural Education major, and Permission
Prereq or Coreq: AgEd 358

AgEd 454 Facilities Organization and Management (2 cr)
Applications of efficient planning, organizing, and teaching skills reqd in management of lab and shop facilities.
Prereq: AgEd 180, Agricultural Education major, and Permission
Prereq or Coreq: AgEd 358

AgEd 460 Practicum: Secondary School Teaching in Agriculture (10 cr)
Fifteen (15) wks of practical experience student teaching in secondary agriculture program. (Spring only)
Prereq: Admission to the Teacher Education Program, and perm of dept

AgEd 461 Student Teaching Portfolio (2 cr)
Summary of the 15-week practicum experience; a notebook portfolio to include unit lesson plans, daily teaching plans, videotape example of teaching, report of early field experience, daily journal, summary of 10 positive and 10 challenging teaching experiences, supervisory assessments of teaching by cooperating instructor and university supervisor, and cooperating teacher's final evaluation. (Spring only)

AgEd 470 Proseminar in Agricultural Education (1 cr, max 2)
Professional issues in agricultural education. Fall semester includes additional 8-hour Saturday session for CPR and first aid training.
Prereq: Admission to Teacher Education Program, or Permission of department

AgEd 471 Senior Capstone in Agricultural Education (1 cr)
This course serves as the senior capstone course for the Bachelors of Science degree in Agricultural Education. The course meetings will include a meeting during the Idaho FFA State Leadership Conference in April, a final presentation, and a senior capstone debriefing meeting at the end of the student-teaching field-experience.
Prereq: AgEd 470
Coreq: AgEd 460 and AgEd 461

AgEd 498 (s) Internship (1-10 cr, max 10)
Formalized learning experience in an actual work setting. Students work in an agriculturally related organization or agency and commit to a minimum of 40 hours of supervised work per semester credit. Requires completion of a formal proposal.
Prereq: Junior or Senior standing; GPA of 2.75 and Permission

AgEd 499 (s) Directed Study (cr arr)

AgEd 500 Master's Research and Thesis (cr arr)

AgEd 501 (s) Seminar (cr arr)

AgEd 502 (s) Directed Study (cr arr)

AgEd 503 (s) Workshop (cr arr)

AgEd 504 (s) Special Topics (cr arr)

AgEd 547 Adult Education in Agriculture (2 cr)
See AgEd J447/J547.

AgEd 548 Foundations of Extension Education (3 cr)
See AgEd J448/J548.

AgEd 550 Developing Leaders (2 cr)
See AgEd J450/J550.

AgEd 560 Beginning Teacher Induction in Agricultural Education (1 cr, max 2)
On-site clinical supervision, technical assistance, and leadership to beginning teachers of secondary agricultural education programs.

AgEd 562 Instructional Methods in Agricultural Education (3 cr)
Innovations and advanced principles in teaching methods and materials.

AgEd 598 (s) Internship (cr arr)

AgEc 489 Understanding and Using Futures and Options Markets (3 cr)
How futures and options markets work, types of futures and options markets, a practical understanding of their role as investment and risk management tools, and individual student management of a simulated futures and options trading account.
Prereq: Math 143 or higher, and Econ 202 or Econ 272

AgEc 497 Teaching Ag Econ/Agribusiness (1-3 cr)
Supervised class observation and course preparation, and an opportunity to present one or several lectures in specific agribusiness and agricultural economics areas. Incorporates learning and teaching methods applied in professional settings; may include advanced practices for competitions, field or lab activities, and client interactions. Max enrollment 5. Recommended preparation: senior standing.
Prereq: Permission

AgEc 499 (s) Directed Study (cr arr)

AgEc 500 Master's Research and Thesis (cr arr)

AgEc 501 (s) Seminar (cr arr)

AgEc 502 (s) Directed Study (cr arr)

AgEc 504 (s) Special Topics (cr arr)

AgEc 505 (s) Professional Development (cr arr)

AgEc 506 Faculty Seminar Series (0 cr)
Focus on current issues impacting agriculture, natural resources, and community development though seminars introducing research occurring in the department.

AgEc 525 Master's Econometrics (3 cr)
Sampling techniques, linear regression and analysis of variance with economic applications. Cooperative: open to WSU degree-seeking students.
Prereq: 3 cr in statistics

AgEc 526 Master's Microeconomics Analysis (3 cr)
Master-level, calculus-based producer and consumer theory with selected managerial economics topics. Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq or Coreq: Econ 527 or Permission

AgEc 527 Mathematics for Economists (3 cr)
Same as Econ 527. Mathematical methods applicable to economic analysis and research. Additional projects/assignments required for graduate credit. Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq: Econ 352 and Math 160 or Math 170

AgEc 529 Research Methods (1-2 cr)
Social science Master's thesis as a research journey toward craftsmanship including elements of imagination, modeling, mindfulness, guidelines, and mentor experiences. Cooperative: open to WSU degree-seeking students.
Prereq: Graduate standing and Permission

AgEc 532 Natural Resource Economics and Policy (3 cr)
Economic principles and models applied to natural resource problems, issues, and policies. Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq: Econ 352 or Permission

AgEc 533 International Trade and Policy (3 cr)
International trade theories and policies and research issues related to world trade, with emphasis on agricultural commodity markets. Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq: Econ 446, AgEc 481, or Permission

AgEc 534 Production Economics (3 cr)
Production economics theory and methods applied to problems of production response, economic optimization, technology, policy, risk and dynamics. Cooperative: open to WSU degree-seeking students.
Prereq: AgEc 526 or Permission

AgEc 535 Applied Industrial Organization (3 cr)
Economic and strategic management theories and their relevance to agribusiness decision-making, including empirical applications. Cooperative: open to WSU degree-seeking students. (Fall only)

AgEc 577 Law, Ethics, and the Environment (3 cr)
See AgEc J477/J577.

AgEc 586 Regional Economic Development Theory (3 cr)
See AgEc J486/J586.

AgEc 587 Regional Economic Development Methods (3 cr)
Methods course in the tools of regional economics and community development. Topics include Community Economic Profiling, Input-Output Analysis, Social Accounting, General Equilibrium Analysis, Social Benefit-Cost Analysis, and Non-Market Valuation. Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq: AgEc 586 or Permission

AgEc 597 Applied Economics Teaching Practicum (1-3 cr)
Graded Pass/Fail. The teaching practicum is an opportunity for students to improve teaching methods and techniques, and expand professional skills under the guidance of mentors from the AERS faculty. The teaching practicum may include classroom lectures, demonstrations, grading assistance, or other related activities.

AgEc 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Agricultural Education Courses

James J Connors, Dept. Chair, Dept. of Agricultural Education and 4-H Youth Development (Agricultural and Extension Education Bldg., 1134 West 6th 83844-2040; phone 208/885-6358; lriesenb@uidaho.edu).

AgEd 140 Introduction to Organizational and Personal Leadership Development (1 cr)
This course is designed to introduce the student to important concepts in organizational and personal leadership development. Topics will include organizational leadership, citizenship, and cooperation, personal development, employee/employer relations, and group and individual interpersonal communications skills.

AgEd 158 Introduction to Supervised Agricultural Experience Programs (1 cr)
This course is designed to introduce the student to important concepts in conducting and organizing supervised agricultural experience projects related to secondary agricultural education classroom and local FFA chapter. Topics will include project planning, goal setting, budgeting, record keeping, basic technical writing, project/program evaluation, employability skills, citizenship, employee/employer relations, and group and individual interpersonal communication skills. (Spring only)

AgEd 159 Introduction to the FFA Organization (1-2 cr)
This course is designed to introduce the student to important concepts in conducting, organizing, and competing in activities inherent in the Idaho and National FFA Organizations as an outgrowth of the secondary agricultural education classroom instruction and coupled with a successful supervised agricultural experience program. Topics will include parliamentary procedure, FFA History and activities, public speaking and communications, project planning, goal setting, budgeting, record keeping, basic technical writing, project/program evaluation, employability skills, citizenship, employee/employer relations, and group and individual interpersonal communication skills. (Spring only)

AgEd 160 Survey of the Expectations and Responsibilities of Teaching High School Agriculture (1 cr, mx 2)
This course is designed for high school students interested in pursuing a career in agricultural education and will serve as a bridge class between high school and collegiate level teacher education courses. The course will include an exploration of the professional qualities and expectations of the teacher/educator. Roles, responsibilities and challenges in the field of education, leadership, and communication will be examined.

AgEd 180 Introduction to Agricultural Education (1 cr)
Overview of the goals, mission, and purpose agricultural education programs in High Schools. Course content will include topics related to career opportunities in Agricultural Education, key issues facing agricultural education programs in high schools at the local, state, and national levels; the importance of agricultural education to society; and the role of the agricultural educator in schools and communities. (Fall only)

AgEc 201 Principles of Agricultural Economics (1 cr)
Review, discussion and application of basic economic, agribusiness, and natural resource principle as applied to the agricultural economics profession. Students will have an opportunity to attend the American Agricultural Economics Association annual meetings and test their knowledge of these principles with students from other universities. (Spring only)
Prereq: AgEc 101

AgEc 278 Farm and Agribusiness Management (4 cr)
Decision making and profit maximization using economic principles, records, enterprise analysis, and comparison of alternative farming practices. Three lec and one 2-hr lab a wk. Recommended Preparation: Econ 202.

AgEc 289 Agricultural Markets and Prices (3 cr)
Economics of agricultural markets and pricing institutions; analysis of supply, demand, elasticity, futures markets; institutional arrangements in food marketing. Recommended Preparation: Econ 202.

AgEc 299 (s) Directed Study (cr arr)

AgEc 301 Managerial Economics: Production (3 cr)
Microeconomic principles applied to agricultural production and the management of agribusiness firms with an introduction to spreadsheet based statistical, mathematical and optimization techniques for analyzing and solving real world management problems.
Prereq: Econ 202 or Econ 272; and Math 143 with a grade of 'C' or better

AgEc 302 Managerial Economics: Consumption & Markets (3 cr)
Microeconomic principles applied to agricultural markets and consumer demand, with an introduction to spreadsheet based statistical and forecasting tools for analyzing associated real world pricing and consumer demand concerns facing managers of agribusiness firms.
Prereq: Econ 202 or Econ 272; and Math 143

AgEc 330 Agricultural Cooperatives (1 cr)
Introduction to the historical basis for the formation and existence of agricultural cooperatives, the principles and policies under which they operate, and an examination of the current environment facing agricultural cooperatives. (Spring only)
Prereq: Junior standing

AgEc 333 Introduction to Sales (3 cr)
Introduction to the economic and consumer behavior theory of the sales industry. Fundamentals of professional business-to-business selling, business-to-consumer selling, sales ethics, and career assessment. (Spring only)

AgEc 356 Agricultural and Rural Policy (3 cr)
Goals, methods, results of economic programs and policies in agriculture, including role of governmental and farm organizations. Recommended Preparation: Econ 201 and Econ 202.

AgEc 398 (s) Internship (1-6 cr, max 6)
Graded P/F.
Prereq: Permission

AgEc 404 (s) Special Topics (cr arr)

AgEc 405 (s) Professional Development (cr arr)

AgEc 410 Experiencing the Idaho Public Policy Making Process (1 cr)
Assessment of policy topics currently facing the agricultural industry. Students will travel to Boise while the legislature is in session to become familiar with the policy making process and to discuss current policy issues with industry and legislative officials. Three, three hour evening classes. (Spring only)
Prereq: AgEc 356 or Permission

AgEc 411 The World of International Agribusiness (1 cr)
Draws on the experience and wisdom of practitioners of international businesses engaged in various fields of agriculture. Examination of current trade practices and issues. (Fall only)
Prereq: Junior standing

AgEc 413 Management of Human Resources in Agribusiness Firms (1 cr)
Processes involved in the management of the human resources of organizations and the study of the personal attributes and behaviors associated with successful managers. Five week course. Three hours of lec per week. (Fall only)
Prereq: Junior standing

AgEc 414 Financial Analysis of Agricultural Firms (1 cr)
Applying cost analysis and financial statement analysis to the management of an agricultural business. Examination of cost and accrual based income statement for tax and management decisions. Five week course. Three hours of lec per week. (Fall only)
Prereq: Acct 201 and AgEc 278; or Permission

AgEc 415 Entrepreneurial Skills in Agribusiness Management (1 cr)
An examination of fundamental entrepreneurial responsibilities of managers in agricultural and natural resource based firms. Identification and development of business goals, tactical and strategic plans, environmental assessment, and decision-making. Five week course. Three hours of lec per week. (Fall only)
Prereq: AgEc 278 or Permission

AgEc 418 Developing Negotiation Skills in Agribusiness (1 cr)
Understanding the art and science of securing agreements between two or more independent parties by managing interdependence, engaging in mutual adjustment, creating or claiming value, and managing conflict. (Spring only)
Prereq: Junior or Senior standing

AgEc 419 Development and Analysis of Enterprise Budgets (1 cr)
Examination of accounting and economic costs and their importance in enterprise cost analysis. Identification and allocation of operating and ownership costs to enterprises. Introduction to software packages used in the development of cost and return estimates. (Spring only)
Prereq: AgEc 278 or Permission

AgEc 447 International Development Economics (3 cr)
See Econ 447.

AgEc 451 Applied Environmental and Natural Resource Economics (3 cr)
Economic analysis of current issues pertaining to environmental and natural resources. Economic tools will be applied in the contexts of climate change, valuation of the environment, sustainable development, energy, water, environmental risk, etc. Specific cases used to describe economic theories and tools used by experts working in the field.
Prereq: AgEc 301, AgEc 302, or Econ 385; or Permission

AgEc J477/J577 Law, Ethics, and the Environment (3 cr)
AgEc 577 same as EnvS 577. Examines the laws and related ethical questions pertaining to agricultural and natural resource issues. Graduate credit includes special projects and additional discussion meetings. Recommended Preparation: BLaw 265.
Prereq for 477: Junior standing
Prereq for 577: Graduate standing and For 235 or PolS 364; or Permission

AgEc 478 Advanced Agribusiness Management (3 cr)
The capstone class for Agribusiness and Agricultural Economic students. Economics and agribusiness theory is put into practice through decision cases and agribusiness simulation games. Team building, written, and oral presentation skills are stressed. (Spring only)
Prereq: AgEc 301, AgEc 302, Acct 201, Acct 202, and Senior standing; or Permission

AgEc 481 Agricultural Markets in a Global Economy (3 cr)
Analysis of agricultural market competition and performance in a global economy; economics of global food and commodity markets and trade; economic principles applied to interaction of economic events in the world food economy.
Prereq: AgEc 301 or Econ 352 or Permission

AgEc J486/J586 Regional Economic Development Theory (3 cr)
Theory course in the explanation and causes of regional economic growth and community development. Topics include land economics, transportation models, central place theory, location theory, agglomeration, economic base theory, and economic growth theory. Additional projects/assignments required for graduate credit. Recommended Preparation: Introductory Microeconomics and Macroeconomics or Introduction to Bioregional Planning. (Spring only)

AOLL 598 (s) Internship (cr arr)
Supervised experience in teacher education, administration, supervision, or ancillary services in adult education. Graded P/F.
Prereq: Permission

AOLL 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

AOLL 600 Doctoral Research and Dissertation (cr arr)

AOLL 612 Doctoral Seminar II (1 cr)
The seminar is intended for those doctoral students who have completed all or most of their course work. The seminar will focus on how to be successful in taking the preliminary examination and how to develop a tentative dissertation proposal. (Spring only)
Prereq: AOLL 591 and enrollment in a doctoral program

AOLL 613 Doctoral Seminar III (1 cr)
The seminar is intended to support candidates who have had a successful defense of the dissertation proposal. The seminar will focus on the advancement of the dissertation, committee ship, completion and continuation of the research project and ultimately the defense of the dissertation.
Prereq: AOLL 591 and 612, and enrollment in a doctoral program

Aerospace Studies Courses

Colonel Gregory Cain, Dept. Head (Washington State University, Kruegel Hall, phone 509/335-5598; www.afrotc.wsu.edu).

Aero 101 Foundations of the U.S. Air Force (1 cr)
Survey course introduces students to the United States Air Force and the Air Force Reserve Officer Training Corps (AFROTC). The course primarily focuses on the mission and organization of the Air Force, Air Force dress and appearance standards, military customs and courtesies, Air Force heritage and introduction to communications skills. Weekly lab consisting of Air Force customs and courtesies, health and physical fitness, and drill ceremonies is mandatory for cadets. (Fall only)

Aero 102 Foundations of the U.S. Air Force (1 cr)
Survey course introduces students to the United States Air Force and the Air Force Reserve Officer Training Corps (AFROTC). The course primarily focuses on the mission and organization of the Air Force, Air Force dress and appearance standards, military customs and courtesies, Air Force heritage and introduction to communications skills. Weekly lab consisting of Air Force customs and courtesies, health and physical fitness, and drill ceremonies is mandatory for cadets. (Spring only)

Aero 103 Leadership Laboratory I (2 cr, max 4)
Introduces students to leadership principles, military experience, and management practice; 2 hours of laboratory and 2 hours of required physical training. Graded Pass/Fail.
Coreq: Aero 101 or Aero 102

Aero 201 Evolution of U.S. Air Force and Space Power (1 cr)
Survey course that presents and overview of the history of the Air Force and key airpower concepts, development of the U.S. Air Force and its guiding principles, the employment of airpower from the advent of manned flight through the post-World War II period to current air and space operations and continued application of communication skills. Weekly lab of applied leadership exercises is required for cadets. (Fall only)

Aero 202 Evolution of U.S. Air Force and Space Power (1 cr)
Survey course that presents and overview of the history of the Air Force and key airpower concepts, development of the U.S. Air Force and its guiding principles, the employment of airpower from the advent of manned flight through the post-World War II period to current air and space operations and continued application of communication skills. Weekly lab of applied leadership exercises is required for cadets. (Spring only)

Aero 205 Leadership Laboratory II (2 cr, max 4)
Introduces students to leadership principles, military experience, and management practice; 2 hours of laboratory and 2 hours of required physical training. Graded Pass/Fail.
Coreq: Aero 201 or Aero 202

Aero 299 (s) Directed Study (cr arr)

Aero 311 Air Force Leadership and Management (3 cr)
Leadership and quality management fundamentals, professional knowledge, leadership ethics, and communicative skills required of an Air Force officer; case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied; a weekly lab provides advanced leadership experience in officer-type activities, giving students the opportunity to apply leadership and management principles of this course (the lab is mandatory for cadets). (Fall only)

Aero 312 Air Force Leadership and Management (3 cr)
Leadership and quality management fundamentals, professional knowledge, leadership ethics, and communicative skills required of an Air Force officer; case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied; a weekly lab provides advanced leadership experience in officer-type activities, giving students the opportunity to apply leadership and management principles of this course (the lab is mandatory for cadets). (Spring only)

Aero 313 Leadership Laboratory III (2 cr, max 4)
Introduces students to leadership principles, military experience, and management practice; 2 hours of laboratory and 2 hours of required physical training. Graded Pass/Fail.
Coreq: Aero 311 or Aero 312

Aero 391 Private Pilot Ground School (2 cr)
All aspects of preparation for the FAA Private Pilot Written Test. Additional fees will be required. Cooperative: open to WSU degree-seeking students.

Aero 392 Instrument Pilot Ground School (2 cr)
All ground-based aspects of instrument flying to prepare students to take the FAA Instrument Pilot Written Test. Must have a FAA Private Pilot license to obtain credit for this course. Additional fees will be required. Cooperative: open to WSU degree-seeking students.

Aero 411 National Security Affairs/Preparation for Active Duty (3 cr)
An examination of the national security process, regional studies, advanced leadership ethics, and Air Force doctrine; focus of the military profession, officership, military justice, civilian control of the military, preparation for active duty, and refinement of communication skills; a lab consisting of advanced leadership experiences is mandatory for cadets. (Fall only)

Aero 412 National Security Affairs/Preparation for Active Duty (3 cr)
An examination of the national security process, regional studies, advanced leadership ethics, and Air Force doctrine; focus of the military profession, officership, military justice, civilian control of the military, preparation for active duty, and refinement of communication skills; a lab consisting of advanced leadership experiences is mandatory for cadets. (Spring only)

Aero 413 Leadership Laboratory IV (2 cr, max 4)
Introduces students to leadership principles, military experience, and management practice; 2 hours of laboratory and 2 hours of required physical training. Graded Pass/Fail.
Coreq: Aero 411 or Aero 412

Aero 499 (s) Directed Study (cr arr)

Agricultural Economics Courses

Cathy Roheim, Dept. Head, Dept. of Agricultural Economics and Rural Sociology (39A Iddings Wing, Ag. Sc. Bldg. 83844-2334; phone 208/885-6264).

AgEc 101 The Business of Agriculture (1 cr)
An examination of current issues in agriculture and how economic and business principles can be used to analyze issues.

AgEc 105 Survey of Agribusiness (1-3 cr, max 3)
Introduction to agribusiness management and consumer economics in the free enterprise system. Incorporates a study of economic principles, budgeting, record keeping, finance, decision making, risk management, business law, marketing, and careers in agribusiness, and allows the student to develop and practice agribusiness sales competencies. Course will be offered for 1 credit in the Fall and 2 in the Spring.

Acct 590 Advanced Auditing Seminar (3 cr)
Independent auditor's role, legal responsibilities, and code of conduct; concepts, standards, and methods in audit judgment formulation. (Spring only)
Prereq: Acct 492

Acct 592 Financial Accounting and Reporting Seminar (3 cr)
Accounting for complex modern business transactions including consolidations, partnerships, and financial instruments; students are expected to conduct research in the professional literature and document their findings and conclusions in cases where there may be no authoritative guidance; cases are considered from the perspective of the reporting entity, its auditors, the users of the financial statements and other stakeholders. (Spring only)
Prereq: Acct 415 or Prereq or Coreq: Acct 515

Acct 595 (s) Practicum in Tutoring (1 cr)
Tutorial services performed by advanced students under faculty supervision. A paper discussing the tutoring experience is required.
Prereq: Permission

Acct 598 (s) Internship (1-3 cr, max 3)
Career relevant learning experience in actual work setting with professional-level responsibilities. Students work within an accounting related field (accounting, auditing, and taxation) and commit to a minimum of 50 hours of direct supervised work for each semester credit. A paper documenting relevance of work experience and a presentation to undergraduate accounting students may be required.

Acct 599 (s) Non-thesis Master's Research (1-6 cr, max 6)
May count only 3 cr toward degree. Student works with individual professor to design a research study, collect and analyze data, and prepare written report.
Prereq: At least one course in research methodology and permission.

Adult and Organizational Learning Courses

Jeffrey S. Brooks, Dept. Chair (208/667-2588; jsbrooks@uidaho.edu). Jerry Fischer, Coordinator of Counseling and School Psychology (207 Educ. Bldg. 83843-3083; phone 208/885-5947; jfischer@uidaho.edu).

AOLL J410/J510 Foundations of Human Resource Development (3 cr)
Advanced study of the foundations and basis for workforce and human resource education programs. (Alt/yrs)

AOLL 473 Foundations of Adult Education and Adult Development (3 cr)
Foundation of Adult Education and an Introduction to Adult and Lifespan Development.

AOLL 500 Master's Research and Thesis (cr arr)

AOLL 501 (s) Seminar (cr arr)

AOLL 502 (s) Directed Study (cr arr)

AOLL 503 (s) Workshop (cr arr)
Graded P/F.
Prereq: Permission

AOLL 504 (s) Special Topics (cr arr)

AOLL 505 (s) Professional Development (cr arr)
Professional development and enrichment of certificated school personnel. Credit earned will not be accepted toward grad degree program, but may be used in a fifth-year program. Additional projects/assignments reqd for grad cr.

AOLL 507 Future of Education and Work (3 cr)
Study and application of secondary and postsecondary curriculum and instruction focusing on sustainability as it relates to technical education, workforce and organizational development, "green" technologies and Science, Technology, Engineering and Mathematics (STEM).

AOLL 509 Foundations of Adult Basic Education (3 cr)
Foundations of Adult Basic Education includes the study of current literature and research related to various aspects of Adult Basic Education and GED Preparation. Topics include: Accountability, Standards, and Research; Program Structures and Instruction; Rethinking Assumptions and Concepts; Improving Language, Citizenship, and Training; Adult & Family Literacy; Identity and Development in Work, School, and Community. Recommended Preparation: Bachelor's degree.

AOLL 510 Foundations of Human Resource Development (3 cr)
See AOLL J410/J510.

AOLL 526 Instructional Design and Curriculum (3 cr)
An in-depth examination and implementation of instructional design systems and curriculum development as a systematic method of designing, carrying out, and evaluating the total process of teaching and learning; based on research in human learning and communication, employing a combination of human and non-human resources to bring about effective instruction. Focused on corporate training as related to HRD in Adult Ed.

AOLL 528 Program Planning, Development, and Evaluation (3 cr)
Program planning and development strategies for learning enterprise workers.

AOLL 560 Career Development in Organizations (3 cr)
Builds upon the foundation of personality psychology, genetic research, and modern neuroscience in understanding the complex process of career decision-making.

AOLL 570 Introduction to Research in Adult/Organizational Learning and Leadership (3 cr)
The first emphasis of this course is to help workforce education students find, interpret and evaluate scholarly research. The second emphasis is to prepare students to conceptualize, design, and conduct various forms of action research.

AOLL 573 Adult Learners: Foundations and Characteristics (3 cr)
Philosophical, psychological, social and economic foundations of adult education and characteristics of adult learners.

AOLL 574 Adult and Transformational Learning (3 cr)
Transformative learning theory is an essential part of this course. The best practices for reflecting upon existing personal, organizational, environmental, and social sustainability mental models and questioning norms are explored and practiced. Cognitive, humanistic, social learning, behavioral, constructivist, and developmental learning theories for adults are foundational elements of the course.

AOLL 575 Strategies for Facilitating Adult Learning (3 cr)
Strategies for planning and facilitating adult learning courses and programs including face-to-face, hybrid and on-line delivery.

AOLL 576 Communication Skills for Adults in a Diverse World (3 cr)
Development of communication skills for use with culturally diverse adults; verbal and nonverbal techniques for improving communication skills.

AOLL 577 Organization Development (3 cr)
Planned change strategies for human resources in organizations; motivation, training/re-training, assessing, and crafting the corporate culture through educational efforts; assessing the knowledge skill gaps in the human resources.

AOLL 581 Theory Practices & Challenges of Leadership (3 cr)
Analysis and study of leadership of the human resource in organizations; theories, styles, and methods of leadership developed from past leaders blended with current models of leadership.

AOLL 583 Organizational Leadership (3 cr)
Development of an understanding of groups, group behavior, development and socialization of groups, and nature of power, conflict, and leadership in groups; intended for adults who spend time with other adults in groups, committees, teams, or other relationship configurations; emphasis on leadership aspects of group behavior and participation.

AOLL 589 Critical Thinking (2-3 cr)
See EdAd 589.

AOLL 591 Doctoral Seminar I (1 cr)
This seminar is intended to help facilitate an understanding among prospective doctoral students on how to be accepted for admission, how to adhere to respective policies, and be successful in all aspects of the program leading to candidacy. (Fall only)

AOLL 597 (s) Practicum (cr arr)
Supervised field experience in an appropriate public or private agency. Graded P/F.
Prereq: Permission

Acct 204 (s) Special Topics (cr arr)

Acct 299 (s) Directed Study (cr arr).
Individual sections may be graded P/F.
Prereq: Permission

Acct 305 Accounting Information Systems (3 cr)
Role of accounting information systems in effective control of organizations; coverage of internal controls, flowcharting, systems analysis and design, implementation and evaluation as they relate to the major systems cycles; revenue, purchases, production, payroll, cash receipts and disbursements. May include evening exams.
Prereq: Acct 201 and Acct 202

Acct 315 Intermediate Financial Accounting I (3 cr)
Preparation of general purpose financial statements for external users based on U.S. generally accepted accounting principles. Emphasis on transactions relating to financing and investing activities. Conceptual framework based instruction includes comparison with alternative treatments used in other countries and under U.S. tax code. May include evening exams.
Prereq: Acct 201 and Acct 202

Acct 385 Cost and Management Accounting (3 cr)
Design and use of cost management systems to support decision making and influence behavior; includes tracing costs to processes, activities, products, and customers; budgeting and responsibility accounting. May require evening exams.
Prereq: Acct 201 and Acct 202

Acct 404 (s) Special Topics (cr arr)

Acct 414 Intermediate Financial Accounting II (3 cr)
Continuation of Acct 315. Covers more advanced topics in the preparation of general purpose financial statements for external users according to US GAAP. Includes accounting database research. May include evening exams.
Prereq: Acct 315

Acct J415/J515 Advanced Financial Accounting & Reporting (3 cr)
In-depth coverage of selected topics in financial accounting designed to introduce students to applied research in the technical literature and enhance students' ability to interpret and apply accounting standards promulgated by official standard setting entities. May include evening exams. Additional class meetings, projects, and/or assignments required for graduate credit.
Prereq: Acct 414 or Graduate Standing

Acct 440 Fraud Examination (3 cr)
Fraud prevention, detection, investigation, and resolution. May include evening exams.
Prereq: Acct 201

Acct J482/J582 Enterprise Accounting (3 cr)
Carries no credit toward master's degree in accounting. Both business and non-business students will learn the critical role played by financial statements as entrepreneurs try to launch a new business. The trade-offs of various funding sources and their impacts on financial statements are also explored. Content will be presented in an integrated manner, rather than concept by concept, to emphasize the interrelatedness of forecasts and assumptions regarding revenues, costs, and financing on financial statements and thus, the resulting business model. Additional projects and/or assignments required for graduate credit. May involve evening exams.

Acct 483 Fundamentals of Federal Taxation (3 cr)
Income determination, deductions, accounting methods, sales of property, deferral of tax, taxation of the individual, tax research, with primary emphasis on tax planning; the case method is used. May include evening exams.
Prereq: Acct 201 and Acct 202

Acct J484/J584 Federal Taxation of Entities (3 cr)
Taxation of corporations and partnerships with emphasis on tax planning, tax research; the case method is used. Additional class meetings, projects, and/or assignments required for graduate credit. May include evening exams.
Prereq: Acct 483

Acct J486/J586 Contemporary Management Accounting Issues (3 cr)
Synthesis of managerial accounting skills through case analysis, written and oral reports; topics include decision making, divisional performance evaluation, transfer pricing, activity based costing, theory of constraints, and total quality management. Additional class meetings, projects, and/or assignments required for graduate credit. May include evening exams.
Prereq: Acct 385

Acct 492 Auditing and Controls (3 cr)
Value of the audit, concepts of attestation and relevant reporting, theories of evidence, development of risk analysis approach to auditing, with emphasis on internal and performance auditing; documentation and understanding of internal control structure, environment, system design, procedures and testing. May include evening exams.
Prereq: Acct 305 and Acct 315

Acct 498 Accounting Internship Program (1-3 cr, max 3)
Formalized learning experience in an actual work setting. Students work within an accounting related field (accounting, auditing, and taxation) and commit to a minimum of 50 hours of direct supervised work for each semester credit. May include evening exams. This course does not count as an undergraduate accounting elective. Graded P/F.
Prereq: Senior status

Acct 499 (s) Directed Study (cr arr)
Individual sections may be graded P/F.
Prereq: Permission

Acct 500 Master's Research and Thesis (1-6 cr, max 6)

Acct 501 (s) Seminar (cr arr)

Acct 502 (s) Directed Study (cr arr)
Individual sections may be graded P/F.
Prereq: Permission

Acct 504 (s) Special Topics (cr arr)

Acct 515 Advanced Financial Accounting & Reporting (3 cr)
See Acct J415/J515.

Acct 530 Accounting for Public Sector Entities (3 cr)
Conceptual and procedural issues involving accounting, reporting, and auditing public sector organizations; topics include state and local governmental accounting principles, GASB/FASB jurisdiction over not-for-profit organizations, federal financial and performance auditing standards, and relevant current issues. May include evening exams.
Prereq: Acct 315

Acct 561 Comparative Accounting Theory (3 cr)
Seminar on comparative accounting theory and practice including the role of accounting information in financial markets and the impact of those markets on accounting disclosures; introduction to empirical accounting research, the role of standard setting entities, international harmonization of accounting and auditing standards, globalization of business operations, and fluctuations in currency exchange rates. (Fall only)
Prereq: Acct 315

Acct 570 Advanced Accounting Systems Analysis and Controls (3 cr)
Emphasis on the role of computer and information technology in the development, analysis, and operation of accounting information systems; includes advanced coverage of accounting transaction cycles, accounting systems planning and analysis, accounting system design, accounting systems implementation and operation, and the accounting system internal control structure. May include evening exams. (Fall only)
Prereq: Acct 305
Coreq: Acct 492

Acct 582 Enterprise Accounting (3 cr)
See Acct J482/J582.

Acct 584 Federal Taxation of Entities (3 cr)
See Acct J484/J584.

Acct 585 Estate and Elder Planning (3 cr)
Gift and estate tax consequences on property transfer during life and at death, tax research, and estate planning, elder planning, and personal financial planning. May include evening exams. Recommended Preparation: Acct 484/584. (Spring only)
Prereq: Acct 483

Acct 586 Accounting for Management Decision Making and Control (3 cr)
See Acct J486/J586.

COURSES

Course Numbering System & Key to Abbreviations and Symbols

Numbering System

Courses numbered 001 are continuing education unit (CEU) courses; those numbered 010-099 are remedial-level courses carrying no credit; those numbered 100-299 are lower-division courses primarily for undergraduates; 300-499 are upper-division courses primarily for advanced undergraduates, fifth-year students, and graduates; courses numbered 500-599 are intended for and are restricted to students enrolled in the College of Graduate Studies (see regulation B-7 for the exception to this rule); courses numbered 600-699 are intended for and are restricted to students enrolled in a doctoral program; courses numbered 800-999 are intended for and are restricted to students enrolled in the College of Law.

Letter Designations with Numbers

Certain course numbers also include letters preceding the number (i.e. R101, C100):

C - offered by correspondence study only.

H - offered only in University Honors Program.

J - courses conducted jointly, e.g., MusA J365/J565 (Chamber Ensemble), in which students' assignments and expected levels of performance reflect the levels for which they are enrolled.

R - offered only at the University of Idaho at Idaho Falls.

Subtitled Courses

An "s" in parentheses between the number and title of a course indicates that the course may be offered under the main title and/or with an appended subtitle, e.g., "Seminar" and/or "Seminar in the History of the Pacific Northwest." The specific area normally will be listed in the Class Schedule as a separate section of the main course.

Standard Course Numbers

University-wide numbers have been established for certain categories of courses. These courses need not be listed in a subject-field section in the catalog unless they are to be offered regularly; they may be offered and listed in the Class Schedule whenever they are needed. The following course numbers and titles are authorized: 200, 400, 501, 601 Seminar; 203, 403, 503, 603 Workshop; 204, 404, 504, 604 Special Topics; 405, 505, 605 Professional Development; 298, 398, 498, 598, 698 Internship; 299, 499, 502, 602 Directed Study; 500 Master's Research and Thesis; 597 Graduate Practicum; 599 Non-thesis Master's Research; 600 Doctoral Research and Dissertation.

Credit Designations

Immediately following each course title, the number of credits authorized is shown in parentheses. Typical designations are:

(3 cr) - three semester credits (for courses with more than one number, e.g., 101-102-103, the three credits apply to each number).

(1-3 cr) - one to three semester credits.

(3 cr; 2 cr) - three credits fall semester; two credits spring semester.

(1-3 cr, max 3) - one to three credits during any academic session and the course may be repeated until the maximum of three credits has been earned.

(3 cr, max 12) - three credits during any academic session and the course may be repeated until the maximum of twelve credits has been earned (for a course with more than one number, e.g., 301-302, the maximum is overall and applies to the combined numbers).

(cr arr) - credits to be arranged from 1 to 16 credits (may be repeated for credit without restriction as to maximum).

(1-3 cr, max arr) - one to three credits during any academic session, and the course may be repeated.

Other Abbreviations

alt/yrs - offered in alternate years
alt/sem - offered in alternate semesters
coreq - corequisite
cr - credit
dem - demonstration
dept - department
disc - discussion
div - division
exam - examination
GPA - grade-point average
grad - graduate
hr - hour
intro - introduction(-tory)
Jr - junior
lab(s) - laboratory(-ies)
lec - lecture(-s)
perm - permission of instructor
perm of dept - permission of department or subject-field chair
P/F - graded on the basis of pass or fail
prereq - prerequisite
reqd - required
Soph - sophomore
Sr - senior
undergrad - undergraduate

Arabic Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Vertically-related courses in this subject field are: Arbc 101-Arbc 102. A maximum of 16 credits may be earned for vertical credit in any language, in the Department of Modern Languages & Cultures.

Arbc 101 Elementary Modern Standard Arabic I (4 cr)
A beginning course in Modern Standard Arabic. Alphabet and writing system, pronunciation, vocabulary, and functional grammar. Greater emphasis on oral and written expression in second semester. Course delivery combining interactive video distance learning and classroom instruction. Cooperative: open to WSU degree-seeking students. (Fall only)

Arbc 102 Elementary Modern Standard Arabic II (4 cr)
A beginning course in Modern Standard Arabic. Alphabet and writing system, pronunciation, vocabulary, and functional grammar. Greater emphasis on oral and written expression in second semester. Course delivery combining interactive video distance learning and classroom instruction. (Spring only)

Arbc 204 (s) Special Topics (cr arr)

Arbc 499 (s) Directed Study (cr arr)

Accounting Courses

Marla Kraut, Dept. Head, Dept. of Accounting (125A J. A. Albertson Bldg. 83844-3161; phone 208/885-7116).

Acct 200 (s) Seminar (cr arr)

Acct 201 Introduction to Financial Accounting (3 cr)
Overview of the nature and purpose of general purpose financial statements provided to external decision makers; emphasis on use of financial statement information. May include evening exams.

Acct 202 Introduction to Managerial Accounting (3 cr)
Intro to cost behavior and managerial use of accounting information for planning, control, and performance evaluation. May involve evening exams.
Prereq: Acct 201

Acct 203 (s) Workshop (cr arr)

Concurrent Degree Details: Students in the Water Resources concurrent J.D. track must meet all graduation requirements set forth by the College of Graduate Studies for the M.S. or Ph.D. degrees and the College of Law for the J.D. Each student shall have a "graduate committee." The student's graduate committee must meet the requirements of the College of Graduate Studies and must have at least one member from the faculty of the College of Law.

A total of 18 credits may be double counted for a J.D./M.S. concurrent degree, and a total of 21 credits may be double counted for a J.D./Ph.D. concurrent degree under the following guidelines:

No more than 12 credits of M.S. and Ph.D. graduate school credit are allowed toward the J.D. degree. The courses must be approved by the student's advisor in the College of Law with the following guidelines: Courses approved for credit toward a J.D. must be complementary to an emphasis in water law, must enhance the candidates ability to serve clients and the legal profession in the area of water law, and must not be the equivalent substantive coverage to a course offered in the College of Law and available to the student.

No more than 6 credits from Law are allowed toward the M.S. degree in Engineering & Science and Science & Management option areas, no more than 12 credits towards the M.S. degree in Law, Management & Policy option area, and no more than 9 credits toward the Ph.D. degree from the following list:

Law 906	Natural Resources Law Seminar (3 cr)
Law 907	Administrative Law (3 cr)
Law 934	Land-Use Law and Planning (3 cr)
Law 937	Wildlife Law and Policy (3 cr)
Law 938	International Environmental and Water Law (3 cr)
Law 939	Law, Science, and the Environment (2 cr)
Law 942	Water Law I (1 cr)
Law 946	Water and Energy Policy Seminar (2 cr)
Law 947	Environmental Law (3 cr)
Law 948	Natural Resource Law and Policy (3 cr)
Law 949	Native American Law (3 cr)
Law 951	Environmental Policy (3 cr)
Law 969	Water Law II (2 cr)
Law 979	Native American Natural Resource Law (3 cr)

Satisfactory completion of both degrees is required to qualify for the exchange credit, the degrees are granted concurrently. The first year of study for concurrent M.S. or Ph.D. students must be exclusively in the College of Law. M.S. students are required to write a thesis. Ph.D. students are required to write a dissertation. If the student fails to complete the M.S. or Ph.D. in Water Resources, only 6 credits from the Water Resources Program are allowed toward the J.D. degree. If a student fails to complete the J.D. degree, the student must satisfy all requirements for the particular option area in the Water Resources Program to receive the M.S. or Ph.D. degree.

Questions regarding the concurrent degree program should be addressed to the Water Resources Program Coordinator (208/885-6113) or to the College of Law (208/885-6423).

Program in Women's Studies

Sandra Reineke, Program Coordinator (sreineke@uidaho.edu); Adjunct Faculty: Katherine G. Aiken, Janice Capel Anderson, Anna Banks, Ian Chambers, Mary Clearman Blew, Traci Craig, Janice W. Fletcher, Annette Folwell, Stephan P. Flores, Walter A. Hesford, Rebecca Jager, Georgia Johnson, Ellen E. Kittell, Ryanne Pilgeram, Sean Quinlan, Sandra Reineke, David Sigler, Debbie Storrs, Alexandra Teague, Nancy J. Wanamaker, J. Gary Williams.

Women's Studies is an interdisciplinary academic field devoted to the study of topics concerning women and men, gender and sexuality, feminist theory and research, social history, public health, and women's and men's participation in the arts and popular culture. The Women's Studies minor offers an interdisciplinary program that allows students to develop critical thinking skills in relation to the scholarly pursuit of knowledge about women, men, the history of feminism, and the social construction of cultural variables, such as gender, sexual identity, age, and race and ethnicity. The Women's Studies minor is an asset in the job market for women and men in both the public and private sectors as women increasingly pursue diverse vocations and careers and find it necessary to examine and to validate their positions as the number of women as supervisors, co-workers, and clients continues to grow. As rigid gender roles become more fluid, men also seek to understand the meaning of these changes for their academic work and lives.

Courses

See the course description section for courses in Women's Studies (WmSt).

Women's Studies Academic Minor Requirements

Women's and Gender Studies Minor

WmSt 201	Intro to Women's Studies (3 cr)

Elective Courses chosen from a minimum of two disciplines (18 cr):

Comm 432	Gender and Communication (3 cr)
Engl 481	Women's Literature (3 cr—may be retaken once to total 6 credits)
FCS 240	Intimate Relationships (3 cr)
FCS 440	Contemporary Family Relationships (3 cr)
FCS 445	Issues in Work and Family Life (3 cr)
FCS 462	Eating Disorders (2 cr)
Hist 357	Women in Pre-Modern European History (3 cr)
Hist 420	History of Women in American Society (3 cr)
PolS 423 or PolS 523	Politics, Policy and Gender (3 cr)
Psyc 315	Psychology of Women (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)
Soc 325	Family, Violence, and Society (3 cr)
Soc 427 or Anth 427	Racial and Ethnic Relations (3 cr)
Soc 424	Sociology of Gender (3 cr)
WmSt 499	Directed Study (3 cr)

Courses to total 20 credits for this minor

With prior approval of the Women's Studies committee, a student may also include credit from survey courses, special topics courses, or seminars meeting the guidelines for inclusion of courses in a Women's and Gender Studies minor. No more than 3 credits may count toward both the student's major and minor.

WR 506 Interdisciplinary Methods in Water Resources (3 cr)
WR 507 Integrated Water Resources Projects (3 cr)
One 500- (or 900- in LAW) level elective course in an option area outside the main option area (3 cr for Ph.D. only)

Water Resources Engineering & Science Option

Entry Requirements: Coursework in the following is required for M.S. and Ph.D. admission to the Water Resources Engineering & Science Option Area. Provisional admission for M.S. students may be granted to those who have completed the majority of this coursework, provided the remaining coursework is completed as deficiency requirements.

Calculus (minimum of 9 credits)
Differential Equations (3 credits)
Statistics for Scientists/Engineers (3 credits)
Chemistry (minimum of 4 credits)
Physics (minimum of 4 credits)
Engineering Fluid Mechanics (minimum of 3 credits)

Core Courses

M.S. students are required to take 6 credits, and Ph.D. students are required to take 9 credits from the following (6 or 9 cr):

BAE 552	Environmental Water Quality (3 cr)
BAE 558	Fluid Mechanics of Porous Media (3 cr)
CE 421 or BAE 451	Engineering Hydrology (3 cr)
CE 526	Aquatic Habitat Modeling (3 cr)
CE 535	Fluvial Geomorphology and River Mechanics (3 cr)*
Hydr 509	Quantitative Hydrogeology (3 cr)
Hydr 576	Fundamentals of Modeling Hydrogeologic Systems (3 cr)
Soil 515	Soil and Environmental Physics (3 cr)

*Note: Either CE 526 or CE 535 may be used to satisfy this requirement, but not both.

Elective Courses: As noted under Common Courses for Ph.D. only, an elective course *must* be in either the Science & Management or Law, Management & Policy Option Areas. A core course may be considered an elective course once the core requirements are satisfied. A detailed list of elective courses for this option area is provided on the Water Resources Program web site (water.uidaho.edu).

Water Resources Science & Management Option

Entry Requirements: Coursework in the following is required for (M.S. and Ph.D.) admission to the Water Resources Science & Management Option Area. Provisional admission for M.S. students may be granted to those who have completed the majority of this coursework, provided the remaining coursework is completed as deficiency requirements.

Calculus (6 credits)
Statistics (3 credits)
Chemistry or Physics or Biology/Ecology (6 credits total)

Core Courses

M.S. students are required to take 6 credits, and Ph.D. students are required to take 9 credits from the following (6 or 9 cr):

Aquatic Ecology:

Fish 503	Workshop (3 cr)
Fish 530	Stream Ecology (3 cr)

Fluvial Geomorphology and Aquatic Habitat:

CE 526	Aquatic Habitat Modeling (3 cr)
CE 535	Fluvial Geomorphology and River Mechanics (3 cr)

Physical Hydrogeology:

BAE 450	Environmental Hydrology (3 cr)*
Fish 515	Large River Fisheries (2 cr)*

Statistics:

EnvS 541	Sampling and Analysis of Environmental Contaminants (3 cr)
Stat 431	Statistical Analysis (3 cr)

Subsurface Hydrology:

Hydr 509	Quantitative Hydrogeology (3 cr)**
Soil 515	Soil and Environmental Physics (3 cr)**

Water Quality:

BAE 552	Environmental Water Quality (3 cr)

**Note: Either BAE 450 or Fish 515 may be used to satisfy this requirement, but not both.*

***Note: Either Hydr 509 or Soil 515 may be used to satisfy this requirement, but not both.*

Elective Courses: As noted under Common Courses for Ph.D. only, an elective course *must* be in either the Engineering & Science or Law, Management & Policy Option Areas. A core course may be considered an elective course once the core requirements are satisfied. A detailed list of elective courses for this option area is provided on the Water Resources Program web site (water.uidaho.edu).

Water Resources Law, Management & Policy Option

Entry Requirements: A background in government, public policy, or management is required for M.S. and Ph.D. admission to the Law, Management, and Policy Option Area. Students without an undergraduate degree in Political Science, Public Policy, Government, or entering the concurrent J.D. program, or related field may be granted provisional admission, but they are required to complete coursework (in addition to standard program and option area requirements) that demonstrates a minimum level of competency. This should include:

American Government (6 credits at the 400 level)
Public Policy (6 credits at the 400 level) **or**
Both requirements above may be met by taking equivalent law courses including:
Constitutional Law and Civil Procedure (12 credits at the 900 level, as approved by major advisor)
Subject to approval of the Water Resources Program curriculum committee, other relevant completed courses (or professional experience) may be substituted to meet these requirements.

Core Courses

All students in the Water Resources Law, Management & Policy Option Area are required to complete:
Research or Analytical Methods (3 cr determined in consultation with committee)
The student and committee select the appropriate mix of Law, Management and Policy courses from the following list. Law students are encouraged to take non-law courses. Non-law students are encouraged to take courses from at least two disciplines. M.S. students are required to take 6 credits, and Ph.D. students 9 credits from the following (6 or 9 cr):

AgEc 577	Law, Ethics, and the Environment (3 cr)
CSS 573	Planning & Decision Making for Watershed Management (3 cr)
Law 942	Water Law I (1 cr)
Law 946	Water and Energy Policy Seminar (2 cr)
Law 947	Environmental Law (3 cr)
Law 951	Environmental Policy (3 cr)
PolS 554	Public Organization Theory (3 cr)
PolS 562	Natural Resource Policy (3 cr)
PolS 572	Local Government Politics and Administration (3 cr)

Elective Courses: As noted under Common Courses for Ph.D. only, an elective course *must* be in either Engineering & Science or Science & Management Option Areas. A core course may be considered an elective course once the core requirements are satisfied. A detailed list of elective courses for this option area is provided on the Water Resources Program web site (water.uidaho.edu).

Water Resources Concurrent J.D. Degree

Entry Requirements: Completion of requirements for admission to both the College of Law and the specific Water Resources option area is required for (M.S. and Ph.D.) admission to earn the Water Resources Concurrent J.D. Degree. Students are required to apply separately to the College of Law and to the Water Resources Program in the College of Graduate Studies, and on acceptance to each college, must apply to the concurrent degree program. Acceptance to both colleges does not have to occur simultaneously. A Steering Committee consisting of the Director of the Water Resources Program, the Associate Dean for Administration and Students of the College of Law, one non-law member of the Water Resources faculty, and one member of the Law faculty makes admission decisions to the concurrent degree program.

Common/Core Courses: All students seeking to earn the Water Resources concurrent J.D. degree are required to complete coursework as specified for the particular Water Resources Option Area for the M.S. or Ph.D., as well as coursework required by the Law School for a J.D.

Elective Courses: The student and faculty committee will select courses appropriate to satisfy the requirements of the Water Resources Program in the College of Graduate Studies and the J.D. in the College of Law.

Theatre Arts Graduate Degree Program

The Master of Fine Arts degree at the University of Idaho is a rigorous three-year, 60-72 hour degree designed for talented students wishing to prepare themselves for a career in the professional theatre. Degree tracks in areas of design, directing, performance and technical production are built around specific curriculum categories and individual courses are selected by the candidate in consultation with his or her major professor. Student progress is monitored by portfolio review or performance jury each semester. Exit procedures from the program include a creative project and comprehensive exam.

Candidates must fulfill the general requirements of the Graduate College and a minimum of 60 credits from the course groupings listed below:

STUDIO AREA (12-16 cr). A minimum of 12 credits are taken in course work directly related to an area of specialization. The studio area of study is individualized to the candidate's specific needs and areas of weakness. Candidates will enroll in M.F.A. Studio each semester of residence excluding summers.

RELATED STUDIO AREA (9-12 cr). A minimum of 9 credits are taken in a related studio area which generally pertains directly to the candidate's area of specialization.

CRAFT AREA (8-12 cr). A minimum of 8 credits are taken in courses to develop specific skills associated with the studio area.

HISTORY/LITERATURE/CRITICISM (9-12 cr). A minimum of 9 credits are taken in history or literature courses which relate directly to the studio area. Courses taken to fulfill this requirement might include dramatic literature, social history, art history, architectural history, and theatre history.

INTERNSHIP (12 cr). A maximum of 12 credits of The 598, Internship, are taken to augment course work with professional experiences with professional regional theatres in the area.

MFA JURY/PORTFOLIO REVIEW (5 cr). A minimum of 5 credits of The 515, MFA Jury/Portfolio Review, must be completed with a grade of B or better before the awarding of the degree. A maximum of 1 credit of The 515 may be taken each semester.

M.F.A. EXIT PROCEDURES (3 cr). Exit procedures vary with the area of specialization. In each case the exit procedure revolves around a thesis project or exam completed sometime in the last two semesters of residence. Projects are designed in consultation with the candidate's graduate committee. Candidates must enroll in The 596, M.F.A. Exit Project, during the semester the project is undertaken.

Program in Water Resources

Jan Boll, Director (216 Morrill Hall 83844-3006; phone 208/885-6113; water@uidaho.edu; www.water.uidaho.edu). Core Faculty: Barbara Cosens, Gary Johnson, Brian P. Kennedy, Timothy E. Link, Jerrold A. Long. . Affiliate Faculty: Elena Aizen, Vladimir Aizen, Richard G. Allen, Erik Coats, Maxine Dakins, Angelique Eaglewoman, Levan Elbakidze, Jerry Fairley, Fritz Fiedler, Alex Fremier, Rodney Frey, Paul Gessler, Dale Goble, Peter Goodwin, Charles C. Harris, Robert Heinse, Thomas F. Hess, Lorie Higgins, Steven J. Hollenhorst, Karen Humes, Jodi Johnson-Maynard, Kathleen Kavanagh, Marla Kraut, Jim Liou, Paul McDaniel, Gregory Möller, Matt Morra, Howard Neibling, Jay O'Laughlin, Michael O'Rourke, John Lawrence, James Osiensky, Sandra Pinel, Russel Qualls, Jae Ryu, Richard Seamon, Manoj Shrestha, Alistair Smith, Eva Strand, Daniel Strawn, Daniele Tonina, John Tracy, , Von Walden, Philip Watson, Kelly Wendland, Frank Wilhelm, Barbara C. Williams,, Patrick Wilson J.D. Wulfhorst, Elowyn Yager. General Faculty: James Ding Johnson, Gary Machlis, Robert L. Mahler, John Marshall, Robert Smith, Garth Taylor, Scott Wood.

The Water Resources Program offers M.S. and Ph.D. degrees in Water Resources with the ability to complete a concurrent M.S./J.D. in 4 years and a Ph.D./J.D. in 6 years. The three program option areas are Water Resources Engineering & Science, Water Resources Science & Management, and Water Resources Law, Management & Policy. The program trains students to address complex water resources issues by building disciplinary depth in concert with multidisciplinary breadth to understand focused problems and communicate across disciplines.

The Water Resources Program forms a coordinated effort that provides interdisciplinary study options in water resources. Participants are drawn from the Colleges of Agriculture and Life Sciences (CALS), Business and Economics (CBE), Engineering (ENG), Law, (LAW), Science (COS), Letters, Arts, and Social Sciences (CLASS), and Natural Resources (CNR). The Program includes faculty from the Moscow campus, and Boise, Idaho Falls, Twin Falls and Coeur d'Alene/Post Falls Centers. Water Resources faculty collaborate with the Idaho Water Resources Research Institute and faculty at the Boise State University, Idaho State University and Washington State University.

Graduate Degree Programs

Students in the Water Resources Program must meet the general requirements set forth by the College of Graduate Studies (see Part Four) for the M.S. or Ph.D. degrees with the following exceptions. The degree of M.S. in Water Resources requires 29 credits of course work and completion of a thesis, equivalent to a minimum of 6 credits of Research and Thesis, for a total of 35 credits (note for transfers: an M.S. student must complete at least 18 of the total 35 required credits at the University of Idaho while matriculated in the College of Graduate Studies). The degree of Ph.D. in Water Resources requires a minimum of 39 credits of course work beyond the bachelor's degree and completion of a dissertation, for a total of 78 credits (note for transfers: A Ph.D. student must complete at least 39 of the 78 required credits at the University of Idaho while matriculated in the College of Graduate Studies). Both M.S. and Ph.D. degrees have higher credit requirements for course work than those of the College of Graduate Studies to allow students to develop depth in a water resources subject area while accommodating breadth in the interdisciplinary areas. Students in the Water Resources concurrent J.D. track must meet the general requirements set forth by the College of Graduate Studies and Water Resources Program for the M.S. or Ph.D. degrees and the College of Law for the J.D. The following sections summarize specific requirements for the three option areas as well as for the joint M.S./ J.D. and Ph.D./ J.D.

Thesis/Dissertation Requirements. Each thesis/dissertation shall reflect integration beyond a single discipline. Integration can be achieved throughout the thesis/dissertation, or through a separate interdisciplinary chapter (possibly co-authored) that specifically integrates methods and/or information from at least two distinct disciplines to advance the argument(s) in the thesis/dissertation. All chapters shall be integrated into a coherent whole. Each student shall evaluate the interdisciplinarity of their thesis/dissertation, at the proposal stage by completing the Interdisciplinary Thesis/Dissertation Proposal Approval form, and prior to the final defense by completing the Interdisciplinary Thesis/Dissertation Approval Form.

Committee Requirements. Each committee shall be composed of members from more than one discipline. For the M.S. a minimum of three members is required; for the Ph.D. a minimum of four members is required. All committee members must approve a) the student's study plan, b) the interdisciplinary component(s) of the thesis/dissertation proposal by signing the Interdisciplinary Thesis/Dissertation Proposal Approval Form, and c.) the interdisciplinary component(s) of the thesis/dissertation at the time of the final defense by signing the Interdisciplinary Thesis/Dissertation Approval Form.

Water Resources Admission Requirements and Procedures

Admission to this program is highly competitive and recruitment is international in scope. Even exceptional applicants are admitted only when there is an opening with one of the participating faculty. As required by the College of Graduate Studies, all applicants must provide: official transcripts from all colleges and/or universities previously attended, a resume or curriculum vitae, a statement of research interests that clearly identifies the research he or she would like to pursue at the University of Idaho, a statement of academic and career goals, and three letters of reference that speak to the applicant's aptitude for graduate research in water resources. For applicants for whom English is a second language, a TOEFL score of at least 600 (CBT 250) is required. Students can apply to the concurrent degree program only after application and admission to the UI College of Law and to the Water Resources Program.

To apply: Please go to the University of Idaho Graduate Admissions webpage at www.students.uidaho.edu/gradadmissions or contact the Graduate Admissions Office, University of Idaho, P.O. Box 444266, Moscow, ID 83844-4266.

Water Resources Graduate Curricular Requirements

Common Courses: Students in both M.S. and Ph.D. degree programs are required to fulfill a set of common courses, applicable to all three Water Resources Option Areas. The common courses are:

WR 501	Seminar (1 cr)

Arts and entertainment is one of this country's fastest growing sectors, and the career options continue to expand along with its economic impact. The career prospects are vast literally hundreds of possibilities in professional theatre, film, television, education, playwriting, drama-turgy, arts management and production, art therapy and recreational drama for special populations. The department's program of study offers a solid foundation for competitive placement in distinguished graduate programs.

The B.A. and B.S. degrees are available for students interested in the study of theatre within a liberal arts background, or as part of a teacher education program. The B.F.A. is a rigorous, competitive program of study for students interested in pursuing careers in professional theatre. An audition or portfolio review as well as faculty approval are required for acceptance in the program. The progress of B.F.A. candidates is monitored closely each semester, utilizing performance juries and portfolio reviews. A core of theatre work is required of all theatre majors. Specialization is available in performance or design at the undergraduate level, and students enjoy flexibility in shaping their studies according to particular goals or interests. Minors are available in theatre for those students wishing to expand the focus of their degree program.

Productions, which include collaborative partnerships with the university's music and dance programs, helps students foster a close working relationship with faculty, and enable the kind of growth that comes through working with professional artists. Class projects and studio work are fully integrated with the department's season to create a balance between theory and skill development.

The department also offers Idaho's only M.F.A. in theatre, and students may select an area of emphasis in acting, directing or design and/or technology (with specialization in scenery, costumes or lighting). Numerous opportunities exist to design, perform and direct productions, which are considered an integral part of graduate training. If qualified, graduate students may assist in teaching basic course work to undergraduates. Admission requires a minimum of 3.0 GPA, a statement of goals or intent, three letters of recommendation, and a portfolio of design work or a 4-6 minute audition tape.

The department has two theatre venues as well as a performance studio that is used for productions, rehearsals and classroom. The elegant 417-seat Hartung Theatre features a semi-thrust proscenium stage, new digital lighting and fully-equipped shops for scenery and costume construction. The Kiva Theatre is an intimate 125-seat performance studio, equipped for flexible staging, including theatre-in-the-round. The 50-seat Arena, which is used for both productions and as a class laboratory, is also managed by the Student Theatre Organization for its Arena Stage Series to showcase student directors, designers and actors.

The Hartung Theatre is home to Idaho Repertory Theatre, the university's professional summer theatre company, which was established in 1953. Numerous theatre artists participate in the summer productions working with professional designers, directors and actors from across the country. Students are also encouraged to seek out internships with other professional theatre companies to enhance their studies.

For more information on the department, its programs of study and theatre productions, visit our web site at www.uitheatre.com, or call (208) 885-6465.

Courses

See the course description section for courses in Theatre Arts (The).

Theatre Arts Undergraduate Curricular Requirements

Theatre Arts (B.A. or B.S.)

To be eligible for graduation, theatre arts students taking B.A./B.S. options in theatre must achieve a minimum grade of C in all theatre courses required by their major. To participate in departmental productions, a student must maintain a minimum 2.50 overall GPA.

Required course work for students pursuing the B.A. in theatre arts includes (1) the university requirements (see regulation J-3), (2) the general CLASS core requirements, and (3) the theatre arts core courses listed below.

Required course work for students pursuing the B.S. in theatre arts includes (1) the university requirements (see regulation J-3), (2) the general CLASS core, an established minor, or courses in a related field approved by the Theatre Arts Department (20 cr), and (3) the theatre arts core courses listed below.

The 101	Introduction to the Theatre (3 cr)
The 103, The 104	Theatre Technology I, II (6 cr)
The 105 The 106	Basics of Performance (6 cr)
The 190	Theatre Practice (1 cr)
The 201	Scene Design I (3 cr)
The 202	Costume Design I (3 cr)
The 205	Lighting Design I (3 cr)
The 206	Theatrical Makeup (1 cr)
The 371	Play Analysis (3 cr)
The 390	Theatre Practice II (at least 1 cr in 3 different semesters)
The 468	Theatre History I (3 cr)
The 469	Theatre History II (3 cr)
The 473	Senior Capstone Seminar (1 cr)
The 483	Senior Capstone Project (1 cr)

Electives in design/production (3 cr)

Courses to total 120 credits for this degree

Theatre Arts (B.F.A.)

The Bachelor of Fine Arts degree is a rigorous training program for students wishing to pursue a career in the professional theatre. Admittance to the B.F.A. program in theatre requires an audition or portfolio review and faculty approval. B.F.A. candidates are closely monitored throughout enrollment utilizing performance juries and portfolio reviews each semester. Specific areas of study within the degree include (but are not limited to) acting, technical production, scenery, lighting, or costume design. Individual courses are selected in consultation with an advisor, so the degree is tailored as closely as possible to a student's specific needs and interests. Students are encouraged to seek out internships with professional theatre companies as part of their program of study.

To be eligible for admittance, continued candidacy, and graduation, the B.F.A. candidate in theatre arts must achieve a minimum grade of C in each theatre course required for the major. To participate in departmental productions, a student pursuing the B.F.A. must maintain a minimum 3.00 overall GPA each semester.

Required course work includes (1) the university requirements (see regulation J-3), (2) the departmental requirements for the B.S. or B.A., and (3) a 30-credit area of departmentally approved emphasis.

Musical Theatre (B.F.A.)

The Bachelor of Fine Arts degree in Musical Theatre is a rigorous training program for students wishing to pursue a career in musical theatre. Admittance to the B.F.A. program in musical theatre requires a voice audition, acting audition or portfolio review, and faculty approval. B.F.A. candidates are closely monitored throughout enrollment utilizing performance juries and portfolio reviews each semester. Students are encouraged to seek out internships with professional theatre companies as part of their program of study.

For information on an undergraduate major in Musical Theatre, see the School of Music section.

Theatre Arts Academic Minor Requirements

Technical Theatre Minor

The 103, The 104	Theatre Technology I, II (6 cr)
The 201	Scene Design I (3 cr)
The 202	Costume Design I (3 cr)
The 205	Lighting Design I (3 cr)
The 307	Advanced Theatrical Make-up (3 cr)

Upper-division technical theatre course work (3 cr)

Courses to total 20 credits for this minor

Theatre Arts Minor

The 103, The 104	Theatre Technology I, II (6 cr)
The 105, The 106	Basics of Performance (6 cr)
The 305	Intermediate Acting (3 cr)
The 307	Advanced Theatrical Make-up (3 cr)
The 471	Directing (3 cr)

Courses to total 20 credits for this minor

Non-thesis Anthropology Electives

One of the following:

Anth 509	Anthropological Field Methods (1-8 cr, max 8)
Anth 598	Internship (cr arr)

Non-thesis Subfield (complete one subfield):

Physical Anthropology

Anth 511	Human Evolution (3 cr)
Anth 512	Human Races (3 cr)

Archaeology

Anth 530	Introduction to Archaeological Method and Theory (3 cr)

One of the following:

Anth 453	Archaeological Lab Techniques (3 cr)
Anth 532	Historical Artifact Analysis (3 cr)
Anth 549	Lithic Technology (3 cr)

Cultural Anthropology

Anth 528	Social and Political Organization (3 cr)
Anth 562	Human Issues in International Development (3 cr)

A minimum of 18 credits must be at the 500 level. Anthropology courses must be at 400 or 500 levels (cross-listed 400-level/500-level courses must be taken at the 500-level), while supporting courses can include 300 level. No more than 12 credits can be transferred from other institutions and an official copy of the student's transcripts from each institution must be on file in the Registrar's Office. Such institutions must have a graduate program and the work taken for graduate credit.

Note: Students who have already received credit for any core course or an equivalent, except for the field school or internship, will not need to retake it, but will substitute appropriate courses with approval from their advisor.

Bi-State Department of Statistical Science

Christopher Williams, Dept. Chair (415A Carol Ryrie Brink Hall 83844-1104; phone 208/885-2929). Faculty: Erkan O. Buzbas, Raymond Dacey, Brian C. Dennis, Paul Hohenlohe, Timothy R. Johnson, Paul Joyce, Luke Harmon, John J. Lawrence, Stephen S. Lee, Bahman Shafii, Michelle Wiest,.

Statistics encompasses course work in designing and analyzing experiments, planning and interpreting surveys, and exploring relationships among variables observed on social, physical, and biological phenomena. The applied nature of the program allows the student to develop data analysis tools for such diverse areas as business and economics, crop and animal production, biological sciences, human behavior, education, engineering, and natural resource management. The statistics program thus supports major programs in other disciplines. Within the Department of Mathematics, a statistics option is available under applied mathematics leading to a baccalaureate degree.

Graduate study in statistics is designed for two types of students. Students whose undergraduate degrees are in subject matter disciplines will prepare for a career involving the application of statistical methods to their particular area of interest. Students with degrees in mathematics, computer science, or similar areas will prepare for a career in technical data analysis, statistical computing, and teaching of introductory-level statistics.

All students who wish to do graduate work in statistics should have a background in quantitative methods including Math 275, Analytic Geometry and Calculus III, and 6 hours of statistics including Stat 431 or equivalent. Additionally, students should have knowledge of at least one higher level programming language.

Faculty members in the Department of Statistical Science will be happy to answer questions about specific programs and courses. Such questions can also be addressed to the department chair (Brink 415A; phone 208/885-2929).

Courses

See Part 6 for courses in Statistics (Stat).

Statistical Science Academic Minor Requirements

Statistics Minor

Stat 422	Sample Survey Methods (3 cr)
Stat 431	Statistical Analysis (3 cr)

One of the following (4 cr)

Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus (4 cr)

One of the following (3 cr)

Stat 251	Statistical Methods (3 cr)
Stat 301	Probability and Statistics (3 cr)

Three of the following courses (9 cr):

Bus 421	Marketing Research and Analysis (3 cr)
Math 330	Linear Algebra (3 cr)
Math 451	Probability Theory (3 cr)
Math 452	Mathematical Statistics (3 cr)
Stat 433	Econometrics (3 cr)
Stat 456	Quality Management (3 cr)
Stat 514	Nonparametric Statistics (3 cr)
Stat 519	Multivariate Analysis (3 cr)

Courses to total 20 credits for this minor

Statistical Science Graduate Academic Certificates Requirements

Process & Performance Excellence Graduate Academic Certificate

Bus 439	Systems and Simulation (4 cr)
Bus 456 or Stat 456	Quality Management (3 cr)
Stat 431	Statistical Analysis (3 cr)
Stat 507	Experimental Design (3 cr)
Stat 519	Multivariate Analysis (3 cr)

Courses to total 16 credits for this certificate

Statistics Academic Graduate Certificate

Stat 431	Statistical Analysis (3 cr)

One of the following (3 cr)

Stat 422	Sample Survey Methods (3 cr)
Stat 507	Experimental Design (3 cr)

Two or more of the following (6-9 cr):

Stat 428	Geostatistics (3 cr)
Stat 451	Probability Theory (3 cr)
Stat 452	Mathematical Statistics (3 cr)
Stat 514	Nonparametric Statistics (3 cr)
Stat 519	Multivariate Analysis (3 cr)
Stat 555	Statistical Ecology (3 cr)
Stat 565	Computer Intensive Statistics (3 cr)

Courses to total 15 credits for this certificate

Statistical Science Graduate Degree Program

Master of Science, Statistical Science major. Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Statistical Science. See the College of Graduate Studies section for the applicable general requirements for M.S. degree.

An individual graduate program is tailored for the student, but all students must complete a basic core requirement of 24 credits and either i) a thesis (Stat 500), ii) an internship report (Stat 598), or iii) a research course (6 credits of Stat 597). The core requirements are Stat 422, Stat 451, Stat 452, Stat 501 (1 credits), Stat 507, Stat 519, Stat 550, Stat 565, and Stat 597 (2 cr). A maximum of 6 credits of Stat 500 may be counted toward the thesis degree option.

Department of Theatre Arts

Dean Panttaja, Dept. Chair (204 Shoup Hall 83844-2008; phone 208-885-6465, www.uitheatre.com). Faculty: Robert C. Caisley, Ann Hoste, David Lee-Painter, Stephanie S. Miller (Emeritae), Dave Nofsinger, Dean F. Panttaja, Kelly M. Quinnett, Robert Valliere.

The programs offered by UI's Department of Theatre Arts are designed to encourage the development of the whole person, which is the hallmark of a liberal arts education.

Through the study of drama, students learn how to use the elements of theatre as performance as well as process. Performance experience helps students gain a deeper understanding of themselves and human behavior. Students learn how to manipulate space, lighting, color and texture in the studies of design. Collaborative participation in the creative process helps students develop the teamwork skills needed to be effective and successful members of contemporary society.

Soc 301	Introduction to Diversity and Stratification (3 cr)
Soc 333	Elite and White Collar Crime (3 cr)
Soc 401	Justice Policy Issues (3 cr)
Soc 420	Sociology of Law (3 cr)
Soc 424	Sociology of Gender (3 cr)
Soc 427	Racial and Ethnic Relations (3 cr)
Soc 439	Inequalities in the Justice System (3 cr)

Courses to total 21 credits for this minor

Sociology Minor

Soc 101	Introduction to Sociology (3 cr)
Soc 310	Methods of Social Research or research methods course acceptable to student's major field (3 cr)

One 200-level sociology course (3 cr)
Sociology electives (9 cr must be in upper-division courses) (12 cr)
Courses to total 20 credits for this minor

Sociology & Anthropology Undergraduate Academic Certificates Requirements

Archaeological Technician Undergraduate Academic Certificate

Note: A minimum overall GPA of 3.00 and a grade of 'B' or higher is required in all coursework for this academic certificate.

Anth 231	Introduction to Archaeology (3 cr)
Anth 409	Anthropological Field Methods (3 cr)*
Anth 430	Introduction to Archaeological Method and Theory (3 cr)
Anth 432	Historical Artifact Analysis (3 cr)
Anth 449	Lithic Technology (3 cr)
Anth 453	Archaeological Lab Techniques (3 cr)
Anth 454	Archaeological Field Techniques (Professional Internship) (3-6cr)
Engl 317	Technical Writing (3 cr)

Electives (9 cr):

Anth 100	Introduction to Anthropology (3 cr)
Anth 230	World Prehistory (3 cr)
Anth 329	North American Indians (3 cr)
Anth 422	Plateau Indians (3 cr)
Geog 385	GIS Primer (3 cr)
Geol 101, Geol 101L	Physical Geology and Lab (4 cr)
Geol 335	Geomorphology (3 cr)
Hist 423	Idaho and the Pacific Northwest (3 cr)
Hist 428	History of the American West (3 cr)
Stat 251	Statistical Methods (3 cr)

Courses to total 12 credits for this certificate

** Although students can fulfill their field school requirement through the University of Idaho, it can also be fulfilled by attending a field school from a fellow institution. The professional internship must be fulfilled outside the University with a cooperating agency, or CRM firm.*

Diversity and Stratification Undergraduate Academic Certificate

Academic Exploration Component (6-9 cr):

Soc 301	Introduction to Diversity and Stratification (3 cr)

Focus Course Electives (3-6 cr):

Anth 220	Peoples of the World (3 cr)
Anth 329	North American Indians (3 cr)
Anth 462	Human Issues in International Development (3 cr)
Comm 335	Intercultural Communication (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 432	Gender and Communication (3 cr)
Comm 491	Communication and Aging (3 cr)
JAMM 340	Cultural Diversity and the Media (3 cr)
JAMM 490	Global Media (3 cr)
Psyc 315	Psychology of Women (3 cr)
Soc 422	Religion, Culture & Society (3 cr)
Soc 423	Social Stratification (3 cr)
Soc 424	Sociology of Gender (3 cr)
Soc 427	Racial and Ethnic Relations (3 cr)
Soc 439	Inequalities in the Justice System (3 cr)

Application Component Electives (3 cr, no more than 6 cr can apply to this certificate):

Anth 203	Workshop (1-2 cr, each)
Anth 403	Workshop (1-2 cr, each)
Soc 203	Workshop (1-2 cr, each)
Soc 403	Workshop (1-2 cr, each)

Experiential Learning (0-3 cr)
Courses to total 12 credits for this certificate

Global Justice Undergraduate Academic Certificate

For the curricular requirements of the academic certificate in global justice, see the Department of Philosophy section.

Professional Ethics Undergraduate Academic Certificate

For the curricular requirements of the academic certificate in professional ethics, see the Department of Philosophy section.

Sociology & Anthropology Graduate Degree Program

Master of Arts. Major in Anthropology. Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Sociology & Anthropology. See the College of Graduate Studies section for the general requirements applicable to each M.A. degree.

Thesis Option. Only the thesis option for the M.A. degree in anthropology is available. Course work will include either 30 credits plus a foreign language proficiency examination or 36 credits and no foreign language requirement. Students who as undergraduates did not take at least one course in each of the four subfields of anthropology and a course in statistics will be asked to do so (in consultation with an advisor) at the beginning of their graduate programs. No graduate credit will be awarded for courses taken to satisfy such deficiencies. Graduate students must demonstrate competence in each of the four subfields of anthropology. The thesis option M.A. core along with the expected undergraduate preparation (or courses taken as deficiencies as a graduate student) are designed for this purpose. Thesis students complete the core courses, supporting field's electives, the anthropology electives, and the thesis credits.

Anth 420	Anthropological History and Theory (3 cr, max 9)
Anth 500	Master's Research and Thesis (6-10 cr)
Anth 510	Research Methods in Anthropology (3 cr)
Anth 511	Human Evolution (3 cr)
Anth 521	Contemporary Issues in Anthropological Theory (3 cr)
Anth 530	Introduction to Archaeological Method and Theory (3 cr)

Thesis Supporting Field's Electives (up to 6 cr)
Thesis Anthropology Electives

Both the 30- and 36-credit M.A. program must include at least 6 but no more than 10 thesis credits, although more than 10 credits of Anth 500 may be taken. A minimum of 18 credits must be at the 500 level. Anthropology courses must be at the 400 or 500 level, while supporting courses can include 300 level. No more than 12 credits can be transferred from other institutions and an official copy of the student's transcripts from each institution must be on file in the Registrar's Office. Such institutions must have a graduate program and the work taken for graduate credit.

Note: Students who have already received credit for Anth 410, Anth 411, Anth 420 or Anth 430 will substitute appropriate courses for Anth 420, Anth 510, Anth 511, or Anth 530 with approval from the student's advisor.

Non-thesis option. Course work will include either 30 credits plus a foreign language (or language other than the student's native language) proficiency examination or 36 credits and no foreign language requirement. Students who as undergraduates did not take at least one course in cultural anthropology, archaeology, and physical anthropology and a course in statistics will be required to do so in consultation with an advisor at the beginning of their graduate programs. In general, no graduate credit will be awarded for courses taken to satisfy such deficiencies. Non-thesis students complete the core courses, the support field's electives, the anthropology electives, non-thesis credits, and select one subfield emphasis.

Anth 420	Anthropological History and Theory (3 cr, max 9)
Anth 510	Research Methods in Anthropology (3 cr)
Anth 521	Contemporary Issues in Anthropological Theory (3 cr)
Anth 530	Introduction to Archaeological Method and Theory (3 cr)
Anth 599	Non-thesis Master's Research (6 cr)

Non-thesis Supporting Field's electives (up to 6 cr)

Sociology & Anthropology Undergraduate Curricular Requirements

Anthropology (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3), the general requirements for either the B.A. or B.S. degree, and:

Anth 100	Introduction to Anthropology (3 cr)
Anth 220	Peoples of the World (3 cr)
Anth 230	World Prehistory (3 cr)
Anth 231	Introduction to Archaeology (3 cr)
Anth 251	Introduction to Physical Anthropology (3 cr)
Anth 410	Research Methods in Anthropology (3 cr)
Anth 420	Anthropological History and Theory (3 cr)
Anth 428	Social and Political Organization (3 cr)
Soc 101	Introduction to Sociology (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3 cr):

Anth 241	Intro to Study of Language (3 cr)
Anth 261	Language and Culture (3 cr)

Anthropology electives (upper-division) (15 cr)
Related fields as approved by the department (12 cr)
Courses to total 120 credits for this degree

Sociology (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3), the general requirements for either the B.A. or B.S. degree and the following courses (electives must be approved by the student's advisor):

Anth 100	Introduction to Anthropology (3 cr)
Soc 101	Introduction to Sociology (3 cr)
Soc 310	Methods of Social Research (3 cr)
Soc 311	Development of Social Theory (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3 cr):

Soc 230	Social Problems (3 cr)
Soc 250	Social Conflict (3 cr)

Related fields (common areas include: anthropology, economics, geography, history, political science, and psychology) (18 cr)*

One of the following (3 cr):

Soc 423	Social Class & Stratification (3 cr)
Soc 424	Sociology of Gender (3 cr)
Soc 427	Racial and Ethnic Relations (3 cr)
Soc 439	Inequalities in the Justice System (3 cr)

**Note: Must be approved by student's advisor*

Select one of the following emphases:

A. Criminology

Soc 260	Intro to Deviance and Crime (3 cr)
Soc 331	Criminology Theory (3 cr)
Soc 401	Justice Policy Issues (3 cr)

One of the following (3 cr):

PolS 467	Constitutional Law (3 cr)
PolS 468	Civil Liberties (3 cr)
PolS 469	The Judicial Process (3 cr)

Selected upper-division emphasis electives (9 cr):

Soc 315	Community Service Learning (1-4 cr, max 4)**
Soc 325	Family, Violence & Society (3 cr)
Soc 330	Juvenile Delinquency (3 cr)
Soc 332	Sociology of Punishment (3 cr)
Soc 333	Elite and White Collar Crime (3 cr)
Soc 334	Police and Social Control
Soc 335	Terrorism, Society and Justice (3 cr)
Soc 336	Comparative Criminal Justice Systems (3 cr)
Soc 339	Crime and the Media (3 cr)
Soc 367	Global Justice (3 cr)**
Soc 403	Workshop (cr arr)
Soc 404	Special Topics (cr arr)
Soc 420	Sociology of Law (3 cr)
Soc 439	Inequalities in the Justice System (3 cr)
Soc 450	Dynamics of Social Protest (3 cr)
Soc 498	Internship (1-6 cr, max arr)**

Courses to total 120 credits for this degree

***Note: A maximum of 3 credits may be earned in Soc 315, Soc 367, and Soc 498, respectively*

B. Inequalities and Globalization

Anth 301 or Soc 301	Introduction to Diversity and Stratification (3 cr)

Two of the following (6 cr):

Soc 343	Political Sociology (3 cr)
Soc 340	Social Change & Globalization (3 cr)
Soc 343	Political Sociology (3 cr)
Soc 440	Post-Colonialism (3 cr)

One of the following (in addition to the similar requirement above for the Sociology major) (3 cr):

Soc 423	Social Class & Stratification (3 cr)
Soc 424	Sociology of Gender (3 cr)
Soc 427	Racial and Ethnic Relations (3 cr)
Soc 439	Inequalities in the Justice System (3 cr)

Selected upper-division emphasis electives (9 cr):

Soc 315	Community Service Learning (1-4 cr, max 4)**
Soc 323	Political Economy (3 cr)
Soc 325	Family, Violence & Society (3 cr)
Soc 335	Terrorism, Society and Justice (3 cr)
Soc 336	Comparative Criminal Justice Systems (3 cr)
Soc 340	Social Change & Globalization (3 cr)
Soc 343	Political Sociology (3 cr)
Soc 350	Food, Culture, and Society (3 cr)
Soc 367	Global Justice (3 cr)**
Soc 403	Workshop (cr arr)
Soc 404	Special Topics (cr arr)
Soc 422	Religion, Culture & Society (3 cr)
Soc 423	Social Class & Stratification (3 cr)
Soc 424	Sociology of Gender (3 cr)
Soc 427	Racial and Ethnic Relations (3 cr)
Soc 439	Inequalities in the Justice System (3 cr)
Soc 440	Post-Colonialism (3 cr)
Soc 450	Dynamics of Social Protest (3 cr)
Soc 498	Internship (1-6 cr, max arr)**

Courses to total 120 credits for this degree

***Note: A maximum of 3 credits may be earned in Soc 315, Soc 367, and Soc 498, respectively*

C. General Sociology

Any combination of additional sociology courses. 18 credits must be upper-division courses. (21 cr)**
Courses to total 120 credits for this degree

***Note: A maximum of 3 credits may be earned in Soc 315, Soc 367, and Soc 498, respectively*

Sociology & Anthropology Academic Minor Requirements

Anthropology Minor

Anth 100	Introduction to Anthropology (3 cr)

Two courses from the following (6 cr)

Anth 220	Peoples of the World (3 cr)
Anth 230	World Prehistory (3 cr)
Anth 231	Introduction to Archaeology (3 cr)
Anth 251	Introduction to Physical Anthropology (3 cr)

Three upper-division anthro courses, including at least one 400-level course (9 cr)
One additional lower or upper-division anthropology course (3 cr)
Courses to total 20 credits for this minor

Justice Studies Minor

Soc 334	Police and Social Control (3 cr)

One of the following (3 cr):

Soc 330	Juvenile Delinquency (3 cr)
Soc 331	Criminology Theory (3 cr)

Three or more of the following to total at least 21 cr for the minor:

PolS 467	Constitutional Law (3 cr)
PolS 468	Civil Liberties (3 cr)
PolS 469	Judicial Process (3 cr)
Psyc 311	Abnormal Psychology (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)

RelS 404
Courses in approaches to religious studies and religion and culture chosen from least 3 cr in Religion and Culture (9 cr):

Approaches to Religious Studies

Anth 327 or RelS 327	Belief Systems (3 cr)
Engl 375 or RelS 375	The Bible as Literature (3 cr)
RelS 204or RelS 404	Special Topics related to this category
RelS 413 or Psyc 413	Psychology of Religion (3 cr)
Soc 311 or RelS 311	Development of Social Theory (3 cr)
Soc 422	Religion, Culture & Society (3 cr)

Religion and Culture

Art 100	World Art and Culture (3 cr)
Art 208 or RelS 208	Italian Renaissance Art and Culture (3 cr)
FLEN 210	Introduction to Classical Mythology (3 cr)
Hist 101 and Hist 102	History of Civilization (6 cr)
Hist 457	History of the Middle East (3 cr)
Phil 240	Belief and Reality (3 cr)
Phil 320	History of Ancient and Medieval Philosophy (3 cr)
Phil 321	History of Modern Philosophy (3 cr)
RelS 133	Religion and Family (2 cr)
RelS 204 or RelS 404	Special Topics related to this category

Courses to total 18 credits for this minor

Foreign languages appropriate to the minor are strongly recommended. For example, Chinese, Japanese, or Nez Perce are recommended for concentration in Asian, Pacific, and Indigenous traditions; Arabic, or Latin for those focusing on Western traditions.

Department of Sociology and Anthropology

Mark Warner, Dept. Chair (101 Archie Phinney Hall 83844-1110; phone 208/885-6751). Anthropology Faculty: Stacey Camp, Rodney P. Frey, Laura Putsche, R. Lee Sappington, Donald E. Tyler, Mark S. Warner. Sociology Faculty: Terressa Benz, Patrick Gillham, Kristin Haltinner, Leontina Hormel, Ryanne Pilgeram, Brian Wolf. Affiliate Faculty: Virginia Babcock, Margaret J. Harvey, Gary E. Machlis. Adjunct Faculty: Caroline D. Carley, Alan G. Marshall, Deward E. Walker, Priscilla S. Wegars.

The department provides students with two interrelated disciplines in which they can pursue a B.A. or B.S. degree: Anthropology and Sociology. Within sociology, students can select an emphasis in Inequalities and Globalization, Criminology, or General Sociology. Students can also pursue a minor in either of these fields, an academic certificate in Diversity & Stratification, a certificate in Global Justice, and an Archaeological Technician Certificate. Our department is an ideal academic home for students interested in developing their understanding of people and society, small and large-scale cultures, culture history, cultural and social diversity, intercultural and global relations, social justice, and crime and society. Our interrelated programs offer students a unique opportunity to gain a variety of tools and perspectives necessary for understanding themselves and others in relation to social and cultural contexts. The educational experience in sociology or anthropology, including ample opportunity for interactions with faculty, provides a foundation from which students can better think through and appreciate the variety of challenges they will face in their professional and personal lives.

Sociology is the scientific study of human behavior, with an emphasis on understanding social interaction, groups, and organizations. It is an ideal major for students who are curious about themselves and the world they live in, who want to understand why groups of people do what they do, how organizations function, and who want to make a positive difference in the world. The goal of sociology is to help students develop a "sociological imagination," the ability to understand how individual experiences, behaviors, and opportunities are influenced by the historical moment and social forces beyond the immediate control of any one person. The Inequalities and Globalization emphasis in sociology focuses on understanding issues related to social, global and environmental justice. In the criminology emphasis, crime is studied within the context of society in efforts to understand the making and breaking of law and social responses to the breaking of law. The sociology program's strengths include, U.S. and global diversity, globalization, social inequalities and social justice, social movements, criminology, deviance, policing, and applied research. The program provides students opportunities to gain practical work experience through internships and service learning. The program provides academic training in preparation for careers in social services, human resources, criminal justice, non-profit positions, community organizing, and applied research and provides a foundation for graduate education in sociology, criminology, social work, and law.

Anthropology is the comprehensive study of the human condition, from humanity's evolutionary past to its biological diversity, from the prehistoric and historic past to cultural and linguistic diversity today, from rural societies to urban societies. While the program at the University of Idaho considers the breadth of these topics and issues, its primary focus is on Indigenous peoples and international development, contemporary U.S. culture, historical archaeology, archaeological conservation and stabilization, and the archaeology and ethnography of the Indian Tribes of the North American Plateau. Graduates of the program are able to apply the anthropological skills and knowledge to help make a difference in the world. Graduates go into many successful careers, as well as into advanced programs of graduate studies.

The department offers the academic certificate in Diversity & Stratification and jointly offers the certificate in Global Justice. The purpose of the certificate in Diversity & Stratification is to provide students with specific training in intercultural skills. It requires 12 credits of diversity study and applied experience. The certificate recognizes competency in understanding a broad range of diversity issues (race, physical ability, gender, sexual orientation, age, religion, social class, etc.) and in applying that understanding in the workplace and social life. The certificate provides students with a focused and work related credential and skill set so they may be more competitive and effective in the job market.

Archaeological Technician Program is designed to offer students a solid understanding of the basic practical and theoretical knowledge necessary to be qualified for an entry level position with a CRM firm or government agency. Participants must complete the entire training program with emphases in field survey, excavation and laboratory methods. All three areas of the Certificate program include practical experience in the field and lab with academic and/or professional evaluations that include appropriate readings and examinations.

Graduate study in anthropology is offered through the department in areas such as American Indian studies, prehistoric and historical archaeology, sociocultural anthropology, and physical anthropology. This program includes class work, seminars, directed studies, independent research, a thesis, and a thesis defense. The curriculum provides sound training in general anthropology, archaeology, physical anthropology, and ethnology. Departmental research specialties include historical archaeology, prehistoric Plateau archaeology, Plateau Indian ethnography, contemporary American culture, human evolution, and indigenous peoples of South America. Anthropologists in the department also regularly collaborate with the university's history department in support of their Ph.D. degree that has a focus on historical archaeology. Graduates of the MA program have successfully gone on to pursue professional careers in anthropology and further graduate studies. Interested students should contact the department for the application procedures.

The department houses the Alfred W. Bowers Laboratory of Anthropology, founded in 1949. The laboratory serves as a center for archaeological research and curation and provides a laboratory environment for research, teaching, and hands-on experience for undergraduate and graduate students. The laboratory holds several notable collections including the Asian American Comparative Collection, the Donald E. Crabtree Lithic Comparative Collection, and the Pacific Northwest Anthropological Archive as well as many other historic and prehistoric collections serving as the Archaeological Survey of Idaho Northern Repository. The laboratory also publishes the University of Idaho anthropological reports.

Questions concerning the department and its programs should be addressed to the department chair (208/885-6751).

Courses

See the course description section for courses in Anthropology (Anth) and Sociology (Soc).

Courses to total 20 credits for this minor

Psychology Minor

Note: All courses required for the psychology minor must be completed with a grade of 'C' or better.

Psyc 101 Introduction to Psychology (3 cr)

At least one of the following from the following group (3-4 cr):

OrgS 444 Methods and Analysis in Organizational Science (4 cr)
Psyc 218 Introduction to Research in the Behavioral Sciences (4 cr)
Soc 310 Methods of Social Research (3 cr)

At least two courses from each of the following groups (12 cr):

Personal/Social Bases of Behavior

Psyc 305 Developmental Psychology (3 cr)
Psyc 310 Psychology of Personality (3 cr)
Psyc 311 Abnormal Psychology (3 cr)
Psyc 320 Introduction to Social Psychology (3 cr)

Biological/Experimental Bases of Behavior

Psyc 325 Cognitive Psychology (3 cr)
Psyc 372 Physiological Psychology (3 cr)
Psyc 390 Psychology of Learning (3 cr)
Psyc 430 Tests and Measurements (3 cr)
Psyc 444 Sensation and Perception (3 cr)
Psyc 456 Psychology of Emotion (3 cr)

And at least one additional upper-division psychology course (not including Psyc 400, Psyc 403, Psyc 497, or Psyc 499).

Courses to total 20 credits for this minor

Psychology and Communication Studies Graduate Academic Certificates Requirements

Organizational Dynamics Graduate Academic Certificate

AOLL 410 Foundations of Human Resource Development (3 cr)
Bus 413 Organizational Behavior (3 cr)
PolS 451 Public Administration (3 cr)
Psyc 541 Social Psychology in the Workplace (3 cr)

Courses to total 12 credits for this certificate

Psychology and Communication Studies Graduate Degree Program

Master of Science, Psychology major. In addition to the admission requirements of the Graduate College, the department requires Graduate Record Examination scores, letters of recommendation, and a brief essay regarding plans for graduate study and professional career. The undergraduate degree need not be in psychology, although at least a minor in psychology is desirable. In the event the student has a minimal background in psychology, this deficiency may be remedied by enrolling in certain undergraduate courses that would not necessarily be included in the graduate study plan.

The study program for each student is prepared with his or her future plans as a point of departure. Some students seek the master's degree as a terminal degree and assume positions in community mental health organizations, school systems, or industry, while others continue in doctoral studies.

Research opportunities in the department are many. Students are encouraged to begin research early in their graduate study under the direction of a major professor of mutual choice.

Students admitted to this program must fulfill the requirements of the College of Graduate Studies and of the Department of Psychology and Communication Studies. See the College of Graduate Studies section for the general requirements applicable to all M.S. degrees.

Doctor of Philosophy, Experimental Psychology major. General Ph.D. requirements apply.

Required Courses:

Psyc 444 Sensation and Perception (3 cr)
Psyc 446 Engineering Psychology (3 cr)
Psyc 500 Master's Research and Thesis (6 cr)
Psyc 504 Special Topics (8 cr)
Psyc 509 Human Factors in Engineering Design (3 cr)
Psyc 512 Research Methods (3 cr)
Psyc 513 Advanced Research Methods (3 cr)
Psyc 525 Cognitive Psychology (3 cr)
Psyc 526 Cognitive Neuroscience (3 cr)
Psyc 552 Ergonomics and Biomechanics (3 cr)
Psyc 561 Human-Computer Interaction (3 cr)
Psyc 562 Advanced Human Factors (3 cr)
Psyc 599 Non-thesis Master's Research (3 cr)
Psyc 600 Doctoral Research and Dissertation (16 cr)
Stat 431 Statistical Analysis (3 cr)

Electives determined in consultation with graduate committee (12 cr)

Courses to total 78 credits for this degree

Religious Studies

Janice Capel Anderson, Acting Coordinator (405 Morrill Hall 83844-3016; phone 208/885-6065). Faculty: Janice Capel Anderson, Ginna M. Babcock, Ivan Castaneda, Rodney Frey, Walter A. Hesford, Ellen E. Kittell, John A. Mihelich, Louis A. Perraud, Laura Putsche, Sean M. Quinlan. Adjunct Faculty: Sharon Kehoe.

The academic study of religion has deep roots in Western intellectual history. One cannot adequately grasp the full dynamics of world culture without attending to the role of religion. In the last hundred years scholars in the West have paid increasing attention to non-Western religions and to the category of "religion" itself as a dimension of human experience.

Religious studies courses do not encourage or discourage religious belief; rather, they engage in the academic study of religion as a crucial element of human culture. Religious studies employs a variety of methods including anthropological, sociological, historical, philosophical, phenomenological, literary, and linguistic approaches. The principal goal of religious studies is submitting sacred texts and traditions to descriptive, analytical, critical, and empathetic scrutiny.

In terms of employment potential, a religious studies minor primarily serves a student in the same way that history or philosophy might. It increases a student's understanding of persons and cultures. Key liberal arts skills in close reading, analysis, research, and oral and written communication are central to religious studies. Some students will use religious studies to enhance their chances of acceptance in graduate programs in areas such as anthropology, sociology, social work, international relations, history, or various area studies. Others may use the minor as a broadly based stepping stone for professional training in theological seminaries or rabbinical schools.

Courses

See the course description section for courses in Religious Studies (RelS).

Religious Studies Academic Minor Requirements

Religious Studies Minor

RelS Courses in religious traditions chosen from the following (at least 3 cr in Asian, Pacific, and Indigenous Religious Traditions and at least 3 cr in Western Religious Traditions) (9 cr):

Asian, Pacific, and Indigenous Religious Traditions

Anth 329 North American Indians (3 cr)
Anth 422 or RelS 422 Plateau Indians (3 cr)
Hist 180 Introduction to East Asian History (3 cr)
Hist 485 Chinese Social and Cultural History (3 cr)
Phil 307 or RelS 307 Buddhism (3 cr)
RelS 204/ 404 Special Topics related to this category

Western Religious Traditions

Hist 442 The Medieval Church (3 cr)
Hist 443 or RelS 443 The Medieval State: Europe in the High and Late Middle Ages (3 cr)
Hist 447 or RelS 447 The Renaissance (3 cr)
Hist 448 or RelS 448 The Reformation (3 cr)
Hist 449 or RelS 449 Tudor-Stuart Britain 1485-1660 (3 cr)
Phil 302 or RelS 302 Biblical Judaism: Texts and Thought (3 cr)
Phil 303 or RelS 303 Early Christianity: Texts and Thought (3 cr)
RelS 204 or Special Topics related to this category

Communication Studies is a social science discipline that considers how people verbally and nonverbally communicate at the individual, societal, and cultural levels. It can be seen as the discipline that links other disciplines, a discipline that is vital if people, organizations, and governments are to cope with today's complex world. Students with degrees in Communication Studies pursue careers as communication specialists in the fields of communication education, business, government and politics, high technology industries, health, and social and human services. Graduates may also pursue advanced degrees in communication and other fields.

The Department of Psychology and Communication Studies offers a B.S. or B.A. in Psychology and a minor in Communication Studies. The psychology degree requires students to take a wide variety of courses in areas such as developmental processes, social psychology, learning and memory, personality, clinical psychology, biological processes, and sensation/perception. Depending on their interests, students also select from more specialized subjects such as human factors, industrial/organizational psychology, aging, and the psychology of emotion. The Communication Studies minor requires students to take courses in the fields of speech, interpersonal and organizational communication. Students choose additional coursework from the areas of conflict management, intercultural communication, persuasion, gender, and aging.

Currently, graduate training in the Department is available only in Psychology. The master's degree in psychology prepares students for careers in government and industry, teaching at the junior college level, or for continued study elsewhere at the doctoral level. The department offers an M.S. in psychology with an emphasis in human factors psychology or industrial/organizational psychology. The intent of both emphases is to develop knowledge and skills germane to a professional position, and to provide appropriate preparation for those interested in further graduate study. Both human factors and industrial/organizational psychology emphases can be taken as thesis or non-thesis options. Occasionally, the department will accept applicants for the general experimental psychology M.S. Students interested in this option should contact the department for more information.

An applicant to the graduate program must possess an undergraduate degree in psychology or a related field, such as engineering, computer science, or business. In addition, applicants are required to have completed a course in introductory statistics, a course in experimental psychology or research methods, and a course in computer programming. Students wishing to emphasize human factors are encouraged to take upper-level courses in cognitive psychology and sensation/perception; students wishing to emphasize industrial/organizational psychology are encouraged to take upper-level courses in social psychology, I/O psychology, and tests and measurement. All applicants will be considered even if recommended coursework has not been taken.

Courses

See the course description section for courses in Psychology (Psyc) and Communication Studies (Comm).

Psychology and Communication Studies Undergraduate Curricular Requirements

Psychology (B.A. or B.S.)

Note: Psyc 101 and Psyc 218 must be completed with a grade of C or better and a minimum cumulative GPA of 2.50 must be attained for students seeking upper-division standing in the department. In order to graduate with a degree in psychology, a 2.50 GPA must be attained.

Required course work includes the university requirements (see regulation J-3), the general requirements for either the B.A. or B.S. degree, and:

Psyc 101	Introduction to Psychology (3 cr)
Psyc 201	Survey of Contemporary Psychology (1 cr)
Psyc 218	Introduction to Research in the Behavioral Sciences (4 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4 cr)

Biol 102, Biol 102L	Biology and Society and Lab (4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)

A grade of C or above in at least three courses from each of the following groups (18 cr):

Personal/Social Bases of Behavior

Psyc 305	Developmental Psychology (3 cr)
Psyc 310	Psychology of Personality (3 cr)
Psyc 311	Abnormal Psychology (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)

Biological/Experimental Bases of Behavior

Psyc 325	Cognitive Psychology (3 cr)
Psyc 372	Physiological Psychology (3 cr)
Psyc 390	Psychology of Learning (3 cr)
Psyc 430	Tests and Measurements (3 cr)
Psyc 444	Sensation and Perception (3 cr)
Psyc 456	Psychology of Emotion (3 cr)

At least 12 additional upper-division psychology credits. Up to 6 of these credits may be earned by taking Comm 347, Comm 410, Comm 432, or Comm 433. Only 3 of these credits may come from Psyc 400, Psyc 494, Psyc 497, Psyc 498, and/or Psyc 499. A grade of C or better must be earned in each course taken to complete this category.

Courses to total 120 credits for this degree

Psychology and Communication Studies Academic Minor Requirements

Addictions Minor

A grade of C or above is required for each class.

Psyc 470	Introduction to Chemical Addictions (3 cr)
Psyc 472	Introduction to the Pharmacology of Psychoactive Drugs (3 cr)
Psyc 477	Chemical Dependency and the Family (3 cr)

And one of the following emphasis areas:

Treatment Emphasis

Psyc 473	Blood and Airborne Pathogens: HIV/STDs/Hepatitis/TB (3 cr)
Psyc 474	Record Keeping and Case Management in Chemical Addictions Counseling (3 cr)
Psyc 475	Professional Ethics in Addictions Counseling (3 cr)
Psyc 476	Relapse Prevention in Chemical Addictions Counseling (3 cr)
Psyc 478	Individual Therapy Techniques in Chemical Addictions Counseling (3 cr)
Psyc 479	Group Therapy Techniques in Chemical Addictions Counseling (3 cr)
Psyc 482	Addictions Screening and Assessment (3 cr)

Prevention Emphasis

Psyc 305	Developmental Psychology (3 cr)
Psyc 483	Substance Abuse Prevention Theory and Applications I (3 cr)
Psyc 484	Facilitation Skills and Group Management for Prevention Providers (3 cr)
Psyc 485	Presentation - Instruction Skills for Helping Professionals (3 cr)
Psyc 486	Community Coalition Development (3 cr)
Psyc 487	Substance Abuse Program Planning and Evaluation (3 cr)
Psyc 488	Ethics in Substance Abuse Prevention (1 cr)
Psyc 489	Substance Abuse Prevention Theory and Applications II (4 cr)

Courses to total 20 credits for this minor

Communication Studies Minor

Comm 101	Fundamentals of Public Speaking (2 cr)
Comm 111	Introduction to Communication Studies (3 cr)
Comm 233	Interpersonal Communication (3 cr)
Comm 235	Organizational Communication (3 cr)

At least four of the following (12 cr):

Comm 332	Communication and the Small Group (3 cr)
Comm 335	Intercultural Communication (3 cr)
Comm 347	Persuasion (3 cr)
Comm 404	Special Topics (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 421	Nonverbal Communication (3 cr)
Comm 431	Applied Business and Professional Communication (3 cr)
Comm 432	Gender and Communication (3 cr)
Comm 433	Organizational Communication Theory, Research, and Application (3 cr)
Comm 491	Communication and Aging (3 cr)
Comm 492	Dark Side of Communication

PolS 471 Intergovernmental Relations (3 cr)

Public Law
PolS 360 Law and Society (3 cr)
PolS 429 Contemporary Political Ethics (3 cr)
PolS 452 Administrative Law and Regulation (3 cr)
PolS 467 Constitutional Law (3 cr)
PolS 468 Civil Liberties (3 cr)
PolS 469 The Judicial Process (3 cr)
Courses to total 20 credits for this minor

Note: Approved political science seminars may be substituted in this minor.

Comparative/International Politics Minor

PolS 205 Introduction to Comparative Politics (3 cr)
PolS 237 International Politics (3 cr)

Five courses in the following areas (at least 3 credits in each area) (15 cr):

Comparative Politics
PolS 381 European Politics (3 cr)
PolS 480 Politics of Development (3 cr)

International Politics
PolS 440 International Organizations and International Law (3 cr)
PolS 449 World Politics and War (3 cr)
PolS 487 Political Violence and Revolution (3 cr)
Courses to total 20 credits for this minor

Note: Approved political science seminars may be substituted in this minor.

International Political Economy Minor

This academic minor is offered through the College of Business and Economics and the College of Letters, Arts, and Social Sciences.

Econ 446 International Economics (3 cr)
Econ 447 International Development Economics (3 cr)
PolS 237 International Politics (3 cr)
PolS 440 International Organizations and International Law (3 cr)

Nine credits selected from the following list, provided that no more than six credits are selected from a particular discipline (9 cr):
Bus 381 International Finance (3 cr)
Econ 385 Environmental Economics (3 cr)
Econ 407 Public Finance (3 cr)
Geog 360 Population Dynamics and Distribution (3-4 cr)
IS 400 International Studies Seminar
PolS 364 Politics of the Environment (3 cr)
PolS 404 ST: Foreign Policy of the Pacific Rim
PolS 404 ST: Investigating International Relations
PolS 449 World Politics and War (3 cr)
PolS 452 Administrative Law and Regulation (3 cr)
PolS 487 Political Violence and Revolution (3 cr)
Courses to total 20 credits for this minor

Political Science Minor

PolS 101 Intro to Political Science and American Government (3 cr)

One of the following (3 cr):
PolS 425 History of Political Philosophy I (3 cr)
PolS 426 History of Political Philosophy II (3 cr)
PolS 428 American Political Thought (3 cr)

Three courses in American government/public law/public administration (only one course may be lower division) (9 cr)
Two courses in comparative/international politics (only one course may be lower div) (6 cr)
Courses to total 20 credits for this minor

Note: Approved political science seminars may be substituted in this minor.

Public Administration and Policy Minor

PolS 101 Intro to Political Science and American Government (3 cr)
PolS 275 American State and Local Government (3 cr)
PolS 451 Public Administration (3 cr)

Four courses from the following (12 cr):
PolS 364 Politics of the Environment (3 cr)
PolS 452 Administrative Law and Regulation (3 cr)
PolS 454 Public Organization Theory (3 cr)
PolS 462 Natural Resource Policy (3 cr)
PolS 471 Intergovernmental Relations (3 cr)
PolS 472 Local Government Politics and Administration (3 cr)
Courses to total 20 credits for this minor

Note: Approved political science seminars may be substituted in this minor.

Political Science and Public Affairs Research Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Political Science and Public Affairs Research. See the College of Graduate Studies section for the general requirements applicable to each degree.

Master of Arts. General College of Graduate Studies M.A. requirements for application must be followed. Applicants must also submit three letters of recommendation and a 300-500 word statement of purpose directly to the Department of Political Science.

Master of Public Administration. Although no specific undergraduate preparation is required for the M.P.A., all applicants must have a 3.0 GPA and submit GRE General Test scores that are no more than five years old. Three letters of recommendations are also required. Students with a lower GPA may, on occasion, be admitted provisionally. Students must have an appropriate background in American National Government and have taken Statistics 251 or its equivalent.

The MPA degree requires a minimum of 30 course credits. In addition a 3 credit public service internship is required for students without appropriate work experience in the public or nonprofit sectors. Students may use credits earned in approved courses taken at any of the cooperating universities (University of Idaho, Idaho State University, and Boise State University).

At least 18 credits must be taken from the Political Science Department with 15 credits required from core areas plus PolS 535. (See Political Science & Public Affairs Home Page for list of core classes). At least 12 credits are required in an area of emphasis. (Currently, the approved fields are: general public administration; community, state, and regional planning; criminal justice administration; environmental and natural resources administration; local government administration; public finance, budgeting, and administrative management; and public works engineering.)

Students may select a thesis or non-thesis option. The preparation and oral defense of the thesis count as six credits in the area of emphasis. Students selecting a non-thesis option must take comprehensive examinations.

Doctor of Philosophy. General College of Graduate Studies requirements for application must be followed. Applicants to the Ph.D. program must also submit Graduate Record Examination scores, three letters of recommendation, and a 300-500 word statement of purpose directly to the Department of Political Science.

Department of Psychology and Communication Studies

Traci Y. Craig, Dept. Chair (206 Student Health Ctr. 83844-3043; phone 208-885-6324; www.uidaho.edu/class/psychcomm. Faculty: Benajmin K. Barton, Rajal G. Cohen, Traci Y. Craig, Jamie C. Derrick, Brian P. Dyre, Annette L. Folwell, Russell E. Jackson, Kenneth D. Locke, Mikaela L. Marlow, Steven E. Meier, Richard E. Reardon, Todd J. Thorsteinson, Steffen Werner, Mark F. Yama. Affiliate Faculty: Martha A. Kitzrow, Charles R. Morrison, Diane L. Phillips-Miller, Joan Pulakos, Steve Saladin. Adjunct Faculty: Ronald L. Boring, Curt C. Braun, David I. Gertman, Susan G. Hill, Justin G. Hollands, Margaret Jelinek Lewis, Eric F. Shaver.

Psychology is the scientific study of thinking, emotion, and behavior. It is a diverse field, and can be applied to almost all aspects of everyday life: interpersonal relationships, school and lifelong learning, family, and the work environment. Psychology uses scientific research methods to develop and test theories, and to explain or predict behavior. Undergraduate study in psychology provides a broad coverage of the field; whereas graduate study focuses more narrowly on a particular discipline, preparing students for professional work as researchers and/or practitioners.

Courses

See the course description section for courses in Political Science (PolS).

Political Science and Public Affairs Research Undergraduate Curricular Requirements

Political Science (B.A.)

The B.A. degree emphasizes a traditional liberal arts education including a 16-credit foreign language requirement. Political Science majors must have a minimum of 35 credits in Political Science courses with at least 23 of those credits coming in upper-division courses. The course work also includes the university requirements (see regulation J-3), the general requirements for the B.A. degree, and:

PolS 101	Intro to Political Science and American Government (3 cr)
PolS 235	Political Research Methods and Approaches (3 cr)
PolS 425 or PolS 426	History of Political Philosophy I or II (3 cr)
Stat 251	Statistical Methods (3 cr)

American Politics (6 cr):

PolS 275	American State and Local Government (3 cr)
PolS 331	American Political Parties and Elections (3 cr)
PolS 332	American Congress (3 cr)
Pols 333	American Political Culture (3 cr)
PolS 335	American Interest Groups & Social Movements (3 cr)
PolS 360	Law and Society (3 cr)
PolS 364	Politics of the Environment (3 cr)
PolS 428	American Political Thought (3 cr)
PolS 436	Policy Deliberation in the New Information Society (3 cr)
PolS 437	American Presidency (3 cr)
PolS 451	Public Administration (3 cr)
PolS 452	Administrative Law and Regulation (3 cr)
PolS 462	Natural Resource Policy (3 cr)
PolS 467	Constitutional Law (3 cr)
PolS 468	Civil Liberties (3 cr)
PolS 469	The Judicial Process (3 cr)
PolS 471	Intergovernmental Relations (3 cr)
PolS 472	Local Government Politics and Administration (3 cr)

Comparative/International Relations (6 cr):

PolS 205	Introduction to Comparative Politics (3 cr)
PolS 237	International Politics (3 cr)
PolS 338	American Foreign Policy (3 cr)
PolS 381	European Politics (3 cr)
PolS 410	Game Theory (3 cr)
PolS 420	Introduction to Asian Politics (3 cr)
PolS 423	Politics, Policy and Gender (3 cr)
PolS 440	International Organizations and International Law (3 cr)
PolS 449	World Politics and War (3 cr)
PolS 473	Sustainable Community Development Planning (3 cr)
PolS 480	Politics of Development (3 cr)
PolS 487	Political Violence and Revolution (3 cr)

20 credits in upper-division related fields including: Anth, Bus, Comm, Econ, Engl, FLEN, Hist, IS, JAMM, MusH, OrgS 415, OrgS 444, Phil, Psyc, Soc, The 468, and The 469. Thesis and internship credits cannot be used to satisfy this requirement.

Courses to total 120 credits for this degree

Note: A maximum of 6 credits of political science internship and/or directed study courses may be counted toward meeting the political science credit requirements.

Political Science (B.S.)

The B.S. degree emphasizes methodology and requires increased course work in behavioral research methods. Political Science majors must have a minimum of 35 credits in Political Science courses with at least 23 of those credits coming in upper-division courses. Course work also includes the university requirements (see regulation J-3), the general requirements for the B.S. degree, and:

PolS 101	Intro to Political Science and American Government (3 cr)
PolS 235	Political Research Methods and Approaches (3 cr)
PolS 425 or PolS 426	History of Political Philosophy I or II (3 cr)
Stat 251	Statistical Methods (3 cr)

American Politics (6 cr):

PolS 275	American State and Local Government (3 cr)
PolS 331	American Political Parties and Elections (3 cr)
PolS 332	American Congress (3 cr)
Pols 333	American Political Culture (3 cr)
PolS 335	American Interest Groups & Social Movements (3 cr)
PolS 360	Law and Society (3 cr)
PolS 364	Politics of the Environment (3 cr)
PolS 428	American Political Thought (3 cr)
PolS 436	Policy Deliberation in the New Information Society (3 cr)
PolS 437	American Presidency (3 cr)
PolS 451	Public Administration (3 cr)
PolS 452	Administrative Law and Regulation (3 cr)
PolS 462	Natural Resource Policy (3 cr)
PolS 467	Constitutional Law (3 cr)
PolS 468	Civil Liberties (3 cr)
PolS 469	The Judicial Process (3 cr)
PolS 471	Intergovernmental Relations (3 cr)
PolS 472	Local Government Politics and Administration (3 cr)

Comparative/International Relations (6 cr):

PolS 205	Introduction to Comparative Politics (3 cr)
PolS 237	International Politics (3 cr)
PolS 338	American Foreign Policy (3 cr)
PolS 381	European Politics (3 cr)
PolS 410	Game Theory (3 cr)
PolS 420	Introduction to Asian Politics (3 cr)
PolS 423	Politics, Policy and Gender (3 cr)
PolS 440	International Organizations and International Law (3 cr)
PolS 449	World Politics and War (3 cr)
PolS 473	Sustainable Community Development Planning (3 cr)
PolS 480	Politics of Development (3 cr)
PolS 487	Political Violence and Revolution (3 cr)

Additional research methods courses (may be counted as related field cr if upper-division) (6 cr)

Bus 350	Management Information Systems (3 cr)
Bus 439	Systems and Simulation (4 cr)
Bus 453	Database Design (3 cr)
Comm 455	Communication Research Methods (3 cr)
Econ 453	Econometrics (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 475	Intermediate GIS (3 cr)
Hist 290	The Historian's Craft (3 cr)
Phil 202	Introduction to Symbolic Logic (3 cr)
Phil 450	Ethics in Science (3 cr)
Pols 410	Game Theory (3 cr)
Pols 435	Advanced Political Science and Research Methods (3 cr)
Psyc 218	Introduction to Research in the Behavioral Sciences (4 cr)
Soc 310	Methods of Social Research (3 cr)

CS course numbered 100 to 499
Math course numbered 171 to 299

Courses in upper-division related fields (20 cr)

Courses to total 120 credits for this degree

Note: A maximum of 6 credits of political science internship and/or directed study courses may be counted toward meeting the political science credit requirements.

Political Science and Public Affairs Research Academic Minor Requirements

American Government/Public Law Minor

PolS 101	Intro to Political Science and American Government (3 cr)

Six courses from the following areas (at least 6 credits in each area) (18 cr):

American Government

PolS 275	American State and Local Government (3 cr)
PolS 331	American Political Parties and Elections (3 cr)
PolS 332	American Congress (3 cr)
PolS 333	American Political Culture (3 cr)
PolS 364	Politics of the Environment (3 cr)
PolS 428	American Political Thought (3 cr)
PolS 437	American Presidency (3 cr)
PolS 451	Public Administration (3 cr)
PolS 462	Natural Resource Policy (3 cr)

MMBB 487	Eukaryotic Molecular Genetics (3 cr)
PlSc 338	Weed Control (3 cr)
PlSc 407	Field Crop Production (3 cr)
PlSc 451	Vegetable Crops (3 cr)
PlSc 490	Potato Science (3 cr)
Soil 446	Soil Fertility (3 cr)

Courses to total 128 credits for this degree

Plant, Soil and Entomological Sciences Academic Minor Requirements

Crop Science Minor

Ent 322	General and Applied Entomology (4 cr)
PlSc 102	The Science of Plants in Agriculture (3 cr)
PlSc 338	Weed Control (3 cr)
PlSc 407	Field Crop Production (3 cr)
PlSc 415	Plant Pathology (3 cr)
Soil 205	The Soil Ecosystem (3 cr)

Two of the following courses (6 credits):

PlSc 408	Cereal Science (3 cr)
PlSc 438	Pesticides in the environment (3 cr)
PlSc 446	Plant Breeding (3 cr)
Soil 446	Soil Fertility (1-3 cr, max 3)

Courses to total 20 credits for this minor

Entomology Minor

Ent 322	General and Applied Entomology (4 cr)

Entomology electives (16 cr)

Courses to total 20 credits for this minor

Horticulture Minor

PlSc 102	The Science of Plants in Agriculture (3 cr)
PlSc 201	Principles of Horticulture (3 cr)

Three of the following courses (9 cr):

PlSc 300	Plant Propagation (3 cr)
PlSc 340	Nursery Management (3 cr)
PlSc 433	Plant Tissue Culture (3 cr)
PlSc 464	Landscape Maintenance (3 cr)

Two of the following courses (6 cr):

LArc 288	Planting Design Studio 1 (3 cr)
Soil 205	The Soil Ecosystem (3 cr)

Courses to total 20 credits for this minor

Plant Protection Minor

Ent 322	General and Applied Entomology (4 cr)
PlSc 338	Weed Control (3 cr)
PlSc 415	Plant Pathology (3 cr)

Courses selected from the following (9 cr):

Ent 446	Host Plant Resistance to Insects and Pathogens (3 cr)
Ent 472	Aquatic Entomology (3 cr)
PlSc 410	Invasive Plant Biology (3 cr)
PlSc 438	Pesticides in the Environment (3 cr)

Courses to total 20 credits for this minor

Soil Science Minor

Soil 205, Soil 206	The Soil Ecosystem and Lab (4 cr)
Soil 415	Soil Physics (3 cr)
Soil 422	Environmental Soil Chemistry (3 cr)
Soil 438	Pesticides in the Environment (3 cr)
Soil 446	Soil Fertility (3 cr)
Soil 454	Soil Development and Classification (3 cr)

Courses selected from the following to total at least 20 credits for this minor:

Soil 417	Market Garden Practicum (1-6 cr)
Soil 425	Microbial Ecology (3 cr)

Courses to total 20 credits for this minor

Plant, Soil and Entomological Sciences Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Plant, Soil, and Entomological Sciences. See the College of Graduate Studies section for general requirements applicable to each degree.

Master and Doctoral students will choose a major professor with the concurrence of the faculty member involved. This choice is based upon the availability of the faculty member and the compatibility of the student's research interests with those of the professor.

Master of Science, Major in Entomology. Thesis and non-thesis options are offered. Admission to graduate programs in entomology requires an undergraduate degree, usually in some field of biology. Specific requirements for each degree are determined by the student's graduate committee. Candidates for the M.S. with zoology or entomology course deficiencies in their undergraduate program may be required to list those courses as deficiencies on their M.S. program.

Master of Science, Major in Plant Science or Soils (Thesis Option). General M.S. requirements apply. These requirements include a formal program of at least 30 semester hours to be chosen in consultation with the major professor and approved by the student's supervisory committee. Candidates for this degree must complete an independent research project and submit an acceptable thesis as well as pass a final oral examination.

Master of Science, Major in Plant Science or Soils (Non-thesis Option). General M.S. non-thesis requirements apply.

Doctor of Philosophy, Major in Entomology, Plant Science, or Soils. University Ph.D. requirements apply. Additional specific requirements are determined by the student's graduate committee.

Department of Political Science and Public Affairs Research

Donald W. Crowley, Chair, Dept. of Political Science and Public Affairs Research (205 Admin. Bldg. 83844-3165; phone 208/885-6328). Faculty: Lisa J. Carlson, Donald W. Crowley, Eric L. Jensen, Nickolas E. Jorgensen, Jooho Lee, William R. Lund, Sandra G. Reineke, Manoj Shrestha.

Political science is the study of politics, the process of gaining, maintaining, and exercising governmental power in the United States, in other countries, and internationally. The political science major at UI provides students with a wide selection of courses in American and comparative politics, international relations, public law, public administration, and political theory. Students may choose either a Bachelor of Arts or Bachelor of Science degree program.

The department is committed to teaching excellence. Most of the introductory courses are taught by full-time faculty and all of the faculty are readily available in their offices for discussion and guidance. The department stresses the opportunity to take small classes and to interact with other students and faculty. The diversity of the faculty's intellectual pursuits and concern for students makes these courses interesting and ensures that, whatever the students' interests, from Middle Eastern politics to the American presidency, from the study of environmental politics to political violence and revolution, there is a scholar in the department who can teach the subject to them.

Students are encouraged to participate directly in the political process through internships in federal, state, and local government or on political campaigns. UI students have participated in internships with the Idaho state legislature, the Idaho Governor's office, and Idaho's U.S. senators and representatives in Washington, D.C. Other students have interned with local governments throughout the state and for federal agencies such as the State Department, and have worked on political campaigns for candidates for offices at all levels of government.

After graduation UI students find that their degree in political science opens the door to a wide variety of careers. Many students pursue careers in law. Others attend graduate school and prepare for careers in federal or state governments, as city managers or administrators, or as teachers. Some graduates choose to work with public interest groups, trade associations, and environmental groups; or eventually run for, and win, elective political office. Still other graduates find that their knowledge of politics and the skills they acquire to analyze complex institutions are excellent preparation for a career in journalism. Finally, business institutions are employing more and more political science graduates because of their ability to communicate with precision and vigor, their familiarity with large organizations and complex decision making processes, as well as their understanding of how foreign and domestic governmental institutions and U.S. multi-national corporations function in an interdependent world.

B. Soil and Land Use

Chem 112	Principles of Chemistry II (5 cr)
Geol 101, Geol 101L	Physical Geology and Lab or
Geol 111, Geol 111L	Physical Geology for Science Majors and Lab (4 cr)
Phys 111, Phys 111L	General Physics I and Lab (4 cr)
Phys 112, Phys 112L	General Physics II and Lab (4 cr)
Soil 415	Soil and Environmental Physics (3 cr)
Soil 422	Environmental Soil Chemistry (3 cr)
Soil 425 or MMBB 425	Microbial Ecology (3 cr)
Soil 446	Soil Fertility (3 cr)
Soil 454	Pedology (3 cr)
Soil 499	Directed Study (1 cr)

One of the following (3 cr):

CS 101	Introduction to Computer Science (3 cr)
CS 112	Introduction to Problem Solving and Programming (3 cr)

Courses to total 128 credits for this degree

C. Sustainable Cropping Systems

Gene 314	General Genetics (3 cr)
PlSc 338	Weed Control (3 cr)
PlSc 401	Plant Physiology (3 cr)
PlSc 407	Field Crop Production (3 cr)
PlSc 446	Plant Breeding (3 cr)
PlSc 480	Field Trip (1 cr)
Soil 446	Soil Fertility (3 cr)

One of the following (1 cr):

Chem 276	Carbon Compounds Lab (1 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)

One of the following (3 cr):

PlSc 398	Internship (3 cr)
PlSc 499	Directed Study (3 cr)

Professional Support Electives (9 cr):
Accounting
Animal and Veterinary Sciences
Agricultural Economics
Biology
Business
Business Law
Chemistry
Computer Science
Economics
Entomology
Foreign Languages (max 4 credits)
Forest Resources
Landscape Architecture
Microbiology, Molecular Biology and Biochemistry
Physics
Plant Science
Rangeland Ecology and Management
Renewable Materials
Soils

Sustainable Cropping Systems Electives (17 cr):

PlSc 408	Cereal Science (3 cr)
PlSc 410	Invasive Plant Biology (3 cr)
PlSc 433	Plant Tissue Culture Techniques (3 cr)
PlSc 490	Potato Science (3 cr)
Stat 431	Statistical Analysis (3 cr)

Courses to total 128 credits for this degree

D. Environmental Horticulture

Gene 314	General Genetics (3 cr)
PlSc 201	Principles of Horticulture (3 cr)
PlSc 300	Plant Propagation (3 cr)
PlSc 338	Weed Control (3 cr)
PlSc 401	Plant Physiology (3 cr)
Soil 446	Soil Fertility (3 cr)

One of the following (1 cr):

Chem 276	Carbon Compounds Lab (1 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)

One of the following (3 cr):

PlSc 398	Internship (3 cr)
PlSc 499	Directed Study (3 cr)

Professional Support Electives (9 cr):
Accounting
Animal and Veterinary Sciences
Agricultural Economics
Biology
Business
Business Law
Chemistry
Computer Science
Economics
Entomology
Foreign Languages (max 4 credits)
Forest Resources
Landscape Architecture
Microbiology, Molecular Biology and Biochemistry
Physics
Plant Science
Rangeland Ecology and Management
Renewable Materials
Soils

Environmental Horticulture Electives (15 cr):

PlSc 340	Nursery Management (3 cr)
PlSc 341	Nursery Management Laboratory (1 cr)
PlSc 433	Plant Tissue Culture Techniques (3 cr)
PlSc 451	Vegetable Crops (3 cr)
PlSc 464	Landscape Maintenance (3 cr)
PlSc 490	Potato Science (3 cr)

Courses to total 128 credits for this degree

E. Plant Biotechnology

Chem 112	Principles of Chemistry II (5 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Gene 314	General Genetics (3 cr)
MMBB 486	Plant Biochemistry (3 cr)
MMBB 488	Genetic Engineering (3 cr)
PlSc 401	Plant Physiology (3 cr)
PlSc 433	Plant Tissue Culture Techniques (3 cr)
PlSc 440	Advanced Laboratory Techniques (4 cr)
PlSc 446	Plant Breeding (3 cr)

One of the following (3-4 cr):

Biol 300	Survey of Biochemistry (3 cr)
Biol 380	Biochemistry I (4 cr)

One of the following (3 cr):

PlSc 398	Internship (3 cr)
PlSc 402	Undergraduate Research in Plant Science (3 cr)
PlSc 499	Directed Study (3 cr)

Professional Support Electives (5 cr):
Accounting
Animal and Veterinary Sciences
Agricultural Economics
Biology
Business
Business Law
Chemistry
Computer Science
Economics
Entomology
Foreign Languages (max 4 credits)
Forest Resources
Landscape Architecture
Microbiology, Molecular Biology and Biochemistry
Physics
Plant Science
Rangeland Ecology and Management
Renewable Materials
Soils

Plant Biotechnology Electives (12 cr):

Biol 250	General Microbiology (3 cr)
Biol 255	General Microbiology Lab (2 cr)
Biol 312	Molecular and Cellular Biology (3 cr)
Biol 313	Molecular and Cellular Laboratory (1 cr)
Biol 382	Biochemistry I Laboratory (2 cr)
Biol 444	Genomics (3 cr)
MMBB 409	Immunology (3 cr)
MMBB 485	Prokaryotic Molecular Biology (3 cr)

agement and operation of commercial greenhouses, nurseries, orchards, vineyards and vegetable farms. Students have the opportunity to focus on managing and maintaining the various components of urban landscapes including trees, shrubs, herbaceous plantings and turf grass, or organic farming techniques. Courses in plant science, soils, biology and entomology further enhance the knowledge needed for a professional career in horticulture. This emphasis area is flexible enough to enable students to pursue science-oriented careers or advanced degree studies.

The undergraduate **soil and land use** emphasis area is offered for students who are interested in working as a soil scientist for businesses, industry, or government agencies. Graduates may work as environmental or agricultural consultants. Many businesses and industries employ graduates with training in soil science to work in various fields related to agriculture; soil fertility, precision farming, crop and forage production, and use and management of agri-chemicals. Consultants with soil science training work on projects related to environmental quality and restoration. Government agencies use soil scientists to inventory and develop conservation plans designed to identify and protect soil resources and maintain environmental quality on agricultural, range, and forest lands.

The **plant biotechnology** emphasis area will interest students who want to work with plants using the latest molecular genetic techniques to address the food and energy needs of the United States and the world in the 21st century. Students will learn how to understand, manipulate and use the genetic information of plants at the molecular level to create and select crop plants with improved traits (e.g. yield; nutritional value; insect, disease or temperature tolerance) to address the challenges brought on by increasing world population, decreasing availability of water for irrigation, and temperature changes brought on by global warming. In addition, students will learn how to modify plant genes to improve crop plant potential for use in biofuel production. Hands-on experience is possible by conducting undergraduate research in our plant biotechnology laboratories. The plant biotechnology emphasis will prepare students for graduate education or professional careers in academia or industry in such areas as genomics, genetic engineering, marker-assisted plant breeding, plant genetics, molecular biology, tissue culture and molecular virology.

Our degree offerings are designed to prepare students for graduate school and a variety of rewarding career opportunities. All of our programs are based on curricula designed to prepare students for present and future employment. We offer students the opportunity to work closely with faculty in classroom and field situations. Our faculty members care about our students' individual needs and interests, and offer additional specialization through directed study, special topics, seminars and other courses as needed. An internship program is available to provide students with practical job experience and to open doors for career opportunities. Additionally, we coordinate closely with the Departments of Entomology, Crop and Soil Sciences, Horticulture and Landscape Architecture, and Plant Pathology at Washington State University (eight miles away) to enhance our offerings.

We offer many opportunities to conduct advanced, in-depth studies with our important scientific collections and cutting-edge facilities. The William F. Barr Entomology Museum contains 1 million specimens. The Lambert-Erickson Weed Herbarium houses one of the nation's outstanding collections with all life stages of weeds represented. The Maynard A. Fosberg Monolith collection is one of the largest in the world with 232 monoliths. We have a state-of-the-art biotechnology facility to accommodate faculty, staff and students. We also offer specially-equipped laboratories for histology, anatomy, and physiology, as well as greenhouse laboratory units with controlled temperature and light-programmed rooms and growth chambers. The University has 1,145 acres located close to campus for field crops, orchards and livestock. Excellent field and laboratory facilities are also available at our research and extension centers at Aberdeen, Parma and Twin Falls.

We welcome questions regarding our programs. Prospective students may contact us by email at pses@uidaho.edu, or by telephone at 208/885-6274.

Courses

See the course description section for courses in Entomology (Ent), Plant Science (PlSc), and Soils (Soil).

Plant, Soil and Entomological Sciences Undergraduate Curricular Requirements

Sustainable Crop and Landscape Systems (B.S.Ag.L.S.)

Required course work includes the university requirements (see regulation J-3) and:

Agricultural and Life Science Core

AgEd 406	Exploring International Agriculture (3 cr)
Soil 205, Soil 206	The Soil Ecosystem and Lab (4 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (2-3cr):

ASM 305	GPS and Precision Agriculture (3 cr)
ASM 412	Agricultural Safety and Health (2 cr)
PlSc 207	Introduction to Biotechnology (3 cr)

One of the following (4cr):

Chem 101	Introduction to Chemistry I (4 cr)
Chem 111	Principles of Chemistry I (4 cr)

One of the following (3-4cr):

Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 207	Persuasive Writing (3 cr)
Engl 313	Business Writing (3cr)
Engl 316	Environmental Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3-4cr):

Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 160	Survey of Calculus (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)

Sustainable Crop and Landscape Systems Courses

Biol 115	Cells and the Evolution of Life (4 cr)
Ent 322	General and Applied Entomology (4 cr)
PlSc 102	The Science of Plants in Agriculture (3 cr)
PlSc 400	(s) Seminar (1 cr)
PlSc 415	Plant Pathology (3 cr)
PlSc 438	Pesticides in the Environment (3 cr)

One of the following (4 cr):

Biol 213	Principles of Biological Structure and Function (4 cr)
PlSc 205	General Botany (4 cr)

One of the following (3 cr):

Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry I (3 cr)

One of the following (3-5 cr)

Biol 250, Biol 255	General Microbiology and Lab (5 cr)
Biol 300	Survey of Biochemistry (3 cr)
Chem 253, Chem 254	Quantitative Analysis and Lab (5 cr)
MMBB 154, MMBB 155	Introductory Microbiology and Lab (4 cr)

And one of the following emphases:

A. Insects and Society

Biol 116	Organisms and Environments (4 cr)
Biol 312	Molecular and Cellular Biology (3 cr)
Biol 313	Molecular and Cellular Laboratory (1 cr)
Biol 314	Ecology and Population Biology (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Ent 440	Insect Identification (4 cr)
Ent 441	Insect Ecology (3 cr)

One of the following (3-4 cr):

Biol 310, Biol 315	Genetics and Lab (4 cr)
Gene 314	General Genetics (3 cr)

Biotechnology Electives (3 cr)
Entomology Electives (5 cr)
Life Science Electives (6 cr)
Mathematics Electives (4 cr)
Physics Electives (4 cr)
Courses to total 128 credits for this degree

PolS 299 (s) Directed Study (cr arr)
Graded Pass/Fail.
Prereq: Permission

PolS 331 American Political Parties and Elections (3 cr)
Development and present character of American political parties and of electoral system, functions of parties in periods of relative consensus and of critical choice regarding fundamental principles, party reform, and future prospects for party system.

PolS 332 American Congress (3 cr)
Roles and functions of Congress in the American political system, theories of representation, recruitment of legislators, Congressional organization and behavior, power structure, relationship to the executive, courts, interest groups, and public.

PolS 333 American Political Culture (3 cr)
Relation of public opinion and political action and affiliation to broad economic, social, religious, and intellectual developments.

PolS 335 American Interest Groups & Social Movements (3 cr)
Study of American interest groups, lobbying, campaign finance, grassroots political activism, and social movements including the American civil rights, anti-war and environmental activism movements.

PolS 338 American Foreign Policy (3 cr)
Analysis of how key decision makers, such as the President and Congress, convert inputs from the international, national, and societal systems into foreign policy outputs.

PolS 360 Law and Society (3 cr)
Overview of legal reasoning and functions of law in society; emphasis on capacity of law to affect social change as well as ways in which law responds to social change.

PolS 364 Politics of the Environment (3 cr)
Same as CSS 364. Political factors that influence formation, implementation, and impact of public policies aimed at protecting the environment.

PolS 381 European Politics (3 cr)
Examination of political processes in Western European parliamentary systems; topics include parties and elections, coalition formation and dissolution, public policy, and the dynamics of the European Union.

PolS 400 (s) Seminar (cr arr)

PolS 403 (s) Workshop (cr arr)

PolS 404 (s) Special Topics (cr arr)

PolS J410/J510 Game Theory (3 cr)
The study of strategic interaction in which an outcome depends upon an individual's own decision and the choices made by others; introduction to the basic tools of game theory used to conceptualize and model political problems as games, including situations involving conflict, cooperation, contracts between agents and principals, coordination, and bargaining. Additional projects/assignments required for graduate credit.

PolS J420/J520 Introduction to Asian Politics (3 cr)
This course will offer both a country-based and thematic survey of political systems and issues in Asia. Countries to be covered will include (but not be limited to) China, Japan, India, Indonesia, Thailand, and Pakistan. The course will also cover topics such as democratization, economic development, and the changing Asian security environment. Additional projects and/or assignments required for graduate credit. Recommended Preparation: PolS 205. (Spring only)

PolS J423/J523 Politics, Policy and Gender (3 cr)
Examination of the gendered social construction of political processes, outputs, and public policy formation on the national and international level. Study of the historical evolution of women's participation in American politics as well as other countries. Analysis of the politics of gendered representation and political leadership in American politics and elsewhere. Additional projects/assignments reqd for grad cr.

PolS J425/J525 History of Political Philosophy I (3 cr)
Perennial problems of politics examined through study of seminal authors of classical antiquity (Plato, Aristotle, Cicero); medieval confrontation of theology with classical political philosophy (Augustine, Aquinas, Marsilius). Additional projects/assignments required for graduate credit.

PolS J426/J526 History of Political Philosophy II (3 cr)
Foundations and development of modern liberalism; analysis of its characteristic goals, and democratic, socialist, and communitarian critics of the project; study of authors including Hobbes, Locke, Rousseau, Marx, and contemporary theorists such as Rawls. Additional projects/assignments required for graduate credit.

PolS J428/J528 American Political Thought (3 cr)
Major themes and debates in the American search for political self-understanding; topics include representative democracy, religion and politics, the frontier and its legacy, and individualism vs. communitarian claims; study of original sources (Founding Fathers, Thoreau, Lincoln, Populists) and contemporary implications. Additional projects/assignments required for graduate credit.

PolS J429/J529 Contemporary Political Ethics (3 cr)
Current controversies concerning status and substance of ethical claims about deception, violence, coercion, and economic justice in politics and public action. Additional projects/assignments required for graduate credit.

PolS 430 Political Participation Internship (1-9 cr, max 9)
Directed student internship as a participant-observer in the political process, work during a campaign with a candidate, party, or interest group. Graded Pass/Fail.
Prereq: Permission

PolS J435/J535 Advanced Political Science and Research Methods (3 cr)
Course covers advanced research design, social science quantitative methods and data collection issues. Additional projects/assignments reqd for grad cr.
Prereq: PolS 235 and Stat 251

PolS J436/J536 Policy Deliberation in the New Information Society (3 cr)
Study of how policymakers use information in the course of deliberating increasingly new and complex public policy choices, the sources of policy information and the quality of policy deliberations in government agencies and legislative institutions at the state and national level. Additional projects/assignments reqd for grad cr.

PolS J437/J537 American Presidency (3 cr)
Roles, power, and functions of the presidency; relationships with other structures and institutions in the U.S. political system. Additional projects/assignments reqd for grad cr.

PolS J439/J539 Public Policy (3 cr)
Processes by which domestic policies are formulated and administered; analysis of intentional and unintentional impact of these policies on society. Additional projects/assignments reqd for grad cr.

PolS 440 (s) International Organizations and International Law (3 cr)
Same as IS 440. League of Nations, United Nations, and role of international law in international relations; the UN's contribution to international security and economic and social development.

PolS J441/J541 Genes and Justice: Comparative Biotechnology Policy Formation (3 cr)
This course introduces students to the basic theoretical, ethical, and practical issues surrounding the rise and regulation of recent biotechnological and biomedical advances, including genetically modified animals and plants in agriculture, stem cell research and cloning in biomedical research, and reprogenetics in medically assisted reproductive technology. Students will learn about theoretical and ethical frameworks to investigate questions of domestic and international policy making and the task of governing modern biosciences, including food safety, fair-trade, consumer well-being, informed choice in medical treatment, conservation, biodiversity, and sustainability. Additional projects/assignments required for graduate credit. Recommended Preparation: PISc 207 or 3 credits of another science course or 3 credits of political science

PolS J449/J549 World Politics and War (3 cr)
A critical analysis of several competing theories that explain why wars occur; some focus on the attempts to control and eliminate warfare as a tool of international diplomacy. Additional projects/assignments required for graduate credit.

PolS 451 Public Administration (3 cr)
Environment of public administration, politics of organizations, public decision-making, public relations, leadership, personnel administration, financial administration, administration ethics; related topics.

PolS J452/J552 Administrative Law and Regulation (3 cr)
Legal and judicial constraints on administration action, rule-making, adjudication, and other modes of administrative action. Additional projects/assignments required for graduate credit.

PolS J453/J553 Public Management Techniques (3 cr)
Emphasizes management styles and the empirical basis for decision; focus on conflict management through control or participatory strategies, and the acquisition and analysis of management information. Additional projects/assignments reqd for grad cr.

PolS J454/J554 Public Organization Theory (3 cr)
Organization theory and behavior in public and nonprofit sector, organization structure and environment, individual behavior in organizations. Additional projects/assignments required for graduate credit.

PolS 458 Management Internship (1-9 cr, max 9)
Directed internship in an agency of federal, state, or local government or special projects involving federal, state, or local government. One cr for each week of internship work. Graded Pass/Fail.
Prereq: Permission

PolS 459 Legislative Internship (1-9 cr, max 9)
Directed internship in a national, state, municipal, or corporate legislative body. Supervised work experience. Report required. Graded Pass/Fail.
Prereq: Permission

PolS 462 Natural Resource Policy (3 cr)
See CSS 462.

PolS J467/J567 Constitutional Law (3 cr)
The Supreme Court as a constitutional policymaker; federal jurisdiction; constitutional principles concerning judicial review, federalism, implied powers, separation of powers, and due process. Additional projects/assignments required for graduate credit.

PolS J468/J568 Civil Liberties (3 cr)
The Supreme Court and its role in protecting civil liberties; freedom of speech, press, and religion; due process, the Bill of Rights, and its application to the states; criminal justice. Additional projects/assignments required for graduate credit.

PolS J469/J569 The Judicial Process (3 cr)
Judicial and legal processes, court structure, procedures; judicial behavior and decision-making; selection of judges. Additional projects/assignments required for graduate credit.

PolS J471/J571 Intergovernmental Relations (3 cr)
Analysis of fiscal and administrative interdependencies among governmental units in the U.S., with an emphasis on public policies. Additional projects/assignments required for graduate credit.

PolS J472/J572 Local Government Politics and Administration (3 cr)
Politics, structure, and problems of American cities and other local governments; focus on the urban political economy, the fiscal and social challenges, and the links between public and private sectors; changing social and political functions of American cities and metropolitan fragmentation. Additional projects/assignments required for graduate credit.

PolS J473/J573 Sustainable Community Development Planning (3 cr)
Course covers theory, methods and national and international practice of sustainable community development planning. Additional projects/assignments required for graduate credit.

PolS J480/J580 Politics of Development (3 cr)
Role of the state in development, political economy of change, transition to democracy in the Third World, problems of ethnic conflict, overpopulation, and poverty. Additional projects/assignments required for graduate credit.

PolS J487/J587 Political Violence and Revolution (3 cr)
Survey of the dominant theories attempting to understand the conditions under which humans rebel against their government; from political demonstrations and riots to terrorism to revolution; special emphasis given to the revolutions in Iran and Vietnam. Additional projects/assignments required for graduate credit.

PolS 499 (s) Directed Study (cr arr)
Graded Pass/Fail.
Prereq: Permission

PolS 500 Master's Research and Thesis (cr arr)
Graded Pass/Fail.

PolS 501 (s) Seminar (cr arr)
Areas normally offered incl U.S. politics, U.S. foreign policy, African and Asian politics, community power and politics, U.S. political thought, public law, public administration, and political development. One 2-day field trip is authorized for the seminar in public administration.
Prereq: Permission

PolS 502 (s) Directed Study (cr arr)

PolS 503 (s) Workshop (cr arr)

PolS 504 (s) Special Topics (cr arr)

PolS 510 Game Theory (3 cr)
See PolS J410/J510.

PolS J420/J520 Introduction to Asian Politics (3 cr)
See PolS J420/J520.

PolS 523 Politics, Policy and Gender (3 cr)
See PolS J423/J523.

PolS 525 History of Political Philosophy I (3 cr)
See PolS J425/J525.

PolS 526 History of Political Philosophy II (3 cr)
See PolS J426/J526.

PolS 528 American Political Thought (3 cr)
See PolS J428/J528.

PolS 529 Contemporary Political Ethics (3 cr)
See PolS J429/J529.

PolS 535 Advanced Political Science and Research Methods (3 cr)
See PolS J435/J535.

PolS 536 Policy Deliberation in the New Information Society (3 cr)
See PolS J436/J536.

PolS 537 American Presidency (3 cr)
See PolS J437/J537.

PolS 539 Public Policy (3 cr)
See PolS J439/J539.

PolS 541 Genes and Justice: Comparative Biotechnology Policy Formation (3 cr)
See PolS J441/J541.

PolS 549 World Politics and War (3 cr)
See PolS J449/J549.

PolS 552 Administrative Law and Regulation (3 cr)
See PolS J452/J552.

PolS 554 Public Organization Theory (3 cr)
See PolS J454/J554.

PolS 555 Seminar in Administrative Theory (3 cr)
Major writers in administrative theory and concepts such as leadership, supervision, authority, decision-making, and human relations. (Alt/yrs)

PolS 556 Governmental Policy and Program Analysis (3 cr)
Techniques used to analyze policy alternatives and to evaluate program; developing program objectives, management by objectives, productivity analysis, program evaluation, and policy analysis.

PolS 557 Governmental Budgeting (3 cr)
Theory and practice of budgeting in a political environment; focus on potentials and limitations of various budgeting systems, particular viz the federal experience.

PolS 562 Natural Resource Policy (3 cr)
Same as CSS 582. Carries no credit after PolS 462. Political and institutional context for making natural resource policy; emphasis on interaction between private and public sectors and the federal, state, and tribal governments, including an examination of topical issues in natural resource politics.

PolS 567 Constitutional Law (3 cr)
See PolS J467/J567.

PolS 568 Civil Liberties (3 cr)
See PolS J468/J568.

PolS 569 The Judicial Process (3 cr)
See PolS J469/J569.

PolS 571 Intergovernmental Relations (3 cr)
See PolS J471/J571.

PolS 572 Local Government Politics and Administration (3 cr)
See PolS J472/J572.

PolS 573 Sustainable Community Development Planning (3 cr)
See PolS J473/J573.

PolS 575 Public Personnel Administration (3 cr)
Personnel administration in public agencies; history of the personnel and merit systems; recruitment; selection, training, and evaluation of administrators; collective bargaining and political activity in public service; personnel administration and democracy.

PolS 580 Politics of Development (3 cr)
See PolS J480/J580.

PolS 587 Political Violence and Revolution (3 cr)
See PolS J487/J587.

PolS 598 (s) Internship (cr arr)

PolS 600 Doctoral Research and Dissertation (cr arr)
Graded Pass/Fail.

Psychology Courses

Traci Craig, Dept. Chair, Dept. of Psychology and Communication Studies (206 Student Health Ctr. 83844-3043; phone 208/885-6324).

Psyc 101 Introduction to Psychology (3 cr)
Intro to psychology topics, including sensation and perception, learning and thinking, motivation, personality and adjustment, social processes, psychological testing; emphasis on fundamental principles.

Psyc 200 (s) Seminar (cr arr)
Prereq: Psyc 101

Psyc 201 Survey of Contemporary Psychology (1 cr)
Introduces students to the psychology major, the psychology faculty, and current research in psychology. Each week a different faculty member will discuss the history, methods, major findings, and recent developments in his or her main areas of study.
Prereq or Coreq: Psyc 101

Psyc 203 (s) Workshop (cr arr)
Prereq: Psyc 101

Psyc 204 (s) Special Topics (cr arr)
Prereq: Psyc 101

Psyc 218 Introduction to Research in the Behavioral Sciences (4 cr)
Primarily for majors in psychology. Logic and method of empirical research in the behavioral sciences; design, execution, and reporting of psychological experimentation and research. Three lec and one 2-hr lab a wk.
Prereq: Psyc 101
Prereq or Coreq: Stat 251

Psyc 299 (s) Directed Study (cr arr)
Prereq: Psyc 101

Psyc 305 Developmental Psychology (3 cr)
Conception through late adolescence; genetics, anatomy, physiology, biological changes during development, learning, socialization, cognition, and personality.
Prereq: Psyc 101 or EDCI 301

Psyc 310 Psychology of Personality (3 cr)
Theories of personality, basic concepts, techniques of measurement, and experimental methods; the normal personality.
Prereq: Psyc 101

Psyc 311 Abnormal Psychology (3 cr)
Nature, causes, treatment, and prevention of patterns of emotional disturbances and personality disorders, including neuroses and psychoses.
Prereq: Psyc 101

Psyc 312 Practical Gerontology (3 cr)
Same as OrgS 312. Preparation for, and accommodation to, becoming older. Emphases will be on behaviors necessary to maintain physical health, and tactics necessary to maintain brain fitness. Course is appropriate for those interested in eldercare, or for any person concerned about sustaining physical health and mental wellness through the lifespan.
Prereq: Psyc 101 or OrgS 210

Psyc 315 Psychology of Women (3 cr)
This course will cover the empirical research regarding gender differences in domains that are of particular interest to women. These topics will include but not be limited to women in the workplace, cognitive and socialization differences, work-family issues, sexuality, childhood, adolescence, motherhood, identity, and intimate relationships. (Spring, alt/yrs)
Prereq: Psyc 101

Psyc 317 Explore Mentoring & Leadership (3 cr)
See Intr 316.

Psyc 319 Environmental Psychology (3 cr)
This course will cover the empirical social science research on a variety of topics within environmental psychology. Specific topics include: conservation, population psychology, built environments, human territoriality, personal space, crowding, environmental stressors, environmental symbolism, cognitive processes, sustainability of spaces and communities.
Prereq: Psyc 101

Psyc 320 Introduction to Social Psychology (3 cr)
Theories, concepts, and research on the social bases of behavior and social interaction; topics of personal and social relevance, aggression, prejudice, altruism and helping behavior, interpersonal attraction, behavior in groups, conformity, attitudes, authoritarianism, and obedience to authority.
Prereq: Psyc 101

Psyc J325/J525 Cognitive Psychology (3 cr)
Survey and analysis of major topics in field; emphasis on contemporary research and theory; related topics in perception, memory, and information processing and transformation. Additional projects/assignments reqd for grad cr.
Prereq: Psyc 101

Psyc J330/J530 Human Sexuality (3 cr)
Introduction to the fundamentals of human sexuality; emphasis on current trends and research. Additional projects/assignments reqd for grad cr.
Prereq: Psyc 101

Psyc J345/J545 Group Dynamics (3 cr)
This course will cover the empirical research regarding group dynamics, including topics of leadership, cohesion, team building, statistical analyses of group level data, problem solving, group mood, group creativity, transactive memory, information processing, and other small group processes. Additional projects/assignments required for graduate credit. (Spring, alt/yrs)
Prereq: Psyc 101 and Psyc 218

Psyc 347 Survey of Helping Professions (3 cr)
Survey of the helping professions involving psychological assistance, including clinical, counseling, school, social work, psychiatric nursing, chaplaincy/ministerial, non-traditional helpers, and peer helpers. Analysis of counseling methods, psychological testing, outcome studies, and professional issues.
Prereq: Psyc 101

Psyc 372 Physiological Psychology (3 cr)
Physiological bases of animal and normal human behavior.
Prereq: Psyc 101, and Biol 102/102L or higher

Psyc 380 Activities-based Therapies (3 cr)
Techniques based on physical and recreational activities, including crafts, individual and team sports, recreational reading and game-playing. The goal of such approached is to assist clients in their return to an adaptive and or comfortable level of functioning. Both physical and psychological functioning are emphasized.
Prereq: Psyc 101 or Permission of Instructor

Psyc 390 Psychology of Learning (3 cr)
Experimental literature of the nature and conditions of classical and operant conditioning, verbal learning, and cognition.
Prereq: Psyc 101

Psyc 400 (s) Seminar (cr arr)
Prereq: Psyc 101

Psyc 403 (s) Workshop (cr arr)
Prereq: Psyc 101

Psyc 404 (s) Special Topics (cr arr)
Prereq: Psyc 101

Psyc 413 Psychology of Religion (3 cr)
Same as RelS 413. This course examines psychological theories on the origin of the religious impulse in humans, some aspects of religious experience, and contemporary religious phenomena. It provides an overview of the relevance of objective, depth, and humanistic approaches for the psychology of religion. The biographies and theories of particularly Freud, Jung, Erikson, and James are highlighted.
Prereq: Psyc 101

Psyc 414 Traumatic Events: Preparation, Intervention, Evaluation (3 cr)
Same as OrgS 414. Traumatic Events (TEs) range from local to large scale human-induced or catastrophic natural disasters (violent crimes, major accidents, weather events, etc.). This course is designed to address integral response elements: (a) preparation (e.g., organizing, planning, training, equipping) (b) intervention (e.g., multi-agency coordination, logistics, triage, first & secondary responses, volunteers, incident command, communication, mitigation, psychological first aid, media, safety, security) (c) evaluation (e.g., after-action reports, lessons learned, hotwash, best practices, research).
Prereq: Psyc 101 or Permission of Instructor

Psyc 415 History and Systems of Psychology (3 cr)
History of psychology as a field of scientific inquiry; overview of development of schools of thought, prominent figures, and key theories. Recommended Preparation: Two upper-division psychology courses.
Prereq: Psyc 101

Psyc J416/J516 Industrial/Organizational Psychology (3 cr)
Application of psychological principles to the study of work behavior; includes topics such as personnel selection, performance appraisal, training, work motivation, teams, leadership, and job attitudes. Additional work required for graduate credit. Psyc 516 is a cooperative course available to WSU degree-seeking students.
Prereq: Psyc 101

Psyc 419 Adult Development and Aging (3 cr)
Analysis of change from early adulthood through death in the areas of social, cognitive, and physical development; examination of theories, concepts, and research in the area of lifespan development; study of the problems of aging, plasticity of functioning, and ingredients of successful aging.
Prereq: Psyc 101

Psyc 420 Personality and Social Development (3 cr)
Personality and social development from birth through adolescence, including such topics as attachment, aggression, impulse control, sex differences, self concept, moral development, and effects of parental childrearing styles.
Prereq: Psyc 101 and 305, or Permission

Psyc 421 Cognitive Development (3 cr)
Intellectual development of child from birth to maturity, mechanisms of intellectual growth, relationship between language and cognitive development.
Prereq: Psyc 101 and 305, or Permission

Psyc J422/J522 Disorders of Childhood and Adolescence (3 cr)
Overview of psychological disorders that affect children and adolescents; emphasis on how childhood mental illness is defined, diagnosed, and treated within multiple theoretical perspectives. Examines how multiple, interacting events shape both adaptive and maladaptive developmental outcomes. Additional work required for graduate credit.
Prereq: Psyc 101 and 305; or Permission

Psyc 430 Tests and Measurements (3 cr)
Review of the major principles of test development including test construction and methods for determining test validity and reliability, some of the currently used scales, and study of scaling methods such as Thurstone scales, Likert scales, and semantic differentials. Recommended Preparation: Stat 251.
Prereq: Psyc 101

Psyc J435/J535 Personnel (3 cr)
Same as OrgS J435/J535. Review of theory and methods related to personnel issues; includes topics such as individual differences, selection, psychometrics, compensation, training programs, and performance appraisal. Additional project/assignments reqd for grad cr. Psyc 535 is a cooperative course available to WSU degree-seeking students.
Prereq: Psyc 101

Psyc 440 Psychology of Judgment and Decision Making (3 cr)
This course is an introduction to the psychological study of judgment and decision-making. By examining both laboratory and real-world research, we will learn how people (both laypersons and experts) actually make decisions and judgments and how various biases and heuristics can influence their judgments and decisions.
Prereq: Psyc 101

Psyc J441/J541 Social Psychology in the Workplace (3 cr)
Overview of the general theory and methods of organizational psychology; focus on how individual or group behavior is affected by the organizational environment; includes topics such as work motivation, leadership, teams, culture/climate, and job attitudes. Additional assignments/projects required for graduate credit. Psyc 541 is a cooperative course available to WSU degree-seeking students.
Prereq: Psyc 101 and Permission

Psyc 444 Sensation and Perception (3 cr)
Fundamental processes and variables in sensory, perceptual, and cognitive experiences of humans.
Prereq: Psyc 101 and Psyc 218

Psyc 446 Engineering Psychology (3 cr)
Application of principles of experimental psychology to analysis of interaction of the human operator with machine systems and work environments; emphasis on psychological aspects of human performance. Cooperative: open to WSU degree-seeking students.
Prereq: Psyc 101; and Psyc 218 or Stat 301 or Permission

Psyc 448 Psycholinguistics (3 cr)
See Engl 448.

Psyc J450/J550 Training and Performance Support (3 cr)
Same as OrgS J450/J550. Review of applicable theory and various methods for developing training programs and performance support systems; emphasis on developing skills for front-end analysis, training program and performance support design, and program evaluation. Additional project/assignments reqd for grad cr. Recommended Preparation: Psyc 325.
Prereq: Psyc 101

Psyc J452/J552 Ergonomics and Biomechanics (3 cr)
Principles of anthropometry, biomechanics, and work physiology applied to workplace. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc 456 Psychology of Emotion (3 cr)
Theories of emotion; biological and social variables influencing the activation of emotion.
Prereq: Psyc 101

Psyc J461/J561 Human-Computer Interaction (3 cr)
Overview of human-computer interaction (HCI) topics, including user models, dialog, display design, usability, software development, groupware, and multimedia. Additional projects/assignments required for graduate credit. Recommended Preparation: Psyc 446. Psyc 561 is a cooperative course available to WSU degree-seeking students.
Prereq: Psyc 101

Psyc J470/J570 Introduction to Chemical Addictions (3 cr)
Understanding how individuals develop an addiction to psychoactive chemicals and how they recover from such an addiction; recognition, assessment, and treatment of various chemical addictions and how to do interventions for addicted individuals and their families; topics include drugs of abuse, symptoms and warning signs of chemical addiction, assessment, codependency, interventions, treatment, and recovery. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J472/J572 Introduction to the Pharmacology of Psychoactive Drugs (3 cr)
Overview of neural mechanisms, behavioral responses, and addictive aspects of psychoactive drugs. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J473/J573 Blood and Airborne Pathogens: HIV/STDs/Hepatitis/TB (3 cr)
Overview of HIV/AIDS, TB, and other STDs; preparing counselors to work with clients to prevent these diseases or counsel clients who have acquired these diseases; making counselors examine issues related to human sexuality and biases about sexually related topics. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J474/J574 Record Keeping and Case Management in Chemical Addictions Counseling (3 cr)
Exploration and examination of the sequence of events and services that clients encounter as they begin and move through the treatment process in a typical addictions treatment setting, as outlined in the Twelve Core Functions and Global Criteria of the International Certification Reciprocity Consortium (ICRC); study of the Twelve Core Functions and the Addiction Counseling Competencies relevant to each area. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J475/J581 Professional Ethics in Addictions Counseling (3 cr)
Overview of ethical issues and decision making related to addictions counseling; ethics related to harm reduction models and other issues. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J476/J576 Relapse Prevention in Chemical Addictions Counseling (3 cr)
Overview of addictions relapse, issues and triggers related to relapse, prevention of relapse, and issues related to addictions relapse in general. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J477/J577 Chemical Dependency and the Family (3 cr)
Overview of how chemical dependence impacts the family unit; intervention techniques to assist the family. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J478/J578 Individual Therapy Techniques in Chemical Addictions Counseling (3 cr)
Techniques related to counseling individual chemical addictions clients; helping skills such as active listening, problem solving, paraphrasing; numerous role plays and other practicum exercises. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J479/J579 Group Therapy Techniques in Chemical Addictions Counseling (3 cr)
Theoretical and practical understanding of the group therapy process with individuals from chemical addictions counseling; information about group therapy with actual experience of being part of a group. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J482/J582 Addictions Screening and Assessment (3 cr)
This course is designed to provide a comprehensive overview of substance abuse screening and assessment. This includes information related to interviewing techniques, substance abuse diagnosis, testing instruments, and issues or problems that influence the assessment environment. Additional projects/assignments required for graduate credit.
Prereq for 482: Psyc 101 and Psyc 478
Prereq for 582: Psyc 578

Psyc J483/J583 Substance Abuse Prevention Theory and Applications I (3 cr)
This course provides a comprehensive overview of substance abuse prevention theories, prevention programming applications. Upon completion, students should understand current prevention models, CSAP prevention strategies and applications, be familiar with the IOM Continuum of Care, and be familiar with state and federal prevention resources. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J484/J584 Facilitation Skills and Group Management for Prevention Providers (3 cr)
This course provides a comprehensive overview of theories and methods related to group small and large group behavior. Upon completion, students will understand the three major types of groups, how gender, ethnicity, work roles, communication styles, etc. impact group interactions, and methods to increase participation. It is expected students will practice facilitation and conflict resolution techniques in these groups. Additional projects/assignments required for graduate credit.
Prereq for 484: Psyc 101, Psyc 305 and Psyc 472
Prereq for 584: Psyc 305 and 572

Psyc J485/J591 Presentation - Instruction Skills for Helping Professionals (3 cr)
This course provides an overview of presentation methods/training techniques for audiences of various sizes and demographics. The course will include knowledge of group types, group dynamics, presentation techniques (including PowerPoint), conflict resolution, and learning styles. Students will be expected to practice these techniques in front of small and large groups with a focus on substance abuse prevention populations. Additional projects/assignments required for graduate credit.
Prereq for 485: Psyc 101, Psyc 305, Psyc 483, and Psyc 484
Prereq for 591: Psyc 305, Psyc 583, and Psyc 584

Psyc J486/J592 Community Coalition Development (3 cr)
This course is designed to provide skills to develop community coalitions. Upon completion students will understand community organization processes, how to measure community readiness, the strategic planning process, decision and prioritizing methodologies, interagency dynamics, and the importance of networking. It is expected students will participate in or develop a community coalition during the course. Additional projects/assignments required for graduate credit.
Prereq for 486: Psyc 101, Psyc 472, Psyc 483, and Psyc 485
Prereq for 592: Psyc 572, Psyc 583, and Psyc 591

Psyc J487/J587 Substance Abuse Program Planning and Evaluation (3 cr)
This class provides an overview of program planning and evaluation with a focus on substance abuse prevention. Upon completion students will understand research related to ATOD prevention, program design and evaluation models, how to use the Idaho LOGIC model, indicators of program effectiveness. Students will also be presented with information regarding local, state, and federal resources. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101 and Psyc 483

Psyc J488/J588 Ethics in Substance Abuse Prevention (1 cr)
This course will provide an overview of ethical issues encountered by substance abuse prevention specialists. Upon completion students will understand boundary issues between prevention and conducting treatment, state and federal mandatory reporting requirements, confidentiality and other legal issues, and professional codes of conduct. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J489/J589 Substance Abuse Prevention Theory and Applications II (4 cr)
This capstone prevention course consolidates all material within the substance abuse prevention curriculum. Students will be expected to understand and apply material such as the LOGIC model, coalition development, use fundraising techniques, and be knowledgeable in topics such as social marketing, program development and evaluation, etc. Additional projects/assignments required for graduate credit.
Prereq: Psyc 101

Psyc J490/J590 Psychopharmacology (3 cr)
This course provides a solid overview of neurobiology, neurophysiology, and pharmacologic treatment for individuals having psychological/psychiatric disorders. It will also examine evidence supporting the

use of such interventions. Additional projects/assignments required for graduate credit. Recommended Preparation: Psyc 311 and 372.
Prereq: Psyc 101

Psyc 494 (s) Psychology Research Training (cr arr)
Supervised experience in conducting psychological research. Available topics vary depending on current faculty research interests. Recommended preparation: Psyc 218
Prereq: Psyc 101 and Permission

Psyc 496 Applied Behavior Analysis (3 cr)
Analysis and assessment of behavior in real-life settings, e.g., home, business, industry, and institutions such as prisons and psychiatric hospitals; structured programs of intervention and assessment of behavior change; special emphasis on self-management of behavior.
Prereq: Psyc 101, Psyc 218 and Psyc 390

Psyc 497 (s) Practicum in Instruction (1-3 cr, max 6)
Tutoring and/or instructional services performed by advanced students under faculty supervision.
Prereq: Psyc 101 and Permission

Psyc 498 (s) Internship (1-6 cr, max arr)
Directed internship in an approved setting that features psychological applications.
Prereq: Psyc 101 and Permission

Psyc 499 (s) Directed Study (cr arr)
Prereq: Psyc 101

Psyc 500 Master's Research and Thesis (cr arr)

Psyc 501 (s) Seminar (cr arr)

Psyc 502 (s) Directed Study (cr arr)

Psyc 503 (s) Workshop (cr arr)

Psyc 504 (s) Special Topics (cr arr)

Psyc 509 Human Factors in Engineering Design (3 cr)
Application of psychological principles to engineering and design; psychological models and principles from areas of perception, cognition, and information processing; the design process; display and control design; work station layout and system integration; environmental factors; safety; mental workload; human-computer interaction; and current research topics. Recommended preparation: Psyc 325 or Psyc 535; Psyc 444; and Psyc 446.

Psyc 512 Research Methods (3 cr)
Philosophy of research, types of design, data analysis, research report.
Prereq: Psyc 218 or equiv, or Permission

Psyc 513 Advanced Research Methods (3 cr)
Types of research designs and data analyses; use of mainframe computer packages for data analysis.
Prereq: Permission

Psyc 516 Industrial/Organizational Psychology (3 cr)
See Psyc J416/J516.

Psyc 522 Disorders of Childhood and Adolescence (3 cr)
See Psyc J422/J522.

Psyc 525 Cognitive Psychology (3 cr)
See Psyc J325/J525.

Psyc 526 Cognitive Neuroscience (3 cr)
Same as Neur 526. Examine research in human and animal cognition and its neurological basis. Material covered will include the study of normal cognitive processes in humans with noninvasive behavioral and physiological techniques (e.g., reaction times, fMRI, EEG), the study of brain-injured patients, behavioral and neurophysiological research in animals, and the comparative analyses of cognitive processes across organisms. Computational approaches towards cognitive and neural processing will also be addressed. A selection of the following topics will be covered: perception, object recognition, attention, memory, spatial cognition, motor control, language, executive control, and development. Recommended Preparation: Psyc 325.

Psyc 528 Psychopathology (3 cr)
Review of symptoms, causes, and treatments in adult psychopathology; training in use of DSM-IV for differential diagnosis; may include practicum experience.
Prereq: Permission

Psyc 530 Human Sexuality (3 cr)
See Psyc J330/J530.

Psyc 535 Personnel (3 cr)
See Psyc J435/J535.

Psyc 541 Social Psychology in the Workplace (3 cr)
See Psyc J441/J541.

Psyc 545 Group Dynamics (3 cr)
See Psyc J345/J545.

Psyc 550 Training and Performance Support (3 cr)
See Psyc J450/J550.

Psyc 552 Ergonomics and Biomechanics (3 cr)
See Psyc J452/J552.

Psyc 561 Human-Computer Interaction (3 cr)
See Psyc J461/J561.

Psyc 562 Advanced Human Factors (3 cr)
Review of topics and theories germane to human factors such as performance measurement systems, design specifications, research issues, controls and displays, human reliability, and illumination. Cooperative: open to WSU degree-seeking students.
Prereq: Psyc 446, and Psyc 586 or Stat 431; or Permission

Psyc 570 Introduction to Chemical Addictions (3 cr)
See Psyc J470/J570.

Psyc 572 Introduction to the Pharmacology of Psychoactive Drugs (3 cr)
See Psyc J472/J572.

Psyc 573 Blood and Airborne Pathogens: HIV/STDs/Hepatitis/TB (3 cr)
See Psyc J473/J573.

Psyc 574 Record Keeping and Case Management in Chemical Addictions Counseling (3 cr)
See Psyc J474/J574.

Psyc 576 Relapse Prevention in Chemical Addictions Counseling (3 cr)
See Psyc J476/J576.

Psyc 577 Chemical Dependency and the Family (3 cr)
See Psyc J477/J577.

Psyc 578 Individual Therapy Techniques in Chemical Addictions Counseling (3 cr)
See Psyc J478/J578.

Psyc 579 Group Therapy Techniques in Chemical Addictions Counseling (3 cr)
See Psyc J479/J579.

Psyc 581 Professional Ethics in Addictions Counseling (3 cr)
See Psyc J475/J581.

Psyc 582 Addictions Screening and Assessment (3 cr)
See Psyc J482/J582.

Psyc 583 Substance Abuse Prevention Theory and Applications I (3 cr)
See Psyc J483/J583.

Psyc 584 Facilitation Skills and Group Management for Prevention Providers (3 cr)
See Psyc J484/J584.

Psyc 587 Substance Abuse Program Planning and Evaluation (3 cr)
See Psyc J487/J587.

Psyc 588 Ethics in Substance Abuse Prevention (1 cr)
See Psyc J488/J588.

Psyc 589 Substance Abuse Prevention Theory and Applications II (4 cr)
See Psyc J489/J589.

Psyc 590 Psychopharmacology (3 cr)
See Psyc J490/J590.

Psyc 591 Presentation - Instruction Skills for Helping Professionals (3 cr)
See Psyc J485/J591.

Psyc 592 Community Coalition Development (3 cr)
See Psyc J486/J592.

Psyc 596 Comprehensive Exam (1 cr)
Capstone integration and comprehensive examination of material in psychology master's degree program.

Psyc 598 (s) Internship (cr arr)

Psyc 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Psyc 600 Doctoral Research and Dissertation (cr arr)

Rangeland Ecology and Management Courses

Anthony S. Davis, Dept. Chair, Dept. of Forest, Rangeland, and Fire Sciences (205B CNR Bldg. 83844-1135; phone 208/885-6536).

Prerequisite: Courses in this subject field that are numbered above 299 are not open to undergraduate students on academic probation.

REM 151 Rangeland Principles (2 cr)
Rangelands are vast landscapes that cover most of western North America and the earth. Students will examine the ecological principles that cause these grasslands, shrublands, woodlands and deserts to change or stay the same. How humans use and manage these ecosystems will also be explored. The modern challenges of rangeland management must be met with broad thinking and new, sustainable practices to maintain and restore rangelands and the human communities that rely on them.

REM 152 Rangeland Ecosystem Exploration (1 cr)
Students will explore the climates, plants, animals, and human communities of rangeland throughout North America and the globe. The grasslands, shrublands, woodlands, and deserts that are collectively called rangelands include extensive challenges and opportunities for management and conservation. Students will individually explore these ecosystems through photos, ecosystem descriptions, videos, and internet-based tools. In discussions and presentations, students will collectively share their findings about these incredible rangeland ecosystems. (Fall only)

REM 200 (s) Seminar (cr arr)

REM 203 (s) Workshop (cr arr)

REM 204 (s) Special Topics (cr arr)

REM 221 Ecology (3 cr)
Fundamental principles of ecology. Major topics covered by the course include the physical environment, how organisms interact with each other and their environment, evolutionary processes, population dynamics, communities, energy flow and ecosystems, human influences on ecosystems, and the integration and scaling of ecological processes through systems ecology. Computer-based materials are used extensively for guided independent learning of ecology. An online version of this course is offered as a separate section. Course information: EcologyOnline.net. Recommended Preparation: Introductory botany, zoology and good working knowledge of Windows-based computer systems.
Prereq: Biol 102/102L, 115, or 116; or Permission

REM 244 Wildland Fire Management (2 cr)
Introduction to wildland fire management including fire behavior, fuels, fire prevention and suppression, fire policy and fire ecology. Includes discussion of current fire management issues.

REM 252 Wildland Plant Identification Field Studies (3 cr)
Develop skills to identify, classify, and collect rangeland plants in the field. Focus on identification of grasses, forbs, and shrubs. Discussions will also encompass the ecological roles of wildland plants and the ecosystem classification. This course includes a 7 to 9-day field trip. Required for REM majors. (Spring only)

REM 280 Introduction to Wildland Restoration (2 cr)
History and overview of the ecological, social, and economic aspects of wildland restoration using case studies. Students will explore approaches and philosophies towards restoring and rehabilitating wildlands that have been damaged through natural forces and human activities such as wildfire, overgrazing, cultivation, and weed invasion.

REM 299 (s) Directed Study (cr arr)

REM 340 Ethnobotany (2 cr)
Course covers the relationships between humans and plants and the ecology of important native wildland plants of western North America. Course focus is on the natural ecology, identification and cultural attributes (historical and present) of 50 to 75 important native wildland plant species found in forestland, rangeland and other wildland settings in the Northwest U.S. Recommended preparation: plant identification course. (Spring only)

REM 341 Systematic Botany (3 cr)
Phylogenetic approach to understanding plant systematics and evolution with a primary focus on the flora of the Pacific Northwest. Includes identification of important plant families and the use of dichotomous keys for species identification. (Spring only)
Prereq: Biol 115; and Biol 213 or PlSc 205

REM 353 Rangeland Plant Identification and Ecology (3 cr)
Classification, description, and identification of the most important rangeland and riparian plants in North America; particular reference to important ecological roles of these plants. Recommended Preparation: For 221 or REM 221. (Fall only).

REM 360 Rangeland Entomology (2 cr)
Much of the world's population depends upon the resources available from rangeland habitats. Rangeland resources are not only an economic asset, but they also serve a multitude of ecological functions. Students will be introduced to the complex community of insects that inhabit rangeland ecosystems and will be better able to understand the roles played by insects in rangeland systems and the impact that selected management practices may have on their ability to fulfill those roles. Recommended Preparation: Stat 251 and REM 221. (Fall only)

REM 398 (s) Renewable Natural Resources Internship (cr arr)
Supervised field experience with an appropriate public or private agency. Reqd for cooperative education students. Graded P/F.
Prereq: Permission of department

REM 400 (s) Seminar (cr arr)

REM 402 GIS Applications in Natural Resources (2 cr)
Course reviews basic GIS concepts emphasizing hands-on experience and independent problem solving. Topics include GIS/GPS integration, habitat inventory, site suitability studies, risk assessment, sources of spatial data, map accuracy, etc. ArcView software and extensions will be used in exercises. (Fall only)

REM 403 (s) Workshop (cr arr)

REM 404 (s) Special Topics (cr arr)

REM J407/J510 GIS Application in Fire Ecology and Management (2 cr)
Introduces applications of GIS in fire ecology, research, and management including incident mapping, fire progression mapping, GIS overlay analysis, remote sensing fire severity assessments, fire atlas analysis and the role of GIS in the Fire Regime Condition Class concept and the National Fire Plan. Additional assignment/projects required for graduate credit. (Spring only)
Prereq: For 375 or Geog 385; or Permission

REM 410 Principles of Vegetation Measurement and Assessment (2 cr)
On-line course designed to give an overview of vegetation measurement techniques for grasslands, shrublands, woodlands, and forests. Students will gain a solid understanding of how to assess and monitor vegetation attributes relative to wildlife habitat, livestock forage, fire fuel characteristics, watershed function, and many other wildland values. Recommended Preparation: A basic statistics course and understanding of how to use computer spreadsheets such as Excel. (Fall only)

REM 411 Ecological Monitoring and Analysis (2 cr)
Field and data analysis course where students collect, analyze, and report ecological data related to scientific research, wildlife habitat, fire, grazing, and land management practices. Class field trips required. Recommended preparation: Ability to use excel.
Prereq: Stat 251 or Permission
Prereq or Coreq: REM 410

REM 429 Landscape Ecology (3 cr)
Ecological relationships and conservation issues for biotic communities across the landscape, including spatial and temporal dynamics and patterns, and importance of landscapes in maintenance of ecosystem diversity and function. One or more field trips; one 2-3 hour lab period per week. Recommended Preparation: Familiarity with spreadsheet programs and problem solving using computers. (Spring only)
Prereq: For 221 or REM 221

REM 440 Wildland Restoration Ecology (3 cr)
Ecological principles and management practices involved in restoring and rehabilitating wildland ecosystems after disturbance or alteration to return damaged ecosystems to a productive and stable state. (Spring only).
Prereq: For 221, or REM 221, or equivalent general ecology course

REM 450 Global Environmental Change (3 cr)
Major global environmental changes addressed using an interdisciplinary approach. Topics may include processes and principles of ecosystems, biogeochemical cycles, impacts and mitigation of climatic change, atmospheric chemistry, feedbacks between climate and various earth system processes, and trends in global biodiversity.
Prereq: Math 143 or Stat 251

REM 452 Western Wildland Landscapes (2 cr)
Survey of wildland plant communities of western North America, focusing on their natural history, including the effects of use by human beings, based on their physical, climatic, and biological characteristics. (Spring only)
Prereq: For 221 or REM 221; or Permission

REM 456 Integrated Rangeland Management (3 cr)
Management strategies for integrating grazing with other natural resource values such as wildlife, water, timber, recreation, and aesthetics; emphasis on herbivore ecology including ecological impacts of grazing, ways to manage grazing, and nutritional relationships between plants and free-ranging ungulates on rangeland, pastureland, and forest ecosystems. One 4 to 5 day field trip. Recommended Preparation: REM 151. (Spring only)
Prereq: Engl 313 or Engl 317

REM 459 Rangeland Ecology (2 cr)
Application of ecological principles in rangeland management; stressing response and behavior of range ecosystems to various kinds and intensity of disturbance and management practice. Web only [www.cnr.uidaho.edu/range459bunting/]. Recommended Preparation: courses in general ecology (e.g., REM 221), technical writing (e.g., Engl 317), and vegetation assessment (e.g., REM 411 or For 274) or Permission. (Fall only)

REM 460 Integrating GIS and Field Studies in Rangelands (2 cr)
Topics related to changing knowledge and technology related to GIS and spatial analysis relevant to ecology of grasslands, shrublands and woodlands. Min. six integrated GIS labs; one five-day field trip. Required for REM majors. (Fall only)
Coreq: REM 459

REM 472 Remote Sensing of the Environment (3-4 cr)
See For 472. Cooperative: open to WSU degree-seeking students.

REM J480/J580 Ecological Restoration (3 cr)
Planning and implementing restoration projects in conjunction with land agencies and stakeholders. Includes service-learning projects. Field trip(s) required. Additional literature review, reports, discussion and/or a class project are required for students pursuing this as a 500-level course.
Prereq: REM 440 or Permission

REM 483 Senior Project Presentation (1 cr)
See For 483.

REM 485 Ecology and Conservation Biology Senior Project (1-3 cr, max 3)
See WLF 485.

REM J495/J595 Teaching Practicum (1-3 cr, max arr)
Provides students with peer teaching experience and assisting an instructor. May include classroom activities, grading assignments, developing materials, and/or participating in field trips. Students who take this course as the graduate level, as REM 595, will be asked to do additional work related to developing a teaching philosophy, developing assessment, or experimenting with specific pedagogical approaches with the faculty supervisor.
Prereq: Permission

REM 497 Senior Research and Thesis (cr arr)
A research investigation, selected and designed jointly by the student and professor, during which the student has the opportunity to learn research techniques of experimental design, proposal writing, data collection and analysis, scientific writing, and publication; at completion, the student will produce a publishable journal manuscript and/or a conference presentation.
Prereq: Senior standing and Permission

REM 498 (s) Internship (cr arr)

REM 499 (s) Directed Study (cr arr)
For the individual student; conferences, library, field, or lab work.
Prereq: Senior standing, GPA 2.5, and Permission

REM 500 Master's Research and Thesis (cr arr)

REM 501 (s) Seminar (cr arr)
Major philosophy, management, and research problems of wildlands; presentation of individual studies on assigned topics.
Prereq: Permission

REM 502 (s) Directed Study (cr arr)

REM 503 (s) Workshop (cr arr)
Selected topics in the conservation and management of natural resources.
Prereq: Permission

REM 504 (s) Special Topics (cr arr)

REM 507 Landscape and Habitat Dynamics (3 cr)
Students explore landscape change occurring a variety of spatial and temporal scales, including global change, succession, disturbance events, and change induced by humans. Via scientific readings, models and spatial analysis students will learn how to quantify landscape change and how a change in environmental conditions and disturbance regimes may affect the composition of landscapes, specifically plant and animal habitats. Recommended Preparation: courses in ecology, statistics, and GIS. (Spring, alt/yrs)
Prereq: Permission

REM J407/J510 GIS Application in Fire Ecology and Management (2 cr)
See REM J407/J510.

REM 530 Stream Ecology (3 cr)
See Fish 530.

REM 551 Rangeland Vegetation Ecology (3 cr)
Ecological concepts of the nature, dynamics, and distribution of plant communities; secondary successional processes, soil-vegetation relations, and development of vegetation-classification schemes for better land management. Cooperative: open to WSU degree-seeking students. (Spring, Alt/odd yrs)
Prereq: Plant ecology and Permission

REM 556 Foraging Ecology of Herbivores (2 cr)
Synthesis of foraging behavior concepts including nutritive quality of forages, digestive and metabolic constraints, and diet and habitat selection. Cooperative: open to WSU degree-seeking students. (Fall, alt odd/yrs)

REM 560 Ecophysiology (3 cr)
Functional responses and adaptations of individual species to their environment, emphasizing the physiological mechanisms that influence the interactions between organisms and the major environmental factors (e.g., solar radiation, energy balance, temperature, water and nutrients, climate), and how this affects the interactions among species and their growth and survival (e.g., competition, herbivory, and allelopathy).The interactive learning materials are compatible only with computers that

are 100% compatible with the Windows operating system and the browser, Internet Explorer. (Fall only)
Prereq: A course in general ecology (i.e. REM 221) and general botany, or Permission [www.EcologyOnline.net]

REM 580 Ecological Restoration (3 cr)
See REM J480/J580.

REM 595 Teaching Practicum (1-3 cr, max arr)
See REM J495/J595.

REM 597 (s) Practicum (cr arr)

REM 598 (s) Internship (cr arr)

REM 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

REM 600 Doctoral Research and Dissertation (cr arr)
Prereq: Admission to the doctoral program in "natural resources" and Permission of department

Recreation Courses

Philip W. Scruggs, Dept. Chair (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

Rec 104 Introduction to Recreation, Parks, and Tourism Professions (3 cr)
Introduction to the foundations of recreation, park and tourism professions and careers, and related issues, resources, and professional opportunities. (Fall only)

Rec 105 Teaching Golf I (2 cr)
Teach Professional Golf Management students the basics of golf instruction. They will learn how to establish relationships, organize groups, design golf development programs, demonstrate the short game, as well as the full swing. (Spring only)
Prereq: PGM student or Bus 103 and Permission

Rec 107 Outdoor Recreation and Tourism Pursuits (3 cr)
Introduction to outdoor recreation and tourism pursuits -via theoretical discussion, examination of current trends and hands-on programming and participation opportunities. Overnight field trips and weekly labs required.

Rec 108 Orienteering & Navigation (1 cr)
This course will provide an introduction to orienteering and basic map and compass navigation skills for working or recreating. The reading and understanding of forest service and topographical maps will be covered with a focus on symbols, legends, border information and contour lines. Magnetic compasses and an introduction to GPS technology will be used to teach course plotting on maps. Orienteering field experience will be integrated throughout the course. Instruction requires practical field application for hands-on experience.

Rec 200 (s) Seminar (cr arr)

Rec 203 (s) Workshop (cr arr)

Rec 204 (s) Special Topics (cr arr)

Rec 216 River Recreation and Water Craft Safety (3 cr)
Introduction to water crafts (river board, rafts, canoes, inflatables, etc) and teaching basic paddling skills and aspects of safety. Additional content includes: river policy, history, culture, careers/guiding, equipment maintenance/storage, river camping and leadership. Field days required (3-5 days).
Prereq or Coreq: Rec 107

Rec 218 Rock Climbing & Mountaineering (3 cr)
This course will teach: intra to fundamentals of basic rock climbing including equipment, climbing techniques, knots, belaying, and rappelling; emphasis on skill development, risk management, and leadership. Intra to fundamentals of mountaineering including equipment; fundamentals; rock, snow, and ice techniques; climbing equipment; navigation; expedition planning and safety; emphasis on skill development and safety. This course will follow and promote industry safety standards and teach best practices. Instruction requires three to five full days of practical field application for hands-on experience.
Prereq: Rec 107

Rec 205 Teaching Golf II (2 cr)
Basic fundamentals of how the golf swing works. Students will learn how to analyze swing motion and observe ball flight characteristics to help the student improve their golf game. Students will also examine ways to generate business using marketing and promotional techniques. (Fall only)
Prereq: PGM student or Bus 103 and Permission

Rec 222 Cross Country Skiing (1 cr)
Intro to skills of cross country skiing including equipment, waxing, climbing techniques, turns, downhill, and diagonal glides. One 1-day field trip. Recommended Preparation: Two courses from CSS 287, CSS 387, CSS 487, CSS 490. (Alt/yrs)

Rec 223 Winter Skills (2 cr)
Intro to fundamental skills reqd to successfully travel in winter environment, including equipment, trip planning, avalanche awareness, snow shelters, travel techniques, and safety including psychological and physiological aspects of cold/winter weather. One 1-day and one 2-day field trips. Recommended Preparation: Rec 222 and two courses from CSS 287, CSS 387, CSS 487, CSS 490. (Alt/yrs)

Rec 224 Whitewater Rafting (1 cr)
Intro to skills of whitewater rafting including equipment, trip planning, permits, techniques, and river impact. One or two field trips. (Alt/yrs)
Prereq: Two courses from CSS 287, CSS 387, CSS 487, CSS 490, or Permission

Rec 225 Kayaking (1 cr)
Intro to skills of whitewater kayaking including equipment, eskimo rolls, eddy turns, ferrying, and rapid maneuvering. One 2-day field trip. (Alt/yrs)
Prereq: Two courses from CSS 287, CSS 387, CSS 487, CSS 490, or Permission

Rec 227 Mountain Biking (1 cr)
Introduction to fundamentals of mountain biking including equipment, trip planning, skill development, off-road riding, bike repair and safety. One 3 to 7 day field trip required.

Rec 228 Avalanche Fundamentals (2 cr)
This course will teach the skills necessary for understanding the complex systems involved in backcountry winter avalanche conditions. This course will follow and promote industry safety standards and teach best practices based off of the guidelines set by the American Avalanche Association. This two credit course will cover curriculum such as: general information about avalanche hazard, a framework for decision making and risk management while traveling in avalanche terrain, effective field observation techniques, companion rescue and proper equipment for traveling in avalanche terrain. Instruction requires two full days of practical field application for hands-on experience.
Prereq: Rec 107 or Equivalent Experience with Instructor Permission

Rec 240 Recreation Activities, Programming and Marketing (3 cr)
Introduction to recreation activities with applications to programming and marketing in leisure settings. Programming field experience required.

Rec 254 Camp Leadership in Recreation and Sport (3 cr)
Objectives, organizational structures, programs, and philosophies of for-profit and non-profit recreation and sport camps. One 3-4 day field trip. (Alt/yrs)

Rec 260 Foundations of Leisure and Society (3 cr)
History of and expanding role of leisure in modern U.S. life; emphasis on factors influencing leisure; analysis of leisure values as related to the individual and society. (Fall only)

Rec 280 Recreation Practicum in Recreation, Parks and Tourism (1 cr, max 3)
Practical experience in agency recreation and leisure services recreation, park, sport, or tourism agency services. Forty clock hrs reqd per cr. Graded P/F.
Prereq: Permission of advisor

Rec 290 Wilderness First Responder (3 cr)
Wilderness First Responder is the accepted standard in wilderness medical training for guides, trip leaders, and outdoor professionals. This course covers the knowledge and skills needed to respond to back country medical and trauma situations. Over night field trip required. (Spring only)

Rec 299 (s) Directed Study (cr arr)

Rec 305 Teaching Golf III (2 cr)
This course will build on the concepts contained in the Analysis of Swing and the preseminar material for Philosophy and Swing Concepts. This course will examine swing philosophy; apply concepts to various situations; understand course management, physical fitness, and special populations; evaluate short game skills; identify and demonstrate different drills; and incorporate video technology.
Prereq: Rec 205

Rec 310 Outdoor and Adventure Leadership (3 cr)
Outdoor and adventure leadership for wilderness experiences and effective expedition planning. Fundamentals of handling wilderness emergencies and evacuation. Wilderness backpacking field experience required during course.
Prereq: Rec 107

Rec 370 Leisure, Health and Human Development (3 cr)
Leisure and health across the lifespan (early childhood to late life) based on health and human development concepts and theories. Emphasis on psychological, sociological, and cultural influences. (Alt/yrs)

Rec 395 Diversity in Recreation, Parks and Tourism (3 cr)
Delivery of recreation, park, and tourism services to diverse populations. Analysis of diversity issues in leisure settings.

Rec 400 (s) Seminar (cr arr)

Rec 403 (s) Workshop (cr arr)

Rec 404 (s) Special Topics (cr arr)

Rec J405/J505 Professional Development (cr arr)
Credit earned may not be applied toward grad degree program. Professional development and enrichment of recreational professionals. Additional projects/assignments required for graduate credit.

Rec 408 Experiential Education and Adventure Recreation (3 cr)
Philosophical and theoretical foundations of experiential education and adventure activities, and applications to individual, group, and organizational development. Field trips required. (Alt/yrs)

Rec 424 Inclusive Physical Education and Recreation (3 cr)
See PEP 424.

Rec 455 Design & Analysis of Research in Movement Sciences (3 cr)
See PEP 455.

Rec 485 Trends in Recreation, Parks and Tourism (3 cr)
Current trends and issues in the recreation, park and tourism field; analysis of selected topics of current relevance. (Alt/yrs)

Rec 490 Management and Entrepreneurship in Recreation, Parks, and Tourism (3 cr)
Models of entrepreneurism and components of successful management in recreation, sport, park, and tomism settings such as business planning, human resources, operations and risk management. (Alt/yrs)

Rec 498 (s) Internship in Recreation, Parks and Tourism (cr arr)
Supervised field work with a professional recreation agency.
Prereq: Rec 280

Rec 499 (s) Directed Study (cr arr)

Rec 505 Professional Development (cr arr)
See Rec J405/J505.

Rec 575 Leadership, Programming and Marketing (3 cr)
Studies of theories, methods, and styles of effective leadership. Includes group dynamics, motivation, team building and leadership skills. Planning and development of activity programs and implementation of marketing techniques. (Fall only)

Rec 585 Policy Analysis and Historical Perspectives of Leisure (3 cr)
Examination of the policy issues that affect the physical education and recreation fields; study of the historical significance of key events and individual contributions from cultural, social and economic points of view. (Fall or Summer only)

Rec 595 Budgeting, Financing and Managing Recreational Facilities (3 cr)
Policies and practices involved in budgeting, financing, acquisition, managing recreation agencies and facilities. (Spring only)

Rec 596 Recreation and Sport Management Behavior (3 cr)
Management behavior and strategies related to recreation and sport agencies, including leadership, supervision, and a variety of administrative issues. (Spring only)

Rec 598 (s) Internship (cr arr)
Supervised field experience in an appropriate leisure agency.
Prereq: Permission

Rec 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Religious Studies Courses

Janice Capel Anderson, Acting Coordinator (405 Morrill Hall 83844-3016; phone 208/885-6065).

ReIS 133 Religion and Family (2 cr)
Overview of influence of religion on dating, courtship, marriage, and family life.

ReIS 204 (s) Special Topics (cr arr)

ReIS 208 Italian Renaissance Art and Culture (3 cr)
See Art 208.

ReIS 302 Biblical Judaism: Texts and Thought (3 cr)
See Phil 302.

ReIS 303 Early Christianity: Texts and Thought (3 cr)
See Phil 303.

ReIS 307 Buddhism (3 cr)
See Phil 307.

ReIS 311 Development of Social Theory (3 cr)
See Soc 311.

ReIS 327 Belief Systems (3 cr)
See Anth 327.

ReIS 375 The Bible as Literature (3 cr)
See Engl 375.

ReIS 404 (s) Special Topics (cr arr)

ReIS 413 Psychology of Religion (3 cr)
See Psyc 413.

ReIS 422 Plateau Indians (3 cr)
See Anth 422.

ReIS 442 The Medieval Church: Europe in the Early and High Middle Ages (3 cr)
See Hist 442.

ReIS 443 The Medieval State: Europe in the High and Late Middle Ages (3 cr)
See Hist 443.

ReIS 447 The Renaissance (3 cr)
See Hist 447.

ReIS 448 The Reformation (3 cr)
See Hist 448.

ReIS 449 Tudor-Stuart Britain 1485-1660 (3 cr)
See Hist 449.

Renewable Materials Courses

Anthony S. Davis, Dept. Head, Dept. of Forest, Rangeland, and Fire Sciences (204 CNR Bldg. 83844-1133; phone 208/885-7952; fores@uidaho.edu).

Prerequisite: Courses in this subject field that are numbered above 299 are not open to undergraduate students on academic probation.

RMat 100 Introduction to Renewable Materials (2 cr)
Overview of renewable building materials and bio-energy industries. Discovery laboratory in the use of renewable and recycled waste stream

materials to create useful products. One lec and one three-hour lab a wk. (Fall only)

RMat 203 (s) Workshop (cr arr)

RMat 204 (s) Special Topics (cr arr)

RMat 299 (s) Directed Study (cr arr)

RMat 321 Properties of Renewable Materials (3 cr)
Physiology, structure and physical and mechanical properties of woody and other renewable plant materials. (Fall only)

RMat 365 Wood Building Technology (3 cr)
Basic structural design including elementary statics and principles and technology of wood structural design. Role of sustainably-produced wood components in green building design. Recommended Preparation: Phys 100, Phys 111. (Fall only)

RMat 400 (s) Seminar (cr arr)

RMat 403 (s) Workshop (cr arr)

RMat 404 (s) Special Topics (cr arr)

RMat 405 (s) Professional Development (cr arr)
Credit earned in this course will not be accepted toward grad degree programs.
Prereq: Permission

RMat J410/J510 Wood Properties, Processes, and Uses (1-2 cr)
Open to non-majors only. Physical, mechanical, and chemical properties of wood and wood products; timber harvesting technologies; and issues in use of wood products. Additional projects/assignments reqd for grad cr. Graded P/F. Five days of workshop, including field trip.

RMat J436/J536 Biocomposites (3 cr)
Raw material, processes, properties, and their applications for a number of natural fiber and wood composites made of veneers, particles and fibers. Additional projects and assignments reqd for grad cr. Two half day field trips. Two lectures and one 3-hr lab a week. REM 536 only: Cooperative: open to WSU degree-seeking students. (Fall only)
Prereq: Chem 101 and RMat 321; and Chem 275 or Chem 277

RMat 438 Introduction to Lignocellulosic Chemistry (1 cr)
The chemistry of lignocellulosic fiber (natural fiber and wood) formation and structure. Two lectures a week for the first half of the semester. This course meets concurrently with RMat 538. (Spring only)
Prereq: Chem 101 or Chem 111; and Chem 275 or Chem 277

RMat 444 Primary Products Manufacturing (3 cr)
Raw materials, procurement, production methods, drying product specifications, and grading for primary products made from renewable materials including lumber, plywood, poles, and energy products; plant layout, machines, and systems analysis; plant tours. Two lec and one 5-hr lab a wk. (Spring only)
Prereq: RMat 321

RMat 450 Biomaterials Deterioration and Protection (2 cr)
Agents that cause deterioration of biomaterials; green building durability issues and design considerations; preservative systems and alternative control methods; and environmental considerations. Recommended preparation: RMat 321 (Fall only)

RMat 491 Biomaterial Product and Process Development Lab (2 cr)
Lab to accompany RMat 495. One 3-hr lab per week. (Spring only)
Prereq: Econ 201 or Econ 202, and RMat 495

RMat 495 Product Development and Brand Management (3 cr)
Same as Bus 495. This course examines the development and management of products (goods and service) and brands. Topics will include the product development process, product-life cycle, development of brands, and management of brand portfolios. Specific to services, topics will include service quality, heterogeneity, perishability, and simultaneous production and consumption. (Fall only)
Prereq: Econ 201, Econ 202 or Econ 272

RMat 498 Renewable Natural Resources Internship (cr arr)
Supervised field experience with an appropriate public agency or private company. Graded P/F. (Summer only)
Prereq: Permission of advisor

RMat 499 (s) Directed Study (cr arr)
For the individual student; conferences, library, field, or lab work.
Prereq: Senior standing, GPA 2.5, or Permission

RMat 500 Master's Research and Thesis (cr arr)

RMat 501 (s) Seminar (cr arr)
Major philosophy, management, and research problems of forest products industries; presentation of individual studies on assigned topics.
Prereq: Permission

RMat 502 (s) Directed Study (cr arr)

RMat 503 (s) Workshop (cr arr)
Selected topics in the conservation and management of natural resources.
Prereq: Permission

RMat 504 (s) Special Topics (cr arr)

RMat 505 (s) Professional Development (cr arr)
Credit earned in this course will not be accepted toward graduate degree programs.
Prereq: Permission

RMat 510 Wood Properties, Processes, and Uses (1-2 cr)
See RMat J410/J510.

RMat 536 Biocomposites (3 cr)
See RMat J436/J536.

RMat 538 Lignocellulosic Biomass Chemistry (3 cr)
The chemistry of lignocellulosic fiber (natural fiber and wood) formation, agricultural/natural fiber and wood structure and reactions of lignocellulosic compounds. Two lec and one 3-hr lab a wk. Cooperative: open to WSU degree-seeking students. (Spring only)
Prereq: Chem 101 and RMat 321; and Chem 275 or Chem 277

RMat 552 Wood and Fiber Science (3 cr)
Cell physiology and formation, anatomy, chemistry, and physical and mechanical properties. Factors that impact material quality and performance. (Spring only)
Prereq: Graduate Standing

RMat 597 (s) Practicum (cr arr)

RMat 598 (s) Internship (cr arr)

RMat 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

RMat 600 Doctoral Research and Dissertation (cr arr)
Prereq: Admission to the doctoral program in "natural resources" and Permission of department

Russian Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Russ 204 (s) Special Topics (cr arr)

Russ 321 Contemporary Russian Culture (3 r)

Sociology Courses

Mark S. Warner, Dept. Chair, Dept. of Sociology & Anthropology (101 Phinney Hall 83844-1110; phone 208/885-6751).

Soc 101 Introduction to Sociology (3 cr)
Basic theories, concepts, and processes involved in scientific study of society; includes socialization process, social inequality, the family, religion, deviance, population, the environment, and social change.

Soc 200 (s) Seminar (cr arr)

Soc 203 (s) Workshop (cr arr)

Soc 204 (s) Special Topics (cr arr)

Soc 209 Alternatives to Violence (ATV) Training (2 cr)
Participation in the training for ATV advocates that includes background information on domestic violence and sexual assault (36 hours) and entry-level techniques of working with victims; requires service in the agency for the duration of the year. Graded P/F. Limited enrollment.
Prereq: Permission

Soc 230 Social Problems (3 cr)
Contemporary social issues and personal deviations; crime and delinquency, poverty and wealth, drugs, sexual variations, racism, sexism, and the environment.

Soc 250 Social Conflict (3 cr)
Explores the origin, escalation, and resolution of social conflict. Focuses on major conflict theories, human values and social action, and the dynamics and regulation of social conflict within and between various kinds of social groupings.

Soc 260 Intro to Deviance and Crime (3 cr)
Introduction and overview as to the way in which sociologists understand crime, justice, deviance and conformity. Topics include explanations of deviance, prostitution, drugs, organized crime, street crime, white collar crime etc.
Prereq: Soc 101

Soc 299 (s) Directed Study (cr arr)

Soc 301 Introduction to Diversity and Stratification (3 cr)
Same as Anth 301. An interdisciplinary and historical study of diversity and stratification in a cross-cultural global context. The course examines multiple forms of diversity and stratification including, but not limited to, culture, class, race/ethnic, gender/sexuality, religious diversity, and political ideology in an effort to raise students' ability to interact with and understand others in our increasingly multicultural world. May include service learning.
Prereq: Soc 101

Soc 310 Methods of Social Research (3 cr)
Provides an overview of the principal methods of data collection, analysis, and interpretation.
Prereq: Soc 101 and Departmental major or minor

Soc J311/J514 Development of Social Theory (3 cr)
Soc 311 same as RelS 311. Development of social theory from classical roots through contemporary schools; biographical accounts and original works in sociological theory. Additional projects/assignments required for graduate credit.
Prereq: Soc 101

Soc 313 Collective Behavior (3 cr)
Analysis of such episodes of behavior as riots, demonstrations, panics, hysteria, as well as interaction of sociological, political, and communication processes involved in public acceptance of fashion, fads, and ideology in a mass society.
Prereq: Soc 101

Soc 315 Community Service Learning (1-4 cr, max 4)
Directed community service, requiring 67 to 140 hours, with concurrent seminar that integrates service experience with theories of human behavior.
Prereq: Soc 101, Soc 230, and sociology major, or Permission

Soc 316 Explore Mentoring & Leadership (3 cr)
See Intr 316.

Soc 323 Political Economy (3 cr)
This course discusses the history of political economic theories and links contemporary issues to classical and current sociological debates in the field. Recommended Preparation: Soc 230 or Soc 250.

Soc 325 Family, Violence, and Society (3 cr)
Sociological analysis of the family, its relationship to other social institutions, and the ways that the family is intersected by conflict, violence and systems of justice. Special attention is given to exploring the causes and impacts of family violence, strategies for its prevention, treatment of those abused, and intervention strategies for abusers.
Prereq: Soc 101

Soc 330 Juvenile Delinquency (3 cr)
Extent, causes, and control of juvenile delinquent behavior.
Prereq: Soc 101 and Soc 260

Soc 331 Criminology Theory (3 cr)
Review and assessment of common explanations of crime, deviant behavior and control. May include field trips.
Prereq: Soc 101

Soc 332 Sociology of Punishment (3 cr)
This course will provide an introduction to the history of criminal punishment, as well as the moral rationales for criminal punishment. The remainder of the course will focus on contemporary issues in crime, criminal punishment and imprisonment. Throughout the course, particular attention will be given to the ways that decisions about punishment affect and are affected by American culture and social structure. May include field trips.
Prereq: Soc 101

Soc 333 Elite and White Collar Crime (3 cr)
The costs, causes, and control of crime by and against businesses and other organizations; the relationship between trust and white collar crime; the impact of the media in shaping perceptions of white collar crime.
Prereq: Soc 101

Soc 334 Police and Social Control (3 cr)
History, development, and role of the police as a component of the justice system, with particular attention to the relationship of the police to community, society, and related institutions of social control; societal control of the police as well as the influences of social change and urban decay and disorder on methods of policing. May include field trips.
Prereq: Soc 101

Soc 335 Terrorism, Society and Justice (3 cr)
Analysis of the concepts, issues and dilemmas related to domestic and international terrorism. Terrorist tactics within the context of the global world-system is considered. Examines counterterrorist strategies and the media and government response to terrorism.

Soc 336 Comparative Criminal Justice Systems (3 cr)
Comparative study of justice systems in selected foreign countries. (Alt/yrs)
Prereq: Soc 101

Soc 339 Crime and the Media (3 cr)
Same as JAMM 339. Critical evaluation of the media portrayals of crime and the criminal justice system; analysis of how the media help to shape public understanding and public policy.

Soc 340 Social Change & Globalization (3 cr)
Social change is a central area of study in sociology. Original studies tried to explain the reason for, and impact of, the Industrial Revolution in the 19th century. Globalization is among the key social phenomena instructing contemporary discussions in social change. This course introduces students to various discussions of social change, from the Industrial Revolution to Globalization. Through case study analysis, Globalization will be explored in examining the increased role of international organizations (such as, the IMF, World Bank, WTO, and OECD) in globalizing capital markets and trade; the social and psychological conditions of conflict (such as the state of war in the contemporary landscape, genocide, and impoverishment); and the role of diversity (social and environmental) in proposing alternatives to globalization. Recommended Preparation: Soc 230 and/or Soc 250.
Prereq: Soc 101

Soc 343 Political Sociology (3 cr)
Examines the relationship between political and social institutions, the distribution of power and authority in society, the origins and expansion of the modern state, social and cultural basis of political behavior, and characteristics of transnational and global governance. Recommended Preparation: Soc 230 or Soc 250.
Prereq: Soc 101

Soc 350 Food, Culture, and Society (3 cr)
Same as Anth 350. Examines the structural and cultural implications of eating and producing food in a global world. Utilizing a social scientific framework, it explores the history of particular foods and examines how food systems are racialized, classed and gendered. Primary foci include the social history of food holidays and taboos, the relationships between food and identity, the impact of agricultural production practices on food systems and food security, and forms of resistance to these impacts. Recommended Preparation: Anth 220 or a 200-level sociology course. May include field trips.
Prereq: Soc 101

Soc 367 (s) Global Justice (3 cr, max arr)
See Phil 367.

Soc 400 (s) Seminar (cr arr)
Prereq: Soc 101

Soc 401 Justice Policy Issues (3 cr)
Focus on social, political, and economic factors that influence operation of the justice system and justice policy formation; critical issues such as the media and fear of crime to drugs and sentencing policy.
Prereq: Soc 101 and Senior standing and departmental major or minor or Permission

Soc 403 (s) Workshop (cr arr)
Prereq: Soc 101

Soc 404 (s) Special Topics (cr arr)
Prereq: Soc 101

Soc 415 Citizen's Police Academy (3 cr)
Offered only in the spring term, students are acquainted with the activities of a local police department in a community-learning style course. This experience is an opportunity for applied learning in the field. Limited space available. Instructor permission required. Pass/fail only.

Soc 420 Sociology of Law (3 cr)
The course examines law creation and law enforcement in their social, political, and economic context. Discussions include the major theories of the role of law and functioning of the modern state, and through the use of historical and contemporary case studies students will evaluate the strengths and weaknesses of these theoretical perspectives.

Soc 422 Religion, Culture & Society (3 cr)
This course provides students with an opportunity to explore religious experience, meanings and organizations as part of a larger socio-cultural context. The primary focus of this course is on a sociological approach to the theory of religion, the historical development and effects of religion in the United States, and contemporary religious conditions and experience. The course will integrate theoretical readings, historical analyses, empirical studies, ethnographic description, and student projects. Throughout the course, a sociological imagination will be cultivated and exercised toward understanding the nature of religious practice and the social significance of its organization and change.
Prereq: Soc 101

Soc 423 Social Class & Stratification (3 cr)
Study of social inequality with a focus on the class structure of U.S. society; theories of stratification; consequences of social inequality.
Prereq: Soc 101 and Soc 230

Soc 424 Sociology of Gender (3 cr)
Historical and comparative analysis of the various roles, statuses, and life opportunities of men and women; emphasis on how gender roles develop in society and their effect on social structure, social institutions, and interpersonal interaction.
Prereq: Soc 101 and a 3 cr lower-division Soc course, or Soc/Anth 301

Soc 425 Society and Popular Culture (3 cr)
See Anth J425/J525.

Soc 427 Racial and Ethnic Relations (3 cr)
Same as Anth 427. Examination of the social construction of racial categories and meanings; theories of race relations; historical and contemporary experiences of racial/ethnic groups in the U.S.; contemporary issues and debates.
Prereq: Soc 101 and a 3 cr lower-division Soc course, or Soc/Anth 301

Soc 431 Personal and Social Issues in Aging (3 cr)
Social, psychological, and physical impacts of aging on the individual and on society.
Prereq: Soc 101

Soc 439 Inequalities in the Justice System (3 cr)
Critical focus on the issues of race, class, and gender and their consequences for the operation of the justice system; the role of the justice system in the history and experience of various minorities, theories of minority crime, and issues of selective enforcement, sentencing disparity, and disproportionate incarceration; the role of gender considered through the examination of offenders, victims, and criminal justice professionals.
Prereq: Soc 101 and a 3 cr lower-division Soc course, or Soc 301/Anth 301

Soc 440 Post-Colonialism (3 cr)
This sociology course examines the history of development thought and its influence in post-colonial perspectives. Although generally conceived as a theory course in international development, this course will apply sociological tools for understanding the criticisms of modernization, neoliberalism, and early dependency theories. Taking the position of the "other", post-colonial theory broadens the scope of these aforementioned theories by drawing upon everyday social experience and the myriad social relations that complicate mainstream and mono-causal explanations of such things as uneven development, diversity, poverty, conflict, and environmental degradation. In learning what stirred the rise of post-colonial theories, students will learn how international development is understood from a variety of perspectives outside of the U.S.

Soc 450 Dynamics of Social Protest (3 cr)
Examines the conditions under which social protest occurs, social movement dynamics and processes, and the state's response to political dissent. Addresses how political, organizational, and cultural dimensions shape social movement development, strategies and tactics, and individual participation. Applies sociological theories and concepts to several U.S. and international movements including civil rights, women's, environmental, antiwar, and global justice movements. Recommended Preparation: Soc 230 or Soc 250.
Prereq: Soc 101

Soc 495 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Soc 101 and Permission

Soc 498 (s) Internship (1-6 cr, max arr)
Supervised professional field experience in human service organizations. Graded P/F.
Prereq: Soc 101 and departmental major and Permission

Soc 499 (s) Directed Study (cr arr)
Intended to accommodate a wide variety of sociological topics.
Prereq: Soc 101 and Permission

Soc 501 (s) Seminar (cr arr)
Subjects normally offered: sociological research, social problems, and social theory.
Prereq: Permission

Soc 502 (s) Directed Study (cr arr)
Subjects normally offered: sociological theory, human ecology, and race relations.
Prereq: Permission

Soc 504 (s) Special Topics (cr arr)

Soc 514 Social Theory (3 cr)
See Soc J311/J514.

Soils Courses

Paul McDaniel, Dept. Head (Ag. Sci. Bldg. Room 242, 875 Perimeter Drive MS 2339, Moscow, ID 83844-2339; phone (208) 885-7012; paulm@uidaho.edu).

Soil 205 The Soil Ecosystem (3 cr)
Introduction to the physical, chemical, and biological nature of soils.
Prereq: Chem 101 or satisfy Prereq for Chem 111

Soil 206 The Soil Ecosystem Lab (1 cr)
May be used as general education credit in J-3-b. Lab study relevant to Soil 205. Experiments and demonstrations on basic and applied aspects of soil science. One 3-hr lab a wk.
Coreq: Soil 205

Soil 210 Food Systems and Healthy Lifestyles (3 cr)
Introduction to food systems including the historical development of our current global food system. Linkages among the production, marketing and transportation of food and food policy on human health will be explored. Students will complete a semester-long assessment of the local food system and its impacts on individual, school and community health and strategies to improve the food system.

Soil 398 Internship (1-6 cr, max 6)
Graded P/F.
Prereq: Permission of department

Soil 404 (s) Special Topics (cr arr)

Soil J415/J515 Soil and Environmental Physics (3 cr)
Physical properties of soils and their relationships to moisture, aeration, and temperature; plant-soil-atmospheric relationships; solute transport and soil salinity. Two lec and one 3-hr lab a wk. Recommended Preparation: Soil 205, 206, and Phys 111. Soil 415 is a cooperative course available to WSU degree-seeking students. (Alt/yrs, Fall)

Soil 416 Sustainable Small Acreage Farming and Ranching (3 cr)
Overview of small acreage production systems, evaluation of goals and resources, land evaluation, marketing options, and accessing community resources. Three field trips. Cooperative: open to WSU degree-seeking students.

Soil 417 Market Garden Practicum (1-6 cr)
Experiential learning based course that covers all aspects of running a small acreage vegetable farm. Topics include farm planning, crop rotation, soil fertility and testing, weed management and food systems. Students satisfy credit hours through participation in lecture/discussion, field work and field trips. Class meets at the Plant Science Farm. Recommended preparation: Soil 205. (Summer only)

Soil 422 Environmental Soil Chemistry (3 cr)
Chemical processes in soil environment. Recommended Preparation: Soil 205, Soil 206, and Chem 112. Cooperative: open to WSU degree-seeking students. (Alt/yrs)

Soil J425/J525 Microbial Ecology (3 cr)
See MMBB J425/J525.

Soil J427/J527 Sustainable Food Systems (3 cr)
The purpose of this course is to help students apply systems thinking and systems methodological problem solving skills to identify and describe current and future food system issues. Through lectures, case studies and research students will explore elements and behavior of food systems that impart sustainability. Students taking the course for graduate credit will complete additional readings, research and presentations.
Prereq: *For 221, REM 221, or Soil 210; or Instructor Permission*

Soil 438 Pesticides in the Environment (3 cr)
Same as Ent and PISc 438. Principles of pesticide fate in soil, water, and air; pesticide metabolism in plants, pesticide toxicology, and pesticide mode-mechanism of action; pest resistance to pesticides; biotechnology in pest control; regulations and liability; equipment application technology; pesticide transport, storage, and disposal; and social and ethical considerations. Recommended Preparation: Chem 275.

Soil 446 (s) Soil Fertility (1-3 cr, max 3)
Principles of soil fertility management; availability of plant nutrients and their relationship to plant growth and fertilization practices. Recommended Preparation: Soil 205 and 206.

Soil 454 Pedology (3 cr)
Morphology, genesis, and classification of soils; distribution of soils as related to environmental processes and factors. Two lectures and one 4-hr lab a week. Recommended Preparation: Soil 205 and Soil 206. Cooperative: open to WSU degree-seeking students.

Soil 456 North Idaho Field Trip (1 cr)
Soils and land use in northern Idaho ecosystems; emphasis on soil parent materials, soil formation and morphology, and soil-plant community relationships. Graded P/F. One 3-day field trip; additional class meetings and assignments before and after field trip. Cooperative: open to WSU degree-seeking students.
Prereq: *Soil 205 or Permission*

Soil 458 Soil and Site Evaluation (1-2 cr, max 8)
Description and evaluation of soils; emphasis on morphological features and properties that influence land use. Graded P/F. Two-four hrs of lab a wk; one 3-day or one 6-day field trip. Recommended Preparation: Soil 205.

Soil 499 (s) Directed Study (cr arr)

Soil 500 Master's Research and Thesis (cr arr)

Soil 501 (s) Seminar (cr arr)

Soil 502 (s) Directed Study (cr arr)

Soil 504 (s) Special Topics (cr arr)

Soil 514 Environmental Geophysics (3 cr)
This course will provide an introduction to near-surface geophysical techniques. The aim is to provide a solid foundation on physical principles used to non-invasively study characteristics and properties of the earth in general, and the shallow subsurface in particular. We will discuss applications ranging from eco-hydrology, precision agriculture, and civil engineering to archeology. The course consists of two parts. Lectures will provide a conceptual understanding of the theory and methods, and a field-based case study will apply these concepts collecting integrated geophysical data that will be processed and interpreted to introduce students to practical procedures and challenges in environmental geophysics. Cooperative: open to WSU degree-seeking students.

Soil 515 Soil and Environmental Physics (3 cr)
See Soil J/415/J515.

Soil 525 Microbial Ecology (4 cr)
See MMBB J425/J525.

Soil 526 Soil Mineralogy (3 cr)
Distribution and significance of common soil minerals; weathering and general reactivity as related to mineral structures; techniques of mineral identification including x-ray diffraction, chemical dissolution procedures, optical and electron microscopy. One lec and one 3-hr lab a wk. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: *Soil 422, Soil 454 or Permission*

Soil 527 Sustainable Food Systems (3 cr)
See Soil J427/J527.

Soil 537 Soil Biochemistry (3 cr)
Origin, chemical structure, and significance of soil biochemical compounds. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: *Soil 422, Biol 380, Biol 250 or Permission*

Soil 547 (s) Soil Fertility Management (1-3 cr, max 3)
Philosophy of fertilizer recommendations based on soil and plant tissue testing; principles of fertilizer manufacture, placement, and use for improving plant growth. Recommended Preparation: Soil 446.

Soil 597 (s) Practicum (cr arr)

Soil 598 (s) Internship (cr arr)
Graded P/F
Prereq: *Permission*

Soil 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: *Permission*

Soil 600 Doctoral Research and Dissertation (cr arr)

Spanish Courses

Irina A. Kappler-Crookston, Dept. Chair (302Admin. Bldg. 83844-3174 phone 208/885-6179; forlang@uidaho.edu).

Vertically-related courses in this subject field are: Span 101/101L-Span 102/102L (or Span 104)-Span 201/201L-Span 202. Any one of the following courses may be considered the terminal course for the related vertical sequence above: Span 301 or Span 302. A maximum of 16 credits may be earned for vertical credit in any language, in the Department of Modern Languages & Cultures.

Span 101 Elementary Spanish I (4 cr)
Credit not given for Span 101 after 104 with the exception of vertical credit (see Regulation I-2-d). Pronunciation, vocabulary, reading, spoken Spanish, and functional grammar. Students who have completed one or more high school units in Spanish may not enroll in Span 101 but may earn credit for Span 101 by successfully completing a higher vertically related course.
Coreq: *Span 101L*

Span 101L Elementary Spanish I Lab (1 cr)
Credit not given for Span 101 after 104 with the exception of vertical credit (see Regulation I-2-d). Pronunciation, vocabulary, reading, spoken Spanish, and functional grammar. Students who have completed one or more high school units in Spanish may not enroll in Span 101 but may earn credit for Span 101 by successfully completing a higher vertically related course. Four lec and one 1-hr lab a wk.
Coreq: *Span 101*

Span 102 Elementary Spanish II (4 cr)
Credit not given for Span 102 after 104. Pronunciation, vocabulary, reading, spoken Spanish, and functional grammar.
Coreq: Span 102L

Span 102L Elementary Spanish II Lab (1 cr)
Credit not given for Span 102 after 104. Pronunciation, vocabulary, reading, spoken Spanish, and functional grammar. Four lec and one 1-hr lab a wk.
Coreq: Span 102

Span 104 Elementary Spanish Transition (4 cr)
Credit not given for Span 104 after Span 101 or Span 102. Not open to students who have completed Span 101 or equivalent in college. Intensive, web-assisted Elementary Spanish course intended for students with some previous study of Spanish. Review and practice of the subject matter covered in Span 101 and 102: pronunciation, vocabulary, reading, listening, speaking, and functional grammar. Recommended Preparation: One-two years of high school Spanish or equivalent experience.

Span 201 Intermediate Spanish I (4 cr)
Reading, grammar review, speaking, and writing. Recommended Preparation: Span 102.
Coreq: Span 201L

Span 201L Intermediate Spanish I Lab
Reading, grammar review, speaking, and writing. Recommended Preparation: Span 102. Four lec and one 1-hr lab a wk.
Coreq: Span 201

Span 202 Intermediate Spanish II (4 cr)
Reading, grammar review, speaking, and writing. Recommended Preparation: Span 201.

Span 204 (s) Special Topics (cr arr)

Span 299 (s) Directed Study (cr arr)

Span 301 Advanced Grammar (3 cr)
Recommended for prospective teachers of Spanish. Recommended preparation: Span 202 or equivalent experience.

Span 302 Advanced Composition (3 cr)
Recommended for prospective teachers of Spanish.
Prereq: Span 301 or Permission

Span 303 Spanish Conversation (3 cr)
Further development of speaking skills for advanced students; discussion on topics of current cultural interest.
Prereq: Span 302 or Permission

Span 305 Culture and Institutions of Spain (3 cr)
Prereq: Span 302 or Permission

Span 306 Culture and Institutions of Latin America (3 cr)
Same as LAS 306.
Prereq: Span 302 or Permission

Span 308 Proficiency in Reading (3 cr)
Issues and methods of literary analysis; emphasis on reading, writing, and speaking skills in the target language.
Prereq: Span 302 or Permission

Span 310 Spanish for Professions (3 cr)
Spanish for law enforcement, tourism, professional translation and health professions.
Prereq: Span 302 or Permission

Span 401 Readings: Spanish Literature (3 cr)
Same as LAS 401.
Prereq: Span 302 or Permission

Span 402 Readings: Spanish American Literature (3 cr)
Same as LAS 402.
Prereq: Span 302 or Permission

Span 404 (s) Special Topics (cr arr)
Prereq: Span 302 or Permission

Span 411 Chicano and Latino Literature (3 cr)
Survey of Chicano and Latino literature.
Prereq: Span 302 or Permission

Span 412 Spanish Short Fiction (3 cr)
A survey of the short story in Spain from the 19th Century to the present. Focus on major writers and representative movements and styles. (Fall only)
Prereq: Span 302 or Permission

Span 413 Spanish American Short Fiction (3 cr)
The short story in 19th- and 20th-century Spanish America.
Prereq: Span 302

Span 419 Latin America Theatre Through Literature (3 cr)
Study of representative dramatic works of Latin America.
Prereq: Span 302 or Permission

Span 420 Modern Spanish Theatre Through Literature (3 cr)
Study of representative dramatic works of modern Spain.
Prereq: Span 302 or Permission

Span 449 (s) Practicum in Tutoring (1 cr, max 2)
Graded P/F. Tutorial services performed by advanced students under faculty supervision.
Prereq: Permission of Department

Span 499 (s) Directed Study (cr arr)

Special Education Courses

Paul Gathercoal, Dept. Chair; Department of Curriculum and Instruction; gatherco@uidaho.edu; Program Coordinator Terry Jentsch; phone 208-885-7677; tjentsch@uidaho.edu. Melissa McConnell, faculty,

EDSP 200 (s) Seminar (cr arr)

EDSP 204 (s) Special Topics (cr arr)

EDSP 299 (s) Directed Study (cr arr)

EDSP 300 Educating for Exceptionalities (2 cr)
Introduction to exceptionalities and strategies for addressing individual differences to ensure student success in the classroom.

EDSP 325 Classroom Applications of Learning Theories (2 cr)
Emphasis on behavioral principles and their relationship to instructional strategies; completion of a project in an applied setting. Recommended Preparation: EDCI 201. (Summer only)

EDSP 350 Language and Communication Development and Disorders (3 cr)
Overview of language, communication, and socio/emotional development and their interaction with cognitive and learning disabilities; legal and cultural issues; informal assessments and teaching strategies; models for collaboration with speech and language professionals. (Summer only)
Prereq: EDCI 201 or FCS 210

EDSP 351 Family and Community Involvement (2 cr)
Orientation to theory and practice for working with parents and families in the education of persons with disabilities; school and community systems and resources; parent-teacher communication; skills in collaborating with other professions, particularly paraprofessionals and volunteers in the classroom. (Spring only)
Prereq: EDCI 201

EDSP 390 (s) Special Education/Field Experience (1-3 cr, max 3)
Supervised observation and/or instruction with students with disabilities; group discussion sessions. Graded P/F.

EDSP 400 (s) Seminar (cr arr)

EDSP 403 (s) Workshop (cr arr)

EDSP 404 (s) Special Topics (cr arr)

EDSP J405/J505 (s) Professional Development (cr arr)
Professional development and enrichment of certificated school personnel. Cr earned will not be accepted toward grad degree programs, but may be used in a fifth-yr program. Additional projects/assignments reqd for grad cr.

EDSP 411 Beginning Sign Language I (1 cr)
This course will enable students to begin to use and understand the language used by D/deaf people in the United States, including common

phrases, idioms, expressions, sentences and questions used in daily conversation. (Fall only)

EDSP 412 Beginning Sign Language II (1 cr)
This course will expand the vocabulary and understanding of the language used by D/deaf people in the United States. Students' will become more comfortable in using body language and facial expression to communicate in sign language, begin to become more fluent in the basic vocabulary of signs, and begin to dialogue with others. (Spring only)
Prereq: EDSP 411 or Experience with ASL

EDSP 423 Collaboration (3 cr)
Strategies for developing and facilitating collaboration with schools, families and community partners including methods to increase successful collaboration and inclusion, interpersonal and intrapersonal dynamics that facilitate the collaboration process, problem solving teams, and effective models of collaboration. (Spring only)
Prereq: EDSP 300, EDSP 325, and EDSP 350

EDSP 424 Students with Behavioral and Emotional Issues (2 cr)
Strategies for developing and implementing educational programs for students with various behavioral and emotional issues, including those who qualify as seriously emotionally disturbed; discussion of assessment, programming, legal, and cultural issues. (Spring only)
Prereq: EDCI 201

EDSP 425 Evaluation of Children and Youth (3 cr)
Assessment procedures for determining eligibility and identifying educational needs of students with disabilities, legal issues including Response to Intervention and Alternative Assessment, and current trends. (Spring only)
Prereq: EDSP 300, EDSP 325, and EDSP 350

EDSP 426 Developing Instructional Programs (3 cr)
Overview of assumptions, current trends, legal and cultural issues; application of learning principles and strategies for curriculum development; collaborative development of Individual Education, Instruction, and Transition Plans; methods for evaluating student progress and instructional effectiveness. (Spring only)
Prereq: EDSP 300, EDSP 325, and EDSP 350

EDSP 427 Curriculum Development and Adaptation (3 cr)
Orientation to philosophies of curriculum development; advantages and disadvantages of curricular approaches; selection, evaluation, and adaptations of curricula and materials; implementation and evaluation of an IEP and lessons in a school setting; models of collaboration and staffing strategies; legal and cultural issues. (Spring only)
Prereq: EDSP 426
Coreq: EDSP 390

EDSP 428 Issues in Secondary Special Education (2 cr)
Examination of various programs and curricula available for secondary students with disabilities; the process of making and implementing transition plans through case-based instruction; emphasis on interagency connections and the use of community resources. (Fall only)
Coreq: EDSP 390, 427

EDSP 483 Special Education Internship I (3-6 cr)
Guided observation, supervised instruction, comprehensive individual and team instruction and program development for students with disabilities in the school setting. Recommended preparation: All special education undergraduate courses.
Prereq: EDSP 425 and EDSP 426

EDSP 484 (s) Special Education Internship II (1-15 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in school settings.
Prereq: Permission of division
Coreq: Integrated course work and EDCI 401

EDSP 499 (s) Directed Study (cr arr)

EDSP 500 Master's Research and Thesis (cr arr)

EDSP 501 (s) Seminar (cr arr)

EDSP 502 (s) Directed Study (cr arr)

EDSP 503 (s) Workshop (cr arr)

EDSP 504 (s) Special Topics (cr arr)

EDSP 505 (s) Professional Development (cr arr)
See EDSP J405/J505.

EDSP 520 Education of People with Disabilities (3 cr)
Introduction to the education of people with disabilities, primarily in the school setting. History and foundation of special education, areas of exceptionality, instructional practices, issues and trends and law and legislation as it applies to persons with disabilities. (Fall and Summer only)

EDSP 522 Advanced Evaluation Techniques (2 cr)
Implementation of evaluation tools, practices, and processes that extend beyond eligibility decisions to alternative assessments for early childhood, elementary, and secondary students with disabilities; integration of assessment and curriculum; legal, cultural, and ethical issues. (Summer only)
Prereq: EDSP 425

EDSP 530 Assistive Technology and Universal Design for Learning for Pre-K12 (2 cr)
This course is designed to introduce students to assistive technology and universal design for learning as they are woven into the PreK12 community to support all students including those with disabilities access and interact with the general education curriculum. This course will increase participants' understanding of the continuum of assistive technologies to universal design and expose them optimal systematic formats for successful implementation. Focus will move from an IEP team-based process, of student evaluations, reporting, training, and follow-up, to a general education classroom instructional design model with an understanding of the impact on school improvement.

EDSP 531 Single Subject Design Research (3 cr)
Prepares graduate students with knowledge and experience using single subject designs. Single subject designs are quantitative approaches that use specific design features to demonstrate experimental control and internal validity of observable and quantifiable behavior most often displayed and interpreted through line graphs and charts. External validity is demonstrated through replication.
Prereq: EDSP 540 or equivalent

EDSP 540 Behavioral Analysis for Children and Youth (3 cr)
Application of learning theory to instruction; principles of behavior analysis with application to teaching; applied research techniques, ethical, legal, and cultural issues. Completion of field work in applied setting required. (Fall only)

EDSP 542 Families: Issues of Disability and Culture (3 cr)
Issues of families and individuals with disabilities; theories and strategies for forming partnerships with families across curricula, assessment, vocational, residential, and related areas; strategies for working with various cultural perspectives; legal issues. Completion of field work in applied setting required. (Fall only)

EDSP 548 Special Education Curriculum (3 cr)
Theories of curriculum; models of teaching, instructional strategies, evaluation of student progress and service delivery; issues and trends in special education. (Fall only)

EDSP 549 Language, Communication, and Social/Emotional Enhancement (3 cr)
Overview of theory and research findings; discussion of current issues, rationale, and intervention programs and strategies with an emphasis on social relations and interactions, legal mandates, and cultural issues. Includes a field component and project. (Spring only)

EDSP 550 Alternative and Augmentative Communication Strategies (3 cr)
A process for decision making, models for assessment, assessment strategies, and implementation steps for designing alternative or augmentative communication system. (Spring only)
Prereq: EDSP 549 and a standard exceptional child certificate or equivalent

EDSP 552 Principles of Leadership in Neurodevelopmental Disorders 1 (3 cr)
Students are trained to move beyond discipline boundaries to provide optimal services to child and adolescents with special health care needs. Enhance skills in evidence based practice via evaluating the validity of published research, understanding the role of outcomes-based information in decision making, and conduct meaningful, scientifically

grounded research to improve systems of care to children with special healthcare needs.

EDSP 553 Principles of Leadership in Neurodevelopmental Disorders 2 (3 cr)
Students are trained to move beyond discipline boundaries to provide optimal services to child and adolescents with special health care needs. Enhance skills in evidence based practice via evaluating the validity of published research, understanding the role of outcomes-based information in decision making, and conduct meaningful, scientifically grounded research to improve systems of care to children with special healthcare needs.

EDSP 554 Principles of Leadership in Neurodevelopmental Disorders Autism Enhanced 1 (3 cr)
This course is part of the proposed doctoral course work in Special Education. This course is offered with the assistance/support of the Utah Regional Leadership in Neurodevelopmental Disabilities program (URLEND) and the University of Utah Medical School who offer some of the trainings / clinics that students enrolled in this course participate in. This course is taught in-load by faculty at the Center on Disabilities and Human Development and does not burden the college or department.

EDSP 555 Principles of Leadership in Neurodevelopmental Disorders Autism Enhanced 2 (3 cr)
Students are trained to move beyond discipline boundaries to provide optimal services to child and adolescents with special autism spectrum disorders. Students will increase their knowledge of issues related to the definition, epidemiology, and prognosis of ASD, enhance their knowledge of screening and diagnostic measures for ASD, enhance their knowledge of interventions for ASD, engage in research related to ASD, enhance their leadership skills in the area of ASD.

EDSP 578 Curriculum and Assessment for Students with Low-Incidence I (3 cr)
First of 2 courses on skills in assessment, design, implementation of instructional programs; measurement, analysis, evaluation; definitions, history; person/family-centered/culturally competent planning, teaming, self-determination. Emphasis on current issues: access to general curriculum, standards-based education, alternate assessment, paraprofessionals. Application of assessment and curriculum in communication, positive behavior supports. (Fall only)
Prereq: Standard exceptional child certificate or equivalent

EDSP 579 Curriculum and Assessment for Students with Low-Incidence II (3 cr)
Second of 2 courses on assessment, design and implementation of instructional programs; measurement and progress monitoring; applications in sensory impairments, motor, self-care skills, peer relationships, general curriculum access in reading, math, social studies, science; community referenced instruction, transition and vocational preparation, and assistive technology. (Spring only)
Prereq: Standard exceptional child certificate or equivalent

EDSP 582 Administration of Special Education (3 cr)
Overview of administration of special education including legal issues, leadership skills, systems change theory, management of personnel, budget, and effective use of human and fiscal resources. (Alt/yrs)

EDSP 597 (s) Practicum (cr arr)
Graded P/F.
Prereq: Permission

EDSP 598 (s) Internship (cr arr)
Supervised field experience in an appropriate public or private agency. Graded P/F.
Prereq: Permission

EDSP 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

EDSP 600 Doctoral Research and Dissertation (cr arr)

Statistics Courses

Christopher Williams, Chair, Department of Statistical Science (415 Carol Ryrie Brink Hall 83844-1104; phone 208/885-4410).

Credit Limitations: Credit is not given for both Stat 251 Stat 301, and Stat 416.

Stat 150 Introduction to Statistics (3 cr)
Intro to statistical reasoning with emphasis on examples and case studies; topics include design of experiments, descriptive statistics, measurement error, correlation and regression, probability, expectation, normal approximation, sample surveys, tests of significance. (Fall only)

Stat 251 Statistical Methods (3 cr)
Credit awarded for only one of Stat 251, Stat 301, and Stat 416. Intro to statistical methods including design of statistical studies, basic sampling methods, descriptive statistics, probability and sampling distributions; inference in surveys and experiments, regression, and analysis of variance.
Prereq: One of the following: Math 108, Math 137, Math 143, Math 160, Math 170, or Sufficient score on SAT, ACT, or COMPASS Math Test to qualify for registration in Math 130

Stat 301 Probability and Statistics (3 cr)
Credit awarded for only one of Stat 251, Stat 301, and Stat 416. Intended for engineers, mathematicians, and physical scientists. Intro to sample spaces, random variables, statistical distributions, hypothesis testing, basic experimental design, regression, and correlation.
Prereq: Math 175

Stat 416 Statistical Methods for Research (3 cr)
Credit awarded for only one of Stat 251, Stat 301, and Stat 416. Concepts and methods in quantitative research including observational and experimental study design, point estimation, hypothesis testing, effect size, sample size, causation, one and two-way ANOVA, simple linear regression, interpreting and reporting results.
Prereq: Math 137, Math 143, Math 160, Math 170, or two years of high school algebra and permission

Stat 422 Sample Survey Methods (3 cr)
Simple random, systematic, stratified random, one and two stage cluster sampling; introduction to variable probability sampling and estimation of population size. Two lec and one 1-hr lab a wk. Cooperative: open to WSU degree-seeking students.
Prereq: Stat 251 or Stat 301

Stat 426 SAS Programming (3 cr)
Coverage of a variety of methods for data manipulation, data management, and programming in the SAS language. DATA step programming methods including data transformation, functions for numeric and character data, input of complicated data files, and do loop usage. Data management topics include concatenating data files, sorting and merging data files and ARRAY statement usage. SAS programming with SAS modules such as SAS/Graph, SAS/IML, and SAS/Macro language. Other topics in SAS programming, such as covering other SAS modules in depth.
Prereq: Stat 251 or Stat 301

Stat 428 Geostatistics (3 cr)
See GeoE 428. Cooperative: open to WSU degree-seeking students.

Stat 431 Statistical Analysis (3 cr)
Concepts and methods of statistical research including multiple regression, contingency tables and chi-square, experimental design, analysis of variance, multiple comparisons, and analysis of covariance. Cooperative: open to WSU degree-seeking students.
Prereq: Stat 251, Stat 301, or Stat 416

Stat 433 Econometrics (3 cr)
See Econ 453.

Stat 446 Six Sigma Innovation (3 cr)
Same as Bus 446. Six Sigma is a highly structured strategy for acquiring, assessing, and applying customer, competitor, and enterprise intelligence for the purposes of product, system or enterprise innovation and design. It has two major thrusts, one that is directed toward significant innovation or improvement of an existing product, process or service that uses an approach called DMAIC (Define - Measure - Analyze - Improve - Control) and a second dedicated to design of new processes, products or services. This course focuses on the innovation aspects of Six Sigma. Recommended preparation: Stat 431. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)
Prereq: Stat 251 or Stat 301

Stat 451 Probability Theory (3 cr)
See Math 451.

Stat 452 Mathematical Statistics (3 cr)
See Math 452.

Stat 456 Quality Management (3 cr)
See Bus 456.

Stat 498 (s) Internship (cr arr)
Prereq: Permission

Stat 499 (s) Directed Study (cr arr)

Stat 500 Master's Research and Thesis (cr arr)

Stat 501 (s) Seminar (cr arr)
This course addresses statistical ethics; statistically oriented research; and deeper and more extensive consideration of topics relevant to but not addressed in other graduate level statistics courses offered during that semester. Formal presentations and reports in journal format are used to enhance written, oral, and presentation communication experience and ability.

Stat 502 (s) Directed Study (cr arr)

Stat 503 (s) Workshop (cr arr)

Stat 504 (s) Special Topics (cr arr)

Stat 507 Experimental Design (3 cr)
Methods of constructing and analyzing designs for experimental investigations; analysis of designs with unequal subclass numbers; concepts of blocking randomization and replication; confounding in factorial experiments; incomplete block designs; response surface methodology. Cooperative: open to WSU degree-seeking students.
Prereq: Stat 431

Stat 511 Design for Six Sigma and Lean Management (3 cr)
See Bus 531.

Stat 514 Nonparametric Statistics (3 cr)
Conceptual development of nonparametric methods including one, two, and k-sample tests for location and scale, randomized complete blocks, rank correlation, and runs test. Permutation methods, nonparametric bootstrap methods, density estimation, curve smoothing, robust and rank-based methods for the general linear model, and comparison. Comparison to parametric methods. Cooperative: open to WSU degree-seeking students.
Prereq: Stat 431

Stat 516 Applied Regression Modeling (3 cr)
Statistical modeling and analysis of scientific date using regression model including linear, nonlinear, and generalized linear regression models. Topics also include analysis of survival data, censored and truncated response variables, categorical response variables, and mixed models. Emphasis is on application of these methods through the analysis of real data sets with statistical packages.
Prereq: Stat 431

Stat 519 Multivariate Analysis (3 cr)
The multivariate normal, Hotelling's T^2, multivariate general linear model, discriminant analysis, covariance matrix tests, canonical correlation, and principle component analysis. Cooperative: open to WSU degree-seeking students.
Prereq: Stat 431

Stat 550 Regression (3 cr)
Theory and application of regression models including linear, nonlinear, and generalized linear models. Topics include model specification, point and interval estimators, exact and asymptotic sampling distributions, tests of general linear hypotheses, prediction, influence, multicollinearity, assessment of model fit, and model selection. Cooperative: open to WSU degree-seeking students.
Prereq: Math 330 and Stat 451
Coreq: Stat 452

Stat 555 Statistical Ecology (3 cr)
See WLF 555. Cooperative: open to WSU degree-seeking students.

Stat 565 Computer Intensive Statistics (3 cr)
Numerical stability, matrix decompositions for linear models, methods for generating pseudo-random variates, interactive estimation procedures (Fisher scoring and EM algorithm), bootstrapping, scatterplot smoothers, Monte Carlo techniques including Monte Carlo integration and Markov chain Monte Carlo. Cooperative: open to WSU degree-seeking students. (Alt/yrs)
Prereq: Stat 451, Stat 452, Math 330, and computer programming experience or Permission

Stat 575 Theory of Linear Models (3 cr)
Theory of least squares analysis of variance models and the general linear hypothesis; small sample distribution theory for regression, fixed effects models, variance components models, and mixed models. Cooperative: open to WSU degree-seeking students.
Prereq: Stat 452 and Math 330

Stat 597 (s) Consulting Practicum (cr arr)
Students will gain experience in statistical consulting and data analysis, using multiple statistical software packages in the analysis process. Topics include communication of statistical information and analysis to non-statisticians, ethics, and computing. Emphasis is placed on written and oral presentation of statistical analysis plans and results.

Stat 598 (s) Internship (cr arr)
Students gain experience in statistical consultation and / or statistical data analysis in their present place of employment or an arranged internship organization. Students are jointly accountable to a faculty advisor and a person providing oversight of the individual's efforts within the organization. All internship experiences must be pre-approved.

Stat 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Technology Management Courses

Sandy Lieske, Program Coordinator, Engineering Management and Technology Management Programs (322 E Front Street, Boise, ID 83702; 208/364-4568; Lieske@uidaho.edu; www.uidaho.edu/engr/technologymanagement).

TM 500 Master's Research and Thesis (cr arr)

TM 502 (s) Directed Study (cr arr)

TM 504 (s) Special Topics (cr arr)

TM 510 Engineering and Technology Management Fundamentals (3 cr)
See EM 510.

TM 512 Fundamental Concepts of Nuclear Science (3 cr)
Fundamental concepts of nuclear science and engineering technologies: nuclear radiations (origin, detection & measurement, shielding & health physics), the chart of the nuclides, the neutron (life cycle, multiplication & criticality, cross sections, fission, activation), nuclear fuel cycles (fuels, reactors and waste streams), and basic reactor behavior.
Prereq: Permission

TM 513 Nuclear Criticality Safety (3 cr)
In-depth overview of nuclear criticality safety including nuclear physics, fission and neutron multiplication, moderation and reflection of neutrons, criticality issues in the fuel cycle, critical experiments and sub-critical limits, calculations of criticality, nuclear criticality safety practices, case studies, incident reporting and recovery, emergency procedures, and nuclear regulations and standards.
Prereq: Permission

TM 514 Nuclear Safety (3 cr)
An in-depth technical study of safety issues within the nuclear fuel cycle and within various reactor types. Evaluation methods, system disturbances, safety criteria, containment, NRC licensing, and codes for safety analysis will be presented. Case studies of reactor accidents and corrective measures included.
Prereq: Permission

TM 515 (s) Advanced Topics in Engineering Management (2-9 cr, max 9)
See EM 515.

TM 516 Nuclear Rules and Regulations (3 cr)
An in-depth examination of nuclear regulatory agencies; major nuclear legislation; current radiation protection standards and organizational responsibility for their implementation.
Prereq: Permission

TM 523 Industrial Safety Applications (3 cr)
Application of engineering science to safety problems; static and dynamic forces on structures, pressure systems; effects of temperature, chemi-

cals, fatigue, and other agencies on strength of materials; use of vectors in engineering analysis.

TM 525 Emergency Management and Planning (3 cr)
A study of the basic principles in emergency management and planning in the United States. This course is not directed at any particular type of hazard, but the processes and considerations of planning for all-hazards along with the basics of generic protective actions and the planning concepts supporting effective protective action recommendations.

TM 526 Community Emergency Planning (3 cr)
A study of the theory and practice of community emergency planning. The Citizen Corps, Principles of Emergency Planning, and CERT programs will be studied. Cases are studied in order to assist students in understanding the management and leadership complexity associated with modern emergencies and disasters. Recommended Preparation: TM 525.

TM 528 Accident Investigation (3 cr)
In-depth examination and implementation of system safety concepts, principles, and methods; development of skills in accident investigation, audit and appraisal, operational readiness, and system safety analysis and review. Recommended Preparation: IndT 442.

TM 529 Risk Assessment (3 cr)
In-depth evaluation and analysis techniques used to determine the risk of industrial, process, nuclear, and aviation industries; fault tree analysis; human reliability analysis; failure mode and effect analysis.

TM 533 Chemical Hazards (3 cr)
Emergency responders can encounter a wide range of chemical hazards. Topics include information on interpreting hazardous chemical labels and Material Safety Data Sheets and the relationship between those two methods of hazard communication. Acute and chronic effects of hazardous chemicals to which responders may be exposed will be discussed. Recommended Preparation: TM 525.

TM 534 Biological Hazards (3 cr)
Emergency responders can encounter a wide range of biological hazards. The objectives of this course are to understand the nature of biological hazards and how to control them. The biological hazards to be discussed are Bacteria, Viruses, Fungi/Molds, Protozoa, Prions – infectious proteins, Biological Toxins. Recommended Preparation: TM 525.

TM 535 Radiation Detection and Measurement (3 cr)
This course is designed to provide in-depth understanding of nuclear radiations with focus on detection, measurement and health physics. Students will learn how to select the proper detector given the energy and type of radiation measured; analyze the results of counting experiments to calculate errors, uncertainties, and energy spectra; and to perform radiation measurements following proper health physics procedures. In-class and laboratory experiments are included.
Prereq: Permission

TM 552 Industrial Ergonomics (3 cr)
A course designed to focus on work design and ergonomics in occupational settings. Specific attention will be focused on introducing the terminology and the techniques used in work design, and on the fundamental concepts embodied in industrial ergonomics. (Summer only)

TM 596 Capstone Integration (1 cr)
Capstone integration of degree material in Technology Management and comprehensive final exam.
Prereq: Advisor or Major Professor Permission

TM 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Theatre Arts Courses

Dean Panttaja, Dept. Chair, Dept. of Theatre Arts (204 Shoup Hall 83844-2008; phone 208/885-6465).

The 101 Introduction to the Theatre (3 cr)
For non-majors. Building an appreciation for theatre as an art form through understanding the creative process of the playwright, the director, the designer, and the actor. Attendance at theatre productions reqd.

The 103 Theatre Technology I (3 cr)
Intro to theatre production spaces, shop tools, construction materials, and stage equipment; theories and methods used in lighting and in the construction of scenery. Course includes a lab component.

The 104 Theatre Technology II (3 cr)
Methods of costume construction techniques; intro to sewing, crafting and costuming skills. Course includes a lab component.

The 105 Basics of Performance (3 cr)
Intro to performance; techniques of relaxation, observation, and justification; work in improvisation, sensory exploration, image-making, and beginning textual analysis; initial monologue and scene performance. One lec and 2 hrs of lab a wk.

The 106 Basics of Performance (3 cr)
Intro to performance; techniques of relaxation, observation, and justification; work in improvisation, sensory exploration, image-making, and beginning textual analysis; initial monologue and scene performance. One lec and 2 hrs of lab a wk.
Prereq: The 105 or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The 110 Convocation (1 cr, max arr)
One 1-hr weekly seminar discussing performance and production techniques, process and activities.

The 125 Summer Theatre I (2-4 cr, max 4)
Theatre production, including public presentation of several plays. Max 10 cr in The 125 and 395 combined.
Prereq: Permission of department

The 190 Theatre Practice (1 cr)
Open to non-majors. Practical experience in an aspect of theatre production including but not limited to: board operation, scenery shifting and wardrobe.

The 200 (s) Seminar (cr arr)

The 201 Scene Design I (3 cr)
Development of basic skills in visualization, period research, graphic techniques, and script interpretation in scenery.

The 202 Costume Design I (3 cr)
Costume design skills including script/character analysis, fabric choices, design process, period research, and drawing/painting skills.

The 203 (s) Workshop (cr arr)

The 204 (s) Special Topics (cr arr)

The 205 Lighting Design I (3 cr)
Basic equipment, lighting methods, and theory for theatrical production; basic drafting of realized and hypothetical productions.

The 206 Theatrical Makeup (1 cr)
Practical application techniques for basic contour and old age makeup for the theatre. Limited to 20 students. 2 hrs of lab a wk.
Prereq: Theatre Major or Minor

The 299 (s) Directed Study (cr arr)

The 305 Intermediate Acting (3 cr)
Exploration of Stanislavsky System focused in work on sense and emotional memory, inner monologue, and imagery techniques; emphasis on group improvisation and theatre games; work in action and scene study; performances of selected scenes and monodramas. One lec and 3 hrs of lab a wk.
Prereq: The 105-The 106. A minimum grade of 'C' is required for all co/prerequisites.

The 306 Intermediate Acting (3 cr)
Studies in American method acting as exemplified by its leading practitioners (Strasberg, Hagen, and Meisner); textual analysis and individual acting problems; continuing emphasis in scene preparation. One lec and 3 hrs of lab a wk. Recommended Preparation: The 305.

The 307 Advanced Theatrical Makeup (3 cr)
Theatrical makeup application (advanced techniques), makeup design process and visual communication tools, prosthetics, mask making, wigs and facial hair appliances.
Prereq: The 206 or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The 311 Pattern Development Studio (3 cr, max arr.)
Patterning and draping techniques for stage costume and apparel construction. May be repeated for course credit. (Fall, Alt/yrs)
Prereq: The 104. A minimum grade of 'C' is required for all co/prerequisites.

The 320 Theatre Management (2 cr)
Exploration of stage management and standard management practices relating to theatre production and business, funding, and public relations.

The 361 Technical Direction (3 cr)
Technical direction and planning for single and multiple set theatre productions; includes shop and personnel management techniques, drafting, budgets, scheduling, and organization.

The 371 Play Analysis (3 cr)
Critical intro to plays as drama and theatre; an approach to tragic and comic genres; major dramatists of the 20th century culminating in an analysis of contemporary theatre styles.

The 390 (s) Theatre Practice II (cr arr)
Open to non-majors. Advanced practical experience in all aspects of theatre production.
Prereq: The 190. A minimum grade of 'C' is required for all co/prerequisites.

The 395 Summer Theatre II (2-8 cr, max 8)
Continuation of The 125. Max 10 cr in The 125 and 395 combined.
Prereq: Permission of department

The 400 (s) Seminar (cr arr)

The 403 (s) Workshop (cr arr)

The 404 (s) Special Topics (cr arr)

The 405 Individual Instruction in Performance (cr arr)
Individualized coaching in performance. One hr of lab a wk per cr.
Prereq: Permission of department

The 406 Design Studio (cr arr)
Individual training in an area of theatre design; includes an advanced design assignment and the public presentation of a play.
Prereq: The 201, The 202, and The 205; or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The J410/J510 Costume Design II (3 cr, max 12)
Emphasis on developing characterization, stylization, and fabric choice; explore advanced rendering techniques; continuation of portfolio development. Additional projects/assignments reqd for grad cr. Three lec and 1 hr of lab a wk.
Prereq: The 202 or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The J417/J517 Movement Studio (3 cr, max 18)
Emphasizes body awareness utilizing yoga and related techniques to increase strength and flexibility, heighten sensory awareness, generate dynamic energy, and mind/body connections. Students are encouraged to explore the creative boundaries of their body and discover the body's effectiveness as a primary expressive tool in performance. Students earning graduate credit will be held to a higher standard.
Prereq: Acceptance into B.F.A./M.F.A. program or Permission

The J418/J518 Voice Studio (3 cr, max 18)
Focuses on techniques of vocal production designed to open, free and energize the voice/body and to promote full and supported breathing. Emphasis on breath control, meditation and visualization techniques, vocal warm-ups, and their application to performance. Students earning graduate credit will be held to a higher standard.
Prereq: Acceptance into B.F.A./M.F.A. program or Permission

The J425/J525 BFA Acting Studio (3 cr, max arr)
Rigorous study and practice in performance. Areas of specialization may include: Shakespeare, Devising, Commedia del'arte, Period Styles, Asian Theatre, Animals, Realism, Comedy. The course will be repeated each semester by BFA candidates.
Prereq for 425: Acceptance into BFA program
Prereq for 525: Acceptance into MFA program

The J440/J540 Playwriting (3 cr)
Introduce the student to the fundamental elements of playwriting, including dramatic structure and action, developing theme and characterization, understanding stagecraft and writing dialogue.

The J441/J541 Foundations of Screenwriting (3 cr)
Introduction to the fundamental elements of screenwriting; techniques of developing story lines and advancing a narrative in a visual way using the industry standard of a tightly structured long-form feature film. Additional projects/assignments required for graduate credit.
Prereq: Permission

The 451 Nonverbal Communication (3 cr)
See Comm 421.

The 463 Advanced Costume Technology Studio (3 cr, max arr)
Advanced theatrical costume construction techniques and strategies, including: tailoring, costume crafts and period undergarment construction. Materials selection and handling. May be repeated for course credit. Recommended Preparation: The 311. (Fall, Alt/yrs.)
Prereq: The 104 or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The 464 Scenographic Techniques (3 cr)
Practical survey of graphics used in design and execution of scenery for the stage, including drafting, perspective, front and rear elevations, painters elevations, and properties design and drafting.
Prereq: The 201 or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The 465 Advanced Scene Design (3 cr)
Development of a conceptual approach to design through assorted design projects.
Prereq: The 201 or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The 466 Scene Painting (3 cr)
Introduction to the art, practice and technique of large-scale decorative painting for the stage. Development of brush and application techniques, color mixing, and layout skills. Provides instruction in the imitation of wood, marble, brick and stone, as well as sections on stenciling, faux finishing and trompe l'oiel. (Fall only)
Prereq: The 201 or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The 468 Theatre History I (3 cr)
The comprehensive survey of the major theatrical trends, theorists, and practitioners from the Golden Age of Greece until the early 19th Century.

The 469 Theatre History II (3 cr)
The comprehensive survey of the major theatrical trends, theorists, and practitioners from 1875 to the present contemporary theatre scene. Recommended Preparation: The 371.

The J471 /J571 Directing (3 cr)
Preparation of a play from casting to performance. Additional projects/assignments required for graduate credit. Three lec and one hr of lab a wk. Recommended Preparation: The 305.

The J472/ J572 Directing (3 cr)
Staging and interpretation of a play; developing a production concept; coaching actors. Additional projects/assignments required for graduate credit. Three lec and one hr of lab a wk. Recommended Preparation: Upper-division acting course at 300/400 level.

The 473 Senior Capstone Seminar (1 cr)
The first part of a year-long capstone class for graduating theatre majors that requires students to synthesize their experiences in dramatic theory, literature, theatre performance, and production. Seminar students prepare a service learning project and a portfolio presentation that summarizes their experience and their current vision of the theatre. The class also includes a component in resume preparation and professional presentation.

The 483 Senior Capstone Project (1 cr)
The second part of a year-long capstone class for graduating theatre majors that requires students to synthesize their experiences in dramatic theory, literature, theatre performance, and production. Seminar students prepare a service learning project and a portfolio presentation that summarizes their experience and their current vision of the theatre. The class also includes a component in resume preparation and professional presentation.

The J484/J584 Advanced Stage Lighting (3 cr, Max 12)
Advanced lighting design theories and practice through design of assorted productions in realistic drama, dance, arena, thrust, and mystical theatre. Additional projects/assignments required for graduate credit.
Prereq: The 205 or Permission. A minimum grade of 'C' is required for all co/prerequisites.

The 498 (s) Internship (cr arr).

The 499 (s) Directed Study (cr arr)

The 501 (s) Seminar (cr arr)

The 502 (s) Directed Study (cr arr)

The 503 (s) Workshop (cr arr)

The 504 (s) Special Topics (cr arr)

The 510 Costume Design II (3 cr, max 12)
See The J410/J510.

The 512 (s) MFA Directing Studio (3 cr, max 18)
Advanced individual study in directing, including work in staging, styles, and interpretation.

The 513 (s) MFA Design Studio (2 cr, max 18)
Advanced individual study in all areas of theatrical design with emphasis on portfolio development. One lec and 2 hrs of lab a wk.

The 514 (s) MFA Production Studio (2 cr, max 18)
Advanced individual study in all areas of technical theatre production and management with emphasis on portfolio development. One lec and 2 hrs of lab a wk.

The 515 MFA Jury/Portfolio Review (1 cr, max arr)
Preparation and evaluation of performance monologues and design portfolios.
Coreq: MFA studio courses

The 516 MFA Graduate Seminar (3 cr, max arr)
An in-depth, rigorous, exploration of theatrical research and collaboration pedagogy and methodologies within the larger context of the artistic, creative process. Course may be repeated.
Prereq: Acceptance into MFA program

The 517 Movement Studio (3 cr, max 18)
See The J417/J517.

The 518 Voice Studio (3 cr, max 18)
See The J418/J518.

The 522 (s) Advanced Studies in Theatre (3 cr, max 18)
This course is for advanced studies in theatre history, analysis, and criticism for creative writing, performance, directing, design, and technology graduate candidates. Topics are coordinated and rotated departmentally and are beyond the departmental history and play analysis core. Course may be repeated for credit.

The 525 MFA Acting Studio (3 cr, max arr)
See The J425/J525.

The 526 MFA Writers Studio (3 cr, max 18)
The primary goal of the MFA Writers Studio is to help the writers develop their unique voice and vision; understand the role of the writer within a historical, cultural and political context; and expose them to a variety of styles and approaches to creating new work for both stage and screen. Toward that end, the Writer's Studio fosters a safe but challenging creative environment, in which writers are presented with assignments designed to help them identify that set of aesthetic concerns which will form the foundation of their Voice and Style as a writer. MFA candidates in Dramatic Writing enroll in this course each semester they are in the program.

The 535 Production Design (3 cr, max 12)
Design responsibility for a mainstage production.
Prereq: Permission of department

The 540 Playwriting (3 cr)
See The J440/J540.

The 541 Foundations of Screenwriting (3 cr)
See The J441/J541.

The 571-572 Directing (3 cr)
See The J471-J472/J571-J572.

The 584 Advanced Stage Lighting (3 cr)
See The J484/J584.

The 595 Professional Off-Campus Studio (3 cr, max 18)
This is a studio course designed for professional off-campus graduate students only. The course is composed of one on one mentoring for off-campus projects.
Prereq: Permission

The 596 MFA Exit Project (3 cr)
Culminating creative project for MFA candidates.
Prereq: Permission of department

The 597 (s) Practicum (cr arr)

The 598 (s) Internship (cr arr)

The 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Virtual Technology and Design Courses

Brian Cleveley, Coordinator (120 Art and Architecture North; phone 208/885-7083)

Note: On registering for a studio or capstone course offered in this program, the student agrees that the program may retain work completed by the student.

VTD 152 Introduction to Virtual Design (2 cr)
Introduction to the language, processes and principles of design associated with virtual and tangible environments. Two 2-hr lectures a week and assigned work. Recommended Preparation: Art 110 and 121. (Spring only)
Prereq: Permission

VTD 200 (s) Seminar (cr arr)

VTD 204 (s) Special Topics (cr arr)

VTD 244 Introduction to 3D Modeling (3 cr)
Introduction to 3D digital modeling focused on high and low poly polygon hard surface assets and digital sets (including basic lighting and materials). Two 1-1/2hr lecture/lab a wk and associated work.
Prereq: Major in Virtual Technology and Design; non-majors by permission as space permits

VTD 245 Advanced Modeling (3 cr)
Exploration of methods used for modeling and sculpting organic surfaces focused on the creation of character and avatar for high and low polygon 3D digital models. Three 1 hr lecture/lab a wk and associated work. (Fall only)
Prereq: VTD 244 or Permission

VTD 246 Advanced Lighting and Materials (3 cr)
Exploration of methods for illuminating and texturing virtual objects and environments. Foreground, middleground and background rendering issues are examined through topics that include radiosity, ray-tracing, procedural materials and render engine options. Three 1hr lecture/lab a wk and associated work. (Fall only)
Prereq: VTD 244 or Permission

VTD 253 Virtual Design I (3 cr)
Investigation of the art and science of virtual design, integrating creative problem solving skills with computer technologies. Sequence of exercises explores the problem domains of virtual objects and environments. Two 3-hr studios a week and assigned work. (Fall only)
Prereq: Art 121 and VTD 152; or Permission

VTD 254 Virtual Design II (3 cr)
Continued development of critical thinking and problem solving skills through a sequence of exercises that emphasize design process, concept and context driven solutions to virtual, tangible and integrated projects. Two 3-hr studios a week and assigned work. (Spring only)
Prereq: VTD 253 or Permission

VTD 266 Animation (3 cr)
Introduction to 3D computer-generated animation addressing interface, character rigging, and linear animation. Two 1-1/2hr lecture/lab a wk and associated work. (Spring only)
Prereq: VTD 244 or Permission

VTD 271 Interactive Technologies (3 cr)
Exploration of technologies to create and deliver interactive and immersive applications. Focus on navigation, way-finding and behavior issues associated with virtual environments. Two 1-1/2hr lecture/lab a wk and associated work. (Fall only)
Prereq: VTD 244 or Permission

VTD 299 (s) Directed Study (cr arr)

VTD 355 Virtual Design III (4 cr)
Introduction to virtual design & relationship to human needs; focus on design process & expansion of vocabulary associated with virtual environments; experimentation & creativity encouraged. Three 3-hr Studios a wk and assigned work. (Fall only)
Prereq: VTD 254 or Permission

VTD 356 Virtual Design IV (4 cr)
Design development of conceptual & technical aspects of virtual environments; exploration of design issues from conception to delivery. Three 3-hr studios a wk and assigned work. (Spring only)
Prereq: VTD 355 or Permission

VTD 367 Advanced Animation (3 cr)
Exploration of methods used for visual and experiential communication, problem solving, and storytelling through linear and interactive 3D computer generated animation. Three 1hr lecture/lab a wk and associated work. (Spring only)
Prereq: VTD 266 or Permission

VTD 372 Advanced Interactive Technologies (3 cr)
Exploration of advanced methods for the creation and delivery of interactive and immersive applications. Focus on object-oriented, event-driven environments and Virtual Reality technologies. Two 1-1/2hr lecture/lab a wk and associated work. (Spring only)
Prereq: VTD 244 and VTD 271; or Permission

VTD 400 (s) Seminar (cr arr)

VTD 404 (s) Special Topics (cr arr)

VTD 444 Other Media (3 cr)
Exploration of new or emerging technologies including but not limited to software and various hardware devices. The focus is on the communicative, affective, and interactive possibilities of the technology and their application within research or creative production.
Prereq: Permission

VTD 457 Capstone Design Studio I (6 cr)
Sequential contract courses built around the collective content of five interdisciplinary clusters; research, design & implementation of comprehensive virtual design project. Three 3-hr studios a wk and associated work.
Prereq: VTD 356

VTD 458 Capstone Design Studio II (6 cr)
Sequential contract courses built around the collective content of five interdisciplinary clusters; research, design & implementation of comprehensive virtual design project. Three 3-hr studios a wk and associated work.
Prereq: VTD 457

VTD 497 Teaching Assistantship, Undergraduate (cr arr)
Teaching assistant services performed by advanced undergraduate students with faculty supervision.

VTD 499 (s) Directed Study (cr arr)

Water Resources Courses

Jan Boll, Director (214 Morrill Hall 83844-3002; phone 208/885-9694; water@uidaho.edu; www.water.uidaho.edu).

WR 500 Master's Research and Thesis (cr arr)

WR 501 (s) Seminar (cr arr)

WR 502 (s) Directed Study (cr arr)

WR 503 (s) Workshop (cr arr)

WR 504 (s) Special Topics (cr arr)

WR 505 (s) Professional Development (cr arr)

WR 506 Interdisciplinary Methods in Water Resources (3 cr)
Student and faculty teams from traditionally disparate disciplines address real issues to develop methods for communicating across disciplines and for solving water resources problems. The course takes a problem-oriented approach using case studies. Faculty will lead students through this integrative process with lectures and working sessions. (Fall only)

WR 507 Integrated Water Resources Projects (3 cr)
In a seminar style format, students present and discuss disciplinary and interdisciplinary aspects of thesis/dissertation research, and finish writing of interdisciplinary aspects of their thesis/dissertation. (Spring only)
Prereq: WR 506

WR 600 Doctoral Research and Dissertation (cr arr)

Wildlife Resources Courses

Kerry Paul Reese, Dept. Head, Dept. of Fish and Wildlife Sciences (104 CNR Bldg. 83844-1136; phone 208/885-6434).

Prerequisite: Courses in this subject field that are numbered above 299 are not open to undergraduate students on academic probation.

WLF 102 The Fish and Wildlife Professions (1 cr)
See Fish 102.

WLF 200 (s) Seminar (cr arr)

WLF 203 (s) Workshop (cr arr)

WLF 204 (s) Special Topics (cr arr)

WLF 299 (s) Directed Study (cr arr)

WLF 314 Wildlife Ecology I (3 cr)
Ecology and natural history of birds, mammals, reptiles, and amphibians. (Fall only)
Prereq: For 221, REM 221, or Biol 314

WLF 315 Wildlife Ecology I Laboratory (1 cr)
Techniques associated with wildlife research and local habitats and areas where wildlife species are present. Three hours of lab a week. One weekend field trip required. Two additional animal trapping sessions also required. (Fall only)
Prereq or Coreq: WLF 314

WLF 316 Wildlife Ecology II (4 cr)
Application of principles of ecology to conservation and management of wildlife in natural and altered habitats. Three lec and one lab a wk; three days of field trips. (Spring only)
Prereq: WLF 314 and 315 with a grade of 'C' or better; or Permission

WLF 396 Wilderness Research Internship (3 cr)
Nine-week summer internship at UI Wilderness Field Station, located at Taylor Ranch in the heart of the Frank Church River of No Return Wilderness of central Idaho; research honorarium awarded; lodging and transportation to field station provided. Enrollment limited to 2-3 students based on available funding; competitive selection process by faculty committee based on research proposal, GPA, and resume. (Summer only)
Prereq: Junior standing

WLF 398 (s) Renewable Natural Resources Internship (cr arr)
Supervised field experience with an appropriate public or private agency. Reqd for cooperative education students. Graded P/F.
Prereq: Permission of department

WLF 403 (s) Workshop (cr arr)

WLF 404 (s) Special Topics (cr arr)

WLF 415 Wildlife Conclave (1 cr)
Objectives of the course are to 1) acquaint students with the procedures and rules used in the Wildlife Quiz Bowl at the Western Students Wildlife Conclave held annually in March, 2) practice in game situations so that

our team is competitive at the event, and 3) to learn practical facts and trivia about wildlife natural history, identification, history of wildlife management and laws, wildlife ecology and management, and related natural resource sciences. The course meets twice a week from the beginning of spring semester until spring break (when Conclave is held). Students are assigned areas to study, have quizzes on those areas of knowledge and provide new written questions with answers for possible use in future classes.

WLF J416/J516 Molecular Methods in Population Biology (1 cr)
Introductory workshop on basic procedures in molecular biology that have applications in ecology and evolutionary biology. Course includes DNA/RNA extraction, PCR, simple recombinant DNA procedures, DNA sequencing, and data analysis. Graduate level will require independent study project. Recommended preparation: Introductory level genetics, general and organic chemistry courses. (Fall only)
Prereq: Permission

WLF 440 Conservation Biology (3 cr)
Patterns of biological diversity; factors producing changes in diversity; values of diversity; management principles applied to small populations, protected areas, landscape linkages, biotic integrity, restoration, legal issues, and funding sources. (Fall only)
Prereq: For 221, REM 221, or Biol 314 or Permission

WLF 448 Fish and Wildlife Population Ecology (4 cr)
Dynamics of animal populations resulting from balance between birth, death, and movement processes; quantitative methods for measuring distribution, abundance, survival and population growth; competition, predation, and self-regulation; viability and management of fish and wildlife populations. Three lec and one lab a wk. (Fall only)
Prereq: Stat 251; and Fish 316, WLF 316, or course in vertebrate ecology

WLF 482 Ornithology (4 cr)
Evolution, systematics, distribution, identification, and biology of birds, including current conservation efforts. Requires two days of field trips. (Spring only)
Prereq: Biol 213

WLF 483 Senior Project Presentation (1 cr)
See For 483.

WLF 485 Ecology and Conservation Biology Senior Project (1-3 cr, max 3)
Same as CSS/Fish/For/REM 485. Scholarly work; learning objectives include development and formal proposal of a specific project and conducting the project or research with the guidance of a faculty mentor.

WLF 492 Wildlife Management (4 cr)
Review of social and biological context for current practice of wildlife management. Three lec and one lab a wk; two days of field trips. (Spring only)
Prereq: WLF 316 and WLF 448
Prereq or Coreq: WLF 482, Biol 481 or Biol 483

WLF 495 (s) Wildlife Seminar (1-2 cr)
Discuss integrating biological, social, political, economic, and philosophic aspects of wildlife problems. (Fall only)
Prereq: Senior standing

WLF 497 Senior Thesis (1-3 cr, max 6)
Preparation of thesis, exhibition, video, computer program, multimedia program, or other creative presentation based on research conducted under the guidance of a faculty mentor.
Prereq: Cumulative GPA of at least 3.2 in all college courses, completion of at least 90 credits, and permission of a faculty mentor

WLF 499 (s) Directed Study (cr arr)
For the individual student; conferences, library, field, or lab work.
Prereq: Senior standing, GPA 2.5, and Permission

WLF 500 Master's Research and Thesis (cr arr)

WLF 501 (s) Seminar (cr arr)
Major philosophy, management, and research problems of wildlands; presentation of individual studies on assigned topics. Graded P (pass)/F (fail).
Prereq: Permission

WLF 502 (s) Directed Study (cr arr)

WLF 503 (s) Workshop (cr arr)
Selected topics in the conservation and management of natural resources.
Prereq: Permission

WLF 504 (s) Special Topics (cr arr)

WLF 516 Molecular Methods in Population Biology (1 cr)
See WLF J416/J516.

WLF 540 Conservation Genetics (3 cr)
Same as For 540. Basic principles of population genetics and phylogenetics and their applications to the field of conservation genetics and natural resource management; case studies and examples from current literature; topics include genetic diversity, inbreeding, population structure, gene flow, genetic drift, molecular phylogenetics, and hybridization. (Fall, Alt/yrs)

WLF 541 Advanced Population Biology (3 cr)
Readings and discussion of current theories of population control, their biological basis, and applications to animal populations. (Fall, Alt/yrs)
Prereq: WLF 448 or Permission

WLF 543 Fish and Wildlife Population Analysis (4 cr)
Quantitative analysis of fish and wildlife habitat, diet, harvest, population density, survival, and natality data; development and application of population models in fish and wildlife management. Three lec and 3 hrs of lab a wk. (Fall, Alt/yrs)
Prereq: WLF 448, Stat 431 or Permission

WLF 545 Wildlife Habitat Ecology (2-3 cr)
Reading and discussion on habitat concepts, analyses, and applications. Students enrolled in the 3rd credit will complete additional readings and quantitative problem sets. Cooperative: open to WSU degree-seeking students.
Prereq: WLF 492 or Permission, animal and plant ecology

WLF 549 Conservation Genetics Lab (1 cr)
Same as For 542. This optional lab course is a complement to WLF540 Conservation genetics and should be taken concurrently. Students will learn to analyze and interpret phylogenetic and population datasets using a variety of software packages. Students will also design and implement a lab for their classmates. (Fall, alt/even yrs)
Coreq: WLF 540 or For 540

WLF 552 Ecological Modeling (3 cr)
Linear and nonlinear dynamical models of biological systems; computer-intensive introduction to concepts of stability, attractors, bifurcations, chaos; model identification, estimation, and evaluation; applications in aquatic and terrestrial ecological communities. (Spring, Alt/yrs)
Prereq: Math 175 and For 221 or Permission

WLF 555 Statistical Ecology (3 cr)
Same as Stat 555. Stochastic models in ecological work; discrete and continuous statistical distributions, birth-death processes, diffusion processes; applications in population dynamics, population genetics, ecological sampling, spatial analysis, and conservation biology. Cooperative: open to WSU degree-seeking students. (Spring, Alt/yrs)
Prereq: Math 451 or Permission

WLF 561 Landscape Genetics (2 cr)
Landscape genetics is an interdisciplinary field of study that evaluates how landscape and environmental features influence gene flow, population structure and local adaptation by integrating landscape ecology, population genetics and spatial statistics. This course covers applications of landscape genetics that can improve our understanding of ecology, evolution, and management of wild populations. Recommended Preparation: Population genetics or conservation genetics, and multivariate or spatial statistics. Cooperative: open to WSU degree-seeking students. (Spring, alt/even yrs)

WLF 562 Landscape Genetics Lab (1-2 cr)
This optional lab course is a complement to WLF561 Landscape genetics and should be taken concurrently. Students will learn to analyze and interpret landscape genetic datasets using a variety of methods. If taken for two credits, students will do a project analyzing landscape genetic data. Recommended Preparation: Population genetics or conservation genetics, and multivariate or spatial statistics. Cooperative: open to WSU degree-seeking students. (Spring, alt/even yrs)
Coreq: WLF 561

WLF 597 (s) Practicum (cr arr)

WLF 598 (s) Internship (cr arr)

WLF 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

WLF 600 Doctoral Research and Dissertation (cr arr)
Prereq: Admission to the doctoral program in "natural resources" and Permission of department

Women's Studies Courses

Sandra Reineke, Coordinator (325 Admin. Bldg. 83844-3165; phone 208/885-7618).

WmSt 201 Introduction to Women's Studies (3 cr)
Survey of and introduction to the study of women's lives; thematic examination of the diversity of women's experiences in families, at work, with the law, in health care, in literature, in the media, in language; exploration of differences and similarities, including ethnicity, sexuality, class, and age.

WmSt 367 (s) Topics in Women's Studies (3 cr, max arr)
Topical examination of issues in women and gender studies.

WmSt 410 Feminist Theory and Action (3 cr)
This course examines a range of feminist theory, including both classic and lesser-known texts, while grounding the study of theory in an examination of historical and contemporary feminist activism. The course covers some of the key concepts and debates within feminism and explores the relationship between theory and action. Students learn how to read theory and apply their knowledge to current events, issues, and problems in the United States and globally.

WmSt 498 Internship (1-6 cr)
Directed student internship in approved setting relevant to women's and gender studies with campus, local, national, or international organizations or offices. Graded pass/fail, various credits depending on the length and type of internship.
Prereq: Permission of the Coordinator of Women's Studies

WmSt 499 (s) Directed Study (cr arr)

WASHINGTON STATE COOPERATIVELY OFFERED COURSES

Cooperative courses between the University of Idaho and Washington State University provide enriched educational opportunities for students of both universities and allow better utilization of supporting resources such as libraries and laboratories. The sharing of faculty and facilities fosters the exchange of ideas and enhances academic ties between the two communities.

Note: Only courses approved by Washington State University as cooperatively offered are open to University of Idaho students. To enroll in a Washington State University course as a cooperative student you must be degree-seeking students.

Please see the Washington State University General Catalog for the full course descriptions of their available cooperatively offered courses.

Subject	Number	Course Title and Credits
AERO	299	Directed Studies (V 1-4 cr)
AGTM	305	Agricultural Precision Systems (3 cr)
AGTM	315	Irrigation Systems and Water Management (3 cr)
ANIM SCI	101	Introductory Animal Science (3 cr)
ANIM SCI	172	Dairy Cattle Management Laboratory (1 cr)
ANIM SCI	174	Beef Cow Calf Management Laboratory (1 cr)
ANIM SCI	178	Swine Management Laboratory (1 cr)
ANIM SCI	260	Live Animal and Carcass Evaluation (3 cr)
ANIM SCI	274	Beef Feedlot Systems (2 cr)
ANIM SCI	285	Rights and Welfare of Animals (3 cr)
ANIM SCI	313	Feeds and Feeding (4 cr)
ANIM SCI	314	Principles of Nutrition (3 cr)
ANIM SCI	330	Animal Genetics (3 cr)
ANIM SCI	345	Introduction to Animal Growth and Development (3 cr)
ANIM SCI	346	Introduction to Skeletal Muscle Physiology (3 cr)
ANIM SCI	350	Physiology of Reproduction (3 cr)
ANIM SCI	360	Meat Science (3 cr)
ANIM SCI	451	Endocrine Physiology (3 cr)
ANIM SCI	454	Artificial Insemination and Pregnancy Detection (2 cr)
ANIM SCI	460	Advanced Meat Science (3 cr)
ANIM SCI	464	Companion Animal Management (3 cr)
ANIM SCI	472	Dairy Cattle Management (3 cr)
ANIM SCI	473	Advanced Dairy Management (3 cr)
ANIM SCI	478	Swine Production (3 cr)
ANIM SCI	485	Applied Animal Behavior (3 cr)
ANIM SCI	488	Perspectives in Biotechnology (3 cr)
ANIM SCI	513	Mineral and Vitamin Metabolism (4 cr)
ANIM SCI	551	Endocrine Physiology (3 cr)
ANIM SCI	558	Molecular and Cellular Reproduction (3 cr)
ANIM SCI	588	Perspectives in Biotechnology (3 cr)
ANIM SCI	598	Advanced Topics in Animal Sciences (V 1-2 cr)
ANTH	450	Descriptive Linguistics (3 cr)
ANTH	463	Anthropology of Life and Death (3 cr)
ANTH	465	Human Evolution (3 cr)
ANTH	535	Cultural Resource Management (3 cr)
ANTH	550	Descriptive Linguistics (3 cr)
ANTH	563	Anthropology of Life and Death (3 cr)
ANTH	565	Human Evolution (3 cr)
ANTH	573	Zooarchaeology (4 cr)
ARCH	490	Seminar in Architectural Design (V 1-4 cr)
ASIA	111	Asian Film (3 cr)
ASIA	121	Modern Chinese Culture (3 cr)
ASIA	131	Masterpieces of Asian Literature (3 cr)
ASIA	320	Issues in East Asian Ethics (3 cr)
ASIA	330	The Art of War (3 cr)
ASTRONOM	581	Advanced Topics (3 cr)
BIOLOGY	324	Comparative Vertebrate Anatomy (4 cr)
BIOLOGY	416	Fisheries Management (4 cr)
BIOLOGY	469	Ecosystem Ecology and Global Change (3 cr)
BIOLOGY	494	Seminar in Mathematical Biology (1 cr)
BIOLOGY	514	Fish Genetics (2 cr)
BIOLOGY	519	Introduction to Population Genetics (3 cr)
BIOLOGY	540	Stable Isotope Theory and Methods (3 cr)
BIOLOGY	548	Evolutionary Ecology of Populations (3 cr)
BIOLOGY	563	Field Ecology (2 cr)
BIOLOGY	566	Mathematical Genetics (3 cr)
BIOLOGY	569	Ecosystem Ecology and Global Change (3 cr)
BSYSE	551	Advanced Biological Systems Engineering Topics (V 1-4 cr)
BSYSE	552	Advanced Biological Systems Engineering Topics (V 1-4 cr)
BSYSE	560	Aquatic Chemistry (3 cr)
BSYSE	582	Food Process Engineering I (3 cr)
CE	211	Statics (3 cr)
CE	215	Mechanics of Materials (3 cr)
CE	418	Hazardous Waste Engineering (V 3-4 cr)
CE	425	Soil and Site Improvement (3 cr)
CE	434	Prestressed Concrete and Reinforced Masonry Design (3 cr)
CE	436	Design of Timber Structures (3 cr)
CE	450	Hydraulic Engineering Design (3 cr)
CE	501	Advanced Topics in Transportation Engineering (V 2-4 cr)
CE	511	Advanced Topics in Geotechnical Engineering (V 2-4 cr)
CE	512	Dynamics of Structures (3 cr)
CE	514	Advanced Mechanics of Materials (3 cr)
CE	517	Mechanics of Sediment Transport (3 cr)
CE	518	Hazardous Waste Engineering (V 3-4 cr)
CE	524	Geotechnical Earthquake Engineering (3 cr)
CE	525	Soil and Site Improvement (3 cr)
CE	527	Engineering Properties of Soils (3 cr)
CE	530	Advanced Design of Steel Structures (3 cr)
CE	531	Probability and Statistical Models in Engineering (3 cr)
CE	532	Finite Elements (3 cr)
CE	533	Advanced Reinforced Concrete Design (3 cr)
CE	534	Prestressed Concrete and Reinforced Masonry Design (3 cr)
CE	538	Earthquake Engineering (3 cr)
CE	541	Physicochemical Water and Wastewater Treatment (3 cr)
CE	542	Biochemical Wastewater Treatment (3 cr)
CE	567	Properties of Highway Pavement Materials (3 cr)
CE	572	Advanced Pavement Design and Analysis (3 cr)
CE	583	Aquatic Chemistry (3 cr)
CHE	510	Transport Processes (3 cr)
CHE	527	Macroscopic Thermodynamics (3 cr)
CHE	529	Chemical Engineering Kinetics (3 cr)
CHE	541	Chemical Engineering Analysis (3 cr)
CHE	560	Biochemical Engineering (3 cr)
CHEM	503	Advanced Topics in Inorganic Chemistry (V 1-3 cr)
CHEM	537	Advanced Topics in Physical Chemistry (V 1-3 cr)
CHEM	544	Advanced Topics in Organic Chemistry (V 1-3 cr)
CHEM	545	Synthetic Organic Chemistry (3 cr)
CHINESE	101	First Semester (4 cr)
CHINESE	102	Second Semester (4 cr)
CHINESE	111	Asian Film (3 cr)

CHINESE	121	Modern Chinese Culture (3 cr)
CHINESE	131	Masterpieces of Asian Literature (3 cr)
CHINESE	203	Third Semester (4 cr)
CHINESE	204	Fourth Semester (4 cr)
CHINESE	305	Intermediate Conversation II (1 cr)
CHINESE	306	Intermediate Reading and Translation (3 cr)
CHINESE	308	Intermediate Grammar and Writing (3 cr)
CHINESE	320	Issues in East Asian Ethics (3 cr)
CHINESE	330	The Art of War (3 cr)
CHINESE	361	Advanced Chinese for the Professions (3 cr)
CHINESE	363	Introduction to Literary Chinese (3 cr)
CHINESE	364	Media Chinese (3 cr)
CHINESE	405	Advanced Conversation (1 cr)
CHINESE	450	Seminar in Chinese Studies - Themes (3 cr)
COUN PSY	511	Theories, Research, and Techniques in Counseling Psychology I (3 cr)
COUN PSY	512	Theories, Research, and Techniques in Counseling Psychology II (3 cr)
COUN PSY	515	Ethics and Professional Problems in Counseling Psychology (3 cr)
COUN PSY	518	Theoretical Foundations of Group Counseling (3 cr)
COUN PSY	541	Clinical and Experimental Hypnosis Seminar (3 cr)
CPT S	442	Computer Graphics (3 cr)
CPT S	464	Distributed Systems Concepts and Programming (3 cr)
CPT S	466	Embedded Systems (3 cr)
CPT S	531	Advanced Matrix Computations (3 cr)
CPT S	542	Computer Graphics (3 cr)
CPT S	564	Distributed Systems Concepts and Programming (3 cr)
CPT S	566	Embedded Systems (3 cr)
CRM J	101	Introduction to the Administration of Criminal Justice (3 cr)
CRM J	320	Criminal Law (3 cr)
CRM J	330	Crime Control Policies (3 cr)
CRM J	365	Juvenile Justice and Corrections (3 cr)
CRM J	370	Introduction to Policing in America (3 cr)
CRM J	400	Issues in the Administration of Criminal Justice (3 cr)
CRM J	405	Comparative Criminal Justice Systems (3 cr)
CRM J	420	Criminal Procedure (3 cr)
CRM J	424	Community Corrections (3 cr)
CRM J	491	Special Topics: Study Abroad (3 cr)
CRM J	505	Comparative Criminal Justice (3 cr)
CRM J	530	Criminal Justice: Process and Institutions (3 cr)
CRM J	540	Seminar in Evaluation Research (3 cr)
CRM J	541	Seminar in Corrections (3 cr)
CRM J	570	The Police and Society (3 cr)
CRM J	572	Seminar in Comparative Policing (3 cr)
CRM J	591	Seminar in the Administration of Criminal Justice (3 cr)
CROP SCI	301	Turfgrass Management (3 cr)
CROP SCI	360	World Agricultural Systems (3 cr)
CROP SCI	401	Turfgrass Science (3 cr)
CROP SCI	403	Advanced Cropping Systems (3 cr)
CROP SCI	503	Advanced Cropping Systems (3 cr)
CROP SCI	504	Plant Transmission Genetics (3 cr)
CROP SCI	505	Advanced Classical and Molecular Breeding (3 cr)
CROP SCI	554	Chromosome Structure and Function (3 cr)
CROP SCI	555	Epigenetics in Plants (2 cr)
E E	451	Digital Communication Systems (3 cr)
E E	486	Power Electronics (3 cr)
E E	501	Linear System Theory (3 cr)
E E	502	Linear Multivariable Control (3 cr)
E E	504	Modern Optics (3 cr)
E E	507	Random Processes in Engineering (3 cr)
E E	511	Protection of Power Systems II (3 cr)
E E	518	Advanced Electromagnetic Theory I (3 cr)
E E	527	Antenna Theory and Design (3 cr)
E E	581	Advanced Topics in Power Systems (V 2-3 cr)
ECONS	324	The Economics of Health Care (3 cr)
ECONS	424	Strategy and Game Theory (3 cr)
ECONS	525	Master's Econometrics (3 cr)
ECONS	526	Master's Microeconomic Analysis I (3 cr)
ECONS	527	Master's Microeconomic Analysis II (3 cr)
ECONS	529	Research Methods (V 1-2 cr)
ECONS	533	International Trade and Policy (3 cr)
ECONS	534	Production Economics (3 cr)
ED AD	580	School Organization and Administration (3 cr)
ED AD	585	Financial Management in Education (3 cr)
ED PSYCH	508	Educational Statistics (3 cr)
ENGLISH	443	Phonology (3 cr)
ENGLISH	543	Phonology (3 cr)
ENGLISH	546	Topics in Teaching English as a Second Language (3 cr)
ENTOM	150	Insects, Science, and World Cultures (3 cr)
ENTOM	401	Biology and Society, Past and Present (3 cr)
ENTOM	490	Special Topics in Entomology (V 1-4 cr)
ENTOM	539	Insect Identification (4 cr)
ENTOM	590	Special Topics in Entomology (V 1-4 cr)
ENVR SCI	310	Modeling the Environment (4 cr)
ENVR SCI	444	Environmental Assessment (4 cr)
ENVR SCI	445	Hazardous Waste Management (3 cr)
ENVR SCI	469	Ecosystem Ecology and Global Change (3 cr)
ENVR SCI	492	Special Topics (V 1-3 cr)
ENVR SCI	544	Environmental Assessment (4 cr)
ENVR SCI	545	Hazardous Waste Management (3 cr)
ENVR SCI	550	System Dynamics Models of Environmental Systems (3 cr)
ENVR SCI	569	Ecosystem Ecology and Global Change (3 cr)
ENVR SCI	590	Special Topics (2 cr)
FINE ART	381	Beginning Photography (3 cr)
FINE ART	382	Intermediate Photography (3 cr)
FRENCH	410	French Film in Translation (3 cr)
FS	110	Introduction to Food Science (3 cr)
FS	201	Science on Your Plate (3 cr)
FS	220	Food Safety and Quality (3 cr)
FS	302	Food Processing Lab (1 cr)
FS	303	Food Processing (3 cr)
FS	304	Cereal Products (2 cr)
FS	401	Topics in Food Science (V 1-3 cr)
FS	406	Evaluation of Dairy Products I (1 cr)
FS	409	Principles of Environmental Toxicology (3 cr)
FS	416	Food Microbiology (3 cr)
FS	417	Food Microbiology Laboratory (2 cr)
FS	418	Oral Seminar in Food Science (1 cr)
FS	422	Sensory Evaluation of Food and Wine (3 cr)
FS	423	Sensory Evaluation of Food and Wine Lab (1 cr)
FS	429	Dairy Products (3 cr)
FS	430	Dairy Products Lab (1 cr)
FS	432	Food Engineering (3 cr)
FS	433	Food Engineering Lab (1 cr)
FS	436	Principles of Sustainability (3 cr)
FS	460	Food Chemistry (3 cr)
FS	461	Food Chemistry Laboratory (1 cr)
FS	462	Food Analysis (3 cr)
FS	464	Food Toxicology (3 cr)
FS	465	Wine Microbiology and Processing (3 cr)
FS	466	Wine Microbiology and Processing Laboratory (1 cr)

FS	470	Advanced Food Technology (3 cr)
FS	489	Food Product Development (3 cr)
FS	495	Internship in Food Science (2 cr)
FS	496	Internship in a Winery (2 cr)
FS	499	Special Problems (V 1-4 cr)
FS	501	Topics in Food Science (V 1-3 cr)
FS	509	Principles of Environmental Toxicology (3 cr)
FS	510	Functional Foods and Health (3 cr)
FS	511	Food Lipids (3 cr)
FS	512	Food Proteins and Enzymes (2 cr)
FS	513	Food Carbohydrates (3 cr)
FS	516	Food Laws (2 cr)
FS	517	Scientific Writing (2 cr)
FS	518	Seminar Oral (1 cr)
FS	522	Sensory Evaluation of Food and Wine (3 cr)
FS	529	Dairy Products (3 cr)
FS	530	Dairy Products Lab (1 cr)
FS	531	Advanced Food Safety and Quality (3 cr)
FS	536	Principles of Sustainability (3 cr)
FS	538	Physical Properties of Foods (2 cr)
FS	564	Food Toxicology (3 cr)
FS	565	Wine Microbiology and Processing (3 cr)
FS	570	Advanced Food Technology (3 cr)
FS	583	Advances in Cereal Sciences and Technology (2 cr)
FOR LANG	100	Studies in Foreign Languages I (V 1-4 cr)
FOR LANG	200	Studies in Foreign Languages II (V 1-4 cr)
FOR LANG	300	Studies in Foreign Languages (V 1-4 cr)
FOR LANG	450	Descriptive Linguistics (3 cr)
FRENCH	310	French and Francophone Film (3 cr)
GEOLOGY	308	Field Geology (3 cr)
GEOLOGY	470	Introduction to Economic Geology (3 cr)
GEOLOGY	520	Advanced Topics in Sedimentology (3 cr)
GEOLOGY	521	Clastic Depositional Systems (3 cr)
GEOLOGY	523	Advanced Topics in Stratigraphy (3 cr)
GEOLOGY	525	Carbonate Depositional Systems (3 cr)
GEOLOGY	538	Orogenic Systems I (3 cr)
GEOLOGY	540	Tectonics (3 cr)
GEOLOGY	541	Structural Analysis (3 cr)
GEOLOGY	550	Advanced Mineralogy (3 cr)
GEOLOGY	552	X-ray Analysis in Geology (3 cr)
GEOLOGY	560	Advanced Igneous Petrology (3 cr)
GEOLOGY	579	Groundwater Geochemistry (V 2-4 cr)
GEOLOGY	583	Radiogenic Isotopes and Geochronology (3 cr)
GEOLOGY	584	Stable Isotope Geochemistry (3 cr)
GERMAN	308	Intermediate Grammar and Writing (3 cr)
GERMAN	320	German Culture (3 cr)
GERMAN	450	Seminar in German Studies - Themes (3 cr)
GERMAN	451	Seminar in German Studies - Authors (3 cr)
H D	514	Research Methods in Human Development II (3 cr)
H D	580	Families, Community and Public Policy (3 cr)
HBM	131	Introduction to Hospitality Business Management (3 cr)
HBM	235	Travel, Society and Business (3 cr)
HBM	381	Hospitality Leadership and Organizational Behavior (3 cr)
HISTORY	308	North American Indian History, Precontact to Present (3 cr)
HISTORY	427	Public History: Theory and Methodology (3 cr)
HISTORY	525	Seminar in American History (3 cr)
HISTORY	527	Public History: Theory and Methodology (3 cr)
HISTORY	569	Field Course in Modern European History (3 cr)
HORT	310	Pomology (3 cr)
HORT	313	Viticulture (3 cr)
HORT	320	Olericulture (3 cr)
HORT	321	Olericulture Laboratory (1 cr)
HORT	332	Interior Plantscaping (3 cr)
HORT	357	Greenhouse Management and Crop Production (3 cr)
HORT	358	Greenhouse Management and Crop Production Lab (1 cr)
HORT	413	Advanced Viticulture (3 cr)
HORT	418	Post-harvest Biology and Technology (3 cr)
HORT	513	Advanced Viticulture (3 cr)
HORT	518	Post-harvest Biology and Technology (3 cr)
HPA	509	Health Care Economics (3 cr)
HUMANITY	131	Masterpieces of Asian Literature (3 cr)
HUMANITY	320	Issues in East Asian Ethics (3 cr)
ITALIAN	101	First Semester (4 cr)
ITALIAN	102	Second Semester (4 cr)
ITALIAN	105	Elementary Conversation (1 cr)
ITALIAN	205	Intermediate Conversation (1 cr)
JAPANESE	320	Issues in East Asian Ethics (3 cr)
LND ARCH	260	History of Landscape Architecture (3 cr)
LND ARCH	480	Professional Practice (2 cr)
LND ARCH	520	The Northern Rocky Mountain Regional Landscape (4 cr)
LND ARCH	521	Cultural Interpretation of the Regional Landscape (4 cr)
MATH	360	Probability and Statistics (3 cr)
MATH	494	Seminar in Mathematical Biology (1 cr)
MATH	503	Complex Analysis (3 cr)
MATH	512	Ordinary Differential Equations (3 cr)
MATH	525	General Topology (3 cr)
MATH	536	Statistical Computing (3 cr)
MATH	543	Approximation Theory (3 cr)
MATH	544	Advanced Matrix Computations (3 cr)
MATH	546	Numerical Analysis of Elliptic PDEs (3 cr)
MATH	560	Partial Differential Equations I (3 cr)
MATH	563	Mathematical Genetics (3 cr)
MATH	574	Topics in Optimization (3 cr)
MATH	581	Topics in Mathematics (V 1-3 cr)
MATH	583	Topics in Applied Mathematics (V 1-3 cr)
MATSE	513	Crystal Plasticity (3 cr)
MBIOS	303	Introductory Biochemistry (4 cr)
MBIOS	442	General Virology (3 cr)
MBIOS	446	Epidemiology (3 cr)
MBIOS	528	Molecular and Cellular Reproduction (3 cr)
MBIOS	542	General Virology (3 cr)
MBIOS	582	Seminar in Reproductive Biology (1 cr)
ME	212	Dynamics (3 cr)
ME	301	Fundamentals of Thermodynamics (3 cr)
ME	303	Fluid Mechanics (3 cr)
ME	313	Engineering Analysis (3 cr)
ME	404	Heat Transfer (3 cr)
ME	419	Air Conditioning (3 cr)
ME	449	Mechanical Vibration (3 cr)
ME	481	Control Systems (3 cr)
ME	513	Crystal Plasticity (3 cr)
ME	515	Advanced Heat Transfer (3 cr)
ME	521	Fundamentals of Fluids I (3 cr)
ME	526	Statistical Thermodynamics (3 cr)
ME	527	Macroscopic Thermodynamics (3 cr)
ME	530	Elasticity (3 cr)
ME	532	Finite Elements (3 cr)
ME	534	Mechanics of Composite Materials (3 cr)
ME	540	Advanced Dynamics of Physical Systems (3 cr)
ME	556	Numerical Modeling in Fluid Mechanics (3 cr)
ME	574	Foundations of CAD (3 cr)
ME	581	Control Systems (3 cr)
MGTOP/STAT	516	Time Series (3 cr)

MSE	402	Polymeric Materials (3 cr)
MSE	513	Crystal Plasticity (3 cr)
MSE	530	Elasticity (3 cr)
MSE	534	Mechanics of Composite Materials (3 cr)
NATRS	431	Wildlife Nutrition (3 cr)
NATRS	556	Foraging Ecology of Herbivores (2 cr)
NATRS	594	Environmental and Natural Resources Issues and Ethics (3 cr)
NEUROSCI	520	Fundamentals of Neuroscience (4 cr)
NEUROSCI	526	Domestic and Exotic Animal Behavior (2 cr)
PHIL	207	Philosophy of Religion (3 cr)
PHIL	320	History of Ancient and Medieval Philosophy (3 cr)
PHIL	321	History of Modern Philosophy (3 cr)
PHIL	322	Nineteenth-century Philosophy (3 cr)
PHIL	350	Philosophy of Science (3 cr)
PHIL	401	Advanced Logic (3 cr)
PHIL	407	Seminar in Philosophy of Religion (3 cr)
PHIL	420	Contemporary Continental Philosophy (3 cr)
PHIL	421	Kant (3 cr)
PHIL	431	Aesthetics and Philosophy of Art (3 cr)
PHIL	442	Philosophy of Mind (3 cr)
PHIL	443	Philosophy of Language (3 cr)
PHIL	446	Metaphysics (3 cr)
PHIL	447	Theory of Knowledge (3 cr)
PHIL	460	Ethical Theory (3 cr)
PHIL	462	Women and Ethics (3 cr)
PHIL	470	Philosophy of Law (3 cr)
PHIL	472	Social and Political Philosophy (3 cr)
PHIL	501	Advanced Logic (3 cr)
PHIL	504	Special Topics in Philosophy (3 cr)
PHIL	507	Seminar in Philosophy of Religion (3 cr)
PHIL	510	Seminar in the History of Philosophy (3 cr)
PHIL	520	Seminar in Ethical Theory (3 cr)
PHIL	522	Seminar in Metaphysics (3 cr)
PHIL	524	Seminar in Epistemology (3 cr)
PHIL	530	Bioethics (2 cr)
PHIL	532	Seminar in Business Ethics (3 cr)
PHIL	535	Advanced Biomedical Ethics (3 cr)
PHIL	543	Philosophy of Language (3 cr)
PHIL	570	Philosophy of Law (3 cr)
PHYSICS	450	Introduction to Quantum Mechanics (3 cr)
PHYSICS	463	Introduction to Solid State and Materials Physics (3 cr)
PHYSICS	521	Classical Mechanics I (3 cr)
PHYSICS	534	Thermal and Statistical Physics II (3 cr)
PHYSICS	541	Electromagnetic Theory (3 cr)
PHYSICS	542	Electrodynamics (3 cr)
PHYSICS	550	Quantum Theory I (3 cr)
PHYSICS	551	Quantum Theory II (3 cr)
PHYSICS	552	Quantum Theory III (3 cr)
PHYSICS	561	Atomic and Molecular Physics (3 cr)
PHYSICS	563	Physics of the Solid State (3 cr)
PHYSICS	571	Methods of Theoretical Physics (3 cr)
PHYSICS	581	Advanced Topics (3 cr)
PL P	403	Advanced Cropping Systems (3 cr)
PL P	503	Advanced Cropping Systems (3 cr)
PL P	511	Viruses and Virus Diseases of Plants (4 cr)
PL P	513	Plant Nematology (4 cr)
PL P	514	Phytobacteriology (4 cr)
PL P	521	General Mycology (4 cr)
PL P	526	Advanced Fungal Biology (4 cr)
PL P	535	Molecular Genetics of Plant and Pathogen Interactions (3 cr)
PL P	551	Epidemiology and Management of Plant Diseases (3 cr)
POL S	405	Comparative Criminal Justice Systems (3 cr)
POL S	445	Public Personnel Administration (3 cr)
POL S	503	Research Methods in Political Science and Criminal Justice (3 cr)
POL S	505	Comparative Criminal Justice (3 cr)
POL S	516	Seminar on Law, Courts, and Judicial Politics (3 cr)
POL S	530	American Foreign Policy: Theories and Applications (3 cr)
POL S	531	Seminar in International Security (3 cr)
POL S	534	Seminar in Comparative Politics (3 cr)
POL S	541	Seminar in Evaluation Research (3 cr)
POL S	542	Proseminar in Administration, Justice, and Applied Policy Studies (3 cr)
PSYCH	412	Psychological Testing and Measurement (3 cr)
PSYCH	533	Adult Psychopathology (3 cr)
PSYCH	544	Medical Psychology: Psychological and Pharmacological Interventions (3 cr)
PSYCH	550	Social Psychology (3 cr)
PSYCH	574	Clinical and Experimental Biopsychology (3 cr)
PSYCH	575	Foundations of Neuropsychology (3 cr)
PSYCH	577	Behavioral Pharmacology (3 cr)
PSYCH	584	Sensory Bases of Behavior (3 cr)
RUSSIAN	101	First Semester (4 cr)
RUSSIAN	102	Second Semester (4 cr)
RUSSIAN	105	Elementary Conversation (1 cr)
RUSSIAN	203	Third Semester (4 cr)
RUSSIAN	204	Fourth Semester (4 cr)
RUSSIAN	205	Intermediate Conversation I (1 cr)
RUSSIAN	305	Intermediate Conversation II (1 cr)
RUSSIAN	321	Contemporary Russian Culture (3 cr)
RUSSIAN	361	Advanced Russian for the Professions (3 cr)
RUSSIAN	410	Russian Film (3 cr)
RUSSIAN	430	St. Petersburg (3 cr)
SOC	356	Sociology of Aging and the Life Course (3 cr)
SOC	367	Juvenile Justice and Corrections (3 cr)
SOIL SCI	101	Organic Gardening and Farming (3 cr)
SOIL SCI	360	World Agricultural Systems (3 cr)
SOIL SCI	414	Environmental Biophysics (2 cr)
SOIL SCI	415	Environmental Biophysics Laboratory (1 cr)
SOIL SCI	508	Environmental Spatial Statistics (3 cr)
SOIL SCI	514	Environmental Biophysics (2 cr)
SOIL SCI	521	Physical Chemistry of Soils (3 cr)
SOIL SCI	574	Remote Sensing and Geospatial Analysis (3 cr)
STAT	360	Probability and Statistics (3 cr)
STAT	412	Statistical Methods in Research I (3 cr)
STAT	422	Sampling Methods (3 cr)
STAT	508	Environmental Spatial Statistics (3 cr)
STAT	520	Statistical Analysis of Qualitative Data (3 cr)
STAT	522	Biostatistics and Statistical Epidemiology (3 cr)
STAT	533	Theory of Linear Models (3 cr)
STAT	535	Regression Analysis (3 cr)
STAT	536	Statistical Computing (3 cr)
STAT	544	Applied Stochastic Processes (3 cr)
STAT	565	Analyzing Microarray and Other Genomic Data (3 cr)
TCH LRN	520	Topics in Special Student Populations (V 1-4 cr)
VET CLIN	499	Special Problems (V 1-4 cr)
VET CLIN	587	Hospital Rotation (3 cr)
VET CLIN	592	Seminar (1 cr)
VET CLIN	600	Special Projects or Independent Study (V 1-18 cr)
VET MED	520	Veterinary Physiology 5
VET MED	526	Domestic and Exotic Animal Behavior (2 cr)
VET MED	545	General Pathology (3 cr)
VET MICR	499	Special Problems (V 1-4 cr)
VET MICR	592	Advances in Immunobiology (1 cr)
VET MICR	600	Special Projects or Independent Study V 1-18
VET PH	499	Special Problems (V 1-4 cr)
VET PH	600	Special Projects or Independent Study V 1-18
VIT ENOL	113	Introduction to Vines and Wines (3 cr)

VIT ENOL	313	Viticulture (3 cr)
VIT ENOL	413	Advanced Viticulture (3 cr)
VIT ENOL	422	Sensory Evaluation of Food and Wine (3 cr)
VIT ENOL	465	Wine Microbiology and Processing (3 cr)
VIT ENOL	466	Wine Microbiology and Processing Laboratory (1 cr)
VIT ENOL	496	Internship in a Winery (2 cr)
WOMEN ST	462	Women and Ethics (3 cr)

FACULTY

Charles A. Staben, President; Katherine G. Aiken, Interim Provost; Patricia Hartzell, Chair of the Faculty Senate (2013-14); Gail Eckwright, Secretary of the Faculty.

Special Designations

The date following a name indicates the beginning of service at the university.

Graduate faculty members are identified with a pound sign (#).

ABATZOGLOU, Crystal K.; 2010; Affiliate Assistant Professor of Environmental Science; Ph.D.; 2010; Clark University.

ABATZOGLOU, John T.; 2009; #Assistant Professor of Geography; Ph.D.; 2006; University of California Irvine.

ABDEL-RAHIM, Ahmed S.; 2002; #Associate Professor of Civil Engineering (P.E.); Ph.D.; 1998; Michigan State University.

ABO, Barbara B.; 1976; Extension Professor and Ada County Extension Educator (Family and Consumer Science/4-H Youth Development); M.S.; 1975; Iowa State University.

ABO, Hirotachi; 2006; #Associate Professor of Mathematics; Ph.D.; 2002; Saarland University.

ADAMS, Anne E.; 2008; #Assistant Professor of Curriculum and Instruction; M.A.; 1982; University of California Davis.

ADDLEMAN, R. Shane; 2013; Adjunct Faculty of Chemistry; Ph.D.; 1999; University of Idaho.

ADLER, David G.; 2010; Adjunct Faculty of Law; Director of the James A and Louise McClure Center for Public Policy Research; Ph.D.; 1982; University of Utah.

ADMASSU, Wudneh; 1992; #Professor of Chemical Engineering; Department Chair, Department of Chemical and Materials Engineering; Ph.D.; 1984; University Of Idaho.

AGENBROAD, Ariel L.; 2008; Assistant Extension Professor and Canyon County Extension Educator (Horticulture, Small Acreage); M.S.; 2007; University of Idaho.

AHMADZAHEH, Amin; 2000; #Associate Professor of Dairy Management; Ph.D.; 1998; Virginia Polytechnic Institute.

AIKEN, Katherine G.; 1984; #Professor of History; Interim Provost, University of Idaho; Ph.D.; 1980; Washington State University.

AIZEN, Elena M.; 2013; Adjunct Faculty of Geography; Ph.D.; 1986; Russian Academy of Sciences.

AIZEN, Vladimir; 2001; #Research Professor of Geography; Affiliate Professor of Environmental Science; Ph.D.; 1988; Russian Academy of Sciences.

AKUJUOBI, Cajetan; 1998; Adjunct Associate Professor of Electrical Engineering; Ph.D.; 1995; George Mason University.

ALBANO, Richard K.; 1991; Adjunct Assistant Professor of Physics; Ph.D.; 1989; University of California Los Angeles.

ALBERTSON-PLOUCHA, Helen; 2009; Senior Instructor of Law; Associate Dean of Administration and Students, College of Law; J.D.; 1997; Temple University.

ALBRECHT, Carol Padgham; 1989; #Associate Professor of Music (oboe, music history); Ph.D.; 2008; Kent State University.

ALESSA, Lilian; 2013; Professor of Resilient Landscapes; Ph.D.; 1998; University of British Columbia.

ALESSI, R. Samuel; 2001; #Adjunct Assistant Professor of Mechanical Engineering; Ph.D.; 1989; North Dakota State University.

ALEXANDER, David G.; 2013; Clinical Assistant Professor of Mechanical Engineering; Ph.D.; 2002; University of Idaho.

ALLEN, Richard G.; 1998; #Professor of Biological and Agricultural Engineering and of Civil Engineering (P.E.); Ph.D.; 1984; University of Idaho.

ALVAREZ, Juan M.; 2001; #Associate Professor of Entomology; Ph.D.; 2000; University of Florida.

ALVES-FOSS, James; 1991; #Professor of Computer Science; Ph.D.; 1991; University of California Davis.

AMADOR, Julie M.; 2012; Assistant Professor of Curriculum and Instruction; Ph.D.; 2010; University of Nevada Reno.

AMADOR, Paul V.; 2014.

AMADOR, Paul V.; 2014; Affiliate Faculty of Organizational Sciences; Ph.D.; 2011; University of Nevada Reno.

ANDERS, Paul J.; 2003; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 2002; University of Idaho.

ANDERSON, Cort L.; 2002; #Assistant Research Professor of Fish and Wildlife Sciences; Affiliate Assistant Professor of Forest Resources; Ph.D.; 1991; Yale University.

ANDERSON, Erik T.; 1987; #Extension Professor of Agricultural Information; Director of Agricultural Communication; Ph.D.; 1997; University of Idaho.

ANDERSON, Janice Capel; 1985; #Professor of Philosophy and Religious Studies; Ph.D.; 1985; University of Chicago.

ANDERSON, John W.; 2008; #Assistant Professor of Virtual Technology and Design; M.S.; 2006; University of Idaho.

ANDERSON, Mark D.; 1982; Professor of Law; J.D.; 1977; University of Chicago.

ANDERSON, Michael J.; 1989; #Professor of Mechanical Engineering; Ph.D.; 1989; Washington State University.

ANDERSON, Miranda S.; 2007; Assistant Professor of Interior Design; M.Arch.; 1999; University of Idaho.

ANTANURI, Nogista; 2013; Adjunct Faculty of Art and Architecture; B.S.; 2010; Institut Teknologi Bandung.

ANZALDO-GONZALEZ, Demetrio; 2007; Assistant Professor of Modern Languages & Cultures (Spanish); Ph.D.; 2001; University of California Irvine.

APA, Anthony Dean; 2005; Adjunct Assistant Professor; Ph.D.; 1998; University of Idaho.

APOSTOL, Kent G.; 2011; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1993; University of Alberta.

ARMPRIEST, Diane E.; 2001; #Associate Professor of Architecture; M.Arch.; 1997; University of Oregon.

ASSEFI, Touraj; 1995; #Professor of Electrical Engineering; Ph.D.; 1973; University of Southern California.

ASTON, D. Eric; 2001; #Associate Professor of Chemical Engineering; Affiliate Associate Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; 2001; University of Washington.

ATKINSON, David A.; 1996; #Adjunct Assistant Professor of Chemistry; Ph.D.; 1992; Washington State University.

ATKINSON, David H.; 1989; #Professor of Electrical Engineering; Ph.D.; 1989; Washington State University.

ATTEBURY, Ramirose I.; 2008; Reference/Instruction Librarian with rank of Assistant Professor; M.A.; 2007; Central Washington University.

AUSTIN, Bryan S.; 2012; Assistant Professor of Leadership and Counseling; Ph.D.; 2012; Michigan State University.

AUSTIN, Gary; 1991; #Associate Professor of Landscape Architecture; M.L.A.; 1981; California State Polytechnic.

AUTUMN, Kellar; 2009; Adjunct Professor of Biological Sciences; Ph.D.; 1995; University of California Berkeley.

AWWAD-RAFFERTY, Rula Z.; 1998; #Associate Professor of Interior Design; Affiliate Associate Professor of Environmental Science; Ph.D.; 1995; Washington State University.

AY, Suat U.; 2007; #Assistant Professor of Electrical and Computer Engineering; Ph.D.; 2005; University of Southern California.

AYCRIGG, Jocelyn L.; 2010; Affiliate Assistant Professor of Environmental Science, Geography, and Fish and Wildlife Sciences; Ph.D.; 2009; University of Idaho.

AYDOGAN, Fatih; 2012; Assistant Professor of Mechanical Engineering; Ph.D.; 2008; Penn State University.

AYERS, Arthur R.; 2006; Adjunct Professor of Biological Sciences; Ph.D.; 1975; University of Colorado.

BAGGS, Belle; 2012; Clinical Assistant Professor of Movement Sciences; M.F.A.; 2011; University of Utah.

BAILEY, J. Franklin; 1984; Affiliate Instructor in Materials Science and Engineering and Metallurgical Engineering; Supervisor, Electron Microscopy Center; M.S.; 1971; Texas A&M University.

BAILEY, Jeffrey J.; 1991; #Professor of Business; Ph.D.; 1991; University of Akron.

BAIRD, Lynn N.; 1974; Head, Access Services, University Library, with rank of Professor; Dean, University Library; M.P.A.; 1979; University of Idaho.

BAKER, Leslie L.; 2013; #Adjunct Assistant Professor of Geological Sciences; Ph.D.; 1996; Brown University.

BAKER, R. Jacob; 1993; #Adjunct Assistant Professor of Electrical Engineering; Ph.D.; 1993; University of Nevada Reno.

BAKER, Russell T.; 2013; #Clinical Assistant Professor of Movement Sciences; D.A.T.; 2013; University of Idaho.

BAKER, Sarah D.; 2009; Assistant Extension Professor and Extension Educator (Animal Science); M.S.; 2005; University of Idaho.

BAKER-EVELETH, Lori; 2003; #Associate Professor of Information Systems; Ph.D.; 2003; Washington State University.

BALDUS, Ronald J.; 1981; Adjunct Assistant Professor of Chemical Engineering; Ph.D.; 1979; University of Idaho.

BALEMBA, Onesmo B.; 2008; #Assistant Professor of Medical History/Biological Sciences; Ph.D.; 2001; Royal Veterinary and Agricultural University.

BANERJEE, Somaditya; 2013; Assistant Professor of History; Ph.D.; 2013; University of British Columbia.

BANKS, Anna; 1989; #Associate Professor of Theatre Arts; Ph.D.; 1989; University of Southern California.

BANKS, John E.; 2010; Adjunct Associate Professor of Plant, Soil and Entomological Sciences; Ph.D.; 1997; University of Washington.

BARANNYK, Lyudmyla; 2007; Assistant Professor of Mathematics; Ph.D.; 2003; New Jersey Institute of Technology.

BARBOUR, James D.; 1996; #Associate Professor of Entomology; Ph.D.; 1992; North Carolina State University.

BARLOW, Fred D. III; 2006; #Associate Professor of Electrical and Computer Engineering; Department Chair, Department of Electrical & Computer Engineering; Ph.D.; 1999; Virginia Polytechnic Institute.

BARNES, Gregory O.; 2002; Adjunct Associate Professor of Electrical and Computer Engineering; M.S.; 1990; University of Idaho.

BARNES, Gwendolyn; 2008; #Assistant Research Professor of Physics; Ph.D.; 2007; University of Arizona.

BARNES, Jason W.; 2008; #Assistant Professor of Physics; Affiliate Faculty of Geological Sciences; Ph.D.; 2004; University of Arizona.

BARNES, Justin J.; 2012; Assistant Professor of Journalism and Mass Media; Ph.D.; 2009; University of Idaho.

BARNES, Kim M.; 2000; #Associate Professor of English; M.F.A.; 1995; University of Montana.

BARNEY, Danny L.; 1988; #Extension Professor of Horticulture; Superintendent of the Sandpoint Research and Extension Center; Ph.D.; 1987; Cornell University.

BARROWS, Frederic T.; 2006; Adjunct Professor of Animal and Veterinary Sciences; Ph.D.; 1987; Iowa State University.

BART, Gwendolyn D.; 2008; Adjunct Assistant Professor of Physics; Affiliate Assistant Professor of Geology; Ph.D.; 2007; University of Arizona.

BARTOLINO, James R.; 2005; Adjunct Assistant Professor of Geological Sciences; Ph.D.; 1991; Texas Technology University.

BARTON, Benjamin K.; 2008; #Assistant Professor of Psychology and Communication Studies; Ph.D.; 2005; University of Alabama.

BATDORF, James A.; 1989; #Adjunct Assistant Professor of Chemical Engineering; Ph.D.; 1988; University of Idaho.

BATHURST, Pamela G.; 1997; #Associate Professor of Music (voice); M.Mus.; 1978; University of Michigan.

BAUMGAERTNER, Bert O.; 2013; #Assistant Professor of Philosophy; Ph.D.; 2013; University of California Davis.

BAXTER, Colden V.; 2013; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 2002; Oregon State University.

BAYOMY, Fouad M.; 1991; #Professor of Civil Engineering (P.E.); Ph.D.; 1982; Ohio State University.

BEARD, D. Benjamin; 1987; Professor of Law; J.D.; 1982; Case Western Reserve University.

BECHINSKI, Edward J.; 1982; #Extension Professor of Entomology; Ph.D.; 1982; Iowa State University.

BECKER, Devin; 2010; Digital Initiatives and Scholarly Communications Librarian with rank of Assistant Professor; M.L.S.; 2010; Indiana University.

BECKER, Penny A.; 2012; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 2010; University of Petoria.

BEISER, Michael E.; 1983; Affiliate Instructor in Recreation; Coordinator, Outdoor Programs; B.A.; 1983; Washington State University.

BELL, Susan M.; 1984; Extension Professor and Ada County Extension Educator (Horticulture); M.A.; 1985; Oregon State University.

BELLMORE, J. Ryan; 2013; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 2011; Idaho State University.

BENDER, Donald A.; 2002; Adjunct Professor of Conservation Social Sciences; Ph.D.; 1984; Purdue University.

BENEFIEL, Arthur N.; 2005; Adjunct Instructor of Forest, Rangeland, and Fire Sciences; M.S.; 1984; University of Washington.

BENNETT, Denise J.; 2006; Senior Instructor of Journalism and Mass Media; M.A.; 2006; Eastern Washington University.

BENZ, Terressa A.; 2012; Assistant Professor of Sociology; Ph.D.; 2011; University of California Irvine.

BERGMAN, Leah; 2000; #Associate Professor of Physics; Ph.D.; 1995; North Carolina State University.

BERRY, Ray A.; 1981; #Adjunct Professor of Mechanical Engineering; Ph.D.; 1992; University of Idaho.

BERVEN, Christine A.; 2002; #Associate Professor of Physics; Ph.D.; 1995; University of Oregon.

BESS, John D.; 2012; Adjunct Faculty of Mechanical Engineering; Ph.D.; 2008; University of Utah.

BEYERLEIN, Steven W.; 1987; #Professor of Mechanical Engineering; Ph.D.; 1987; Washington State University.

BILDERBACK, Barry T.; 2008; #Assistant Professor of Music History; Ph.D.; 2001; University of Oregon.

BIRD, R. Kenton; 1999; Associate Professor of Journalism and Mass Media; Director, School of Journalism and Mass Media; Ph.D.; 1999; Washington State University.

BISBEE, Yolanda J.; 2007; Affiliate Instructor of American Indian Studies; M.Ed.; 2005; University of Idaho.

BITTERWOLF, Thomas E.; 1988; #Professor of Chemistry; Ph.D.; 1976; West Virginia University.

BJORNBERG, David; 1996; #Adjunct Assistant Professor of Biological and Agricultural Engineering; Ph.D.; 1995; University of Iowa.

BLACKMAN, James R.; 1996; Adjunct Professor of Biological Sciences; M.D.; 1969; University of Iowa.

BLEDSOE, Gleyn E.; 2010; Adjunct Professor of Agricultural Economics & Rural Sociology; Ph.D.; 1995; University of Washington.

BLEW, Mary C.; 1994; #Professor of English; Ph.D.; 1969; University of Missouri.

BLEW, Roger D.; 2002; Adjunct Assistant Professor of Environmental Science; Ph.D.; 1991; University of Calgary.

BOARDMAN, Richard D.; 2013; Adjunct Faculty of Mechanical Engineering; Ph.D.; 1990; Brigham Young University.

BOCKELMAN, Harold E.; 1987; Adjunct Assistant Professor of Plant Science; Ph.D.; 1974; University of California Davis.

BODINE, Timothy N.; 2009; Adjunct Assistant Professor of Animal and Veterinary Science; Ph.D.; 2004; Oklahoma State University.

BOHACH, Carolyn H.; 1990; #Professor of Biological Sciences; Ph.D.; 1985; University of Minnesota.

BOHACH, Gregory A.; 1988; #Professor of Biological Sciences; Ph.D.; 1985; West Virginia University.

BOHLSCHEID, Jeffri C.; 2007; #Assistant Professor of Food Science; Ph.D.; 2005; Washington State University.

BOISEN, Monte B. Jr.; 2001; #Professor of Mathematics; Department Chair, Department of Mathematics; Ph.D.; 1970; University of Nebraska.

BOITANI, Luigi; 2000; Adjunct Professor of Fish and Wildlife Sciences; Laurea (Doctor); 1970; Rome.

BOLDEN, Bruce M.; 1997; Senior Instructor in Computer Science; M.S.; 1987; University of California Davis.

BOLIN, Mary K.; 1986; Head, Technical Services, University Library, with rank of Professor; M.L.S.; 1981; University of Kentucky.

BOLL, Jan; 1996; #Professor of Biological and Agricultural Engineering (Environmental Water Quality); Director, Environmental Science, Water Resources, and Professional Science Masters Programs; Ph.D.; 1995; Cornell University.

BOND, Leonard; 2005; Adjunct Professor of Computer Science and Physics; Ph.D.; 1978; City University.

BONMAN, J. Michael; 2003; Adjunct Professor of Plant, Soil and Entomological Sciences; Ph.D.; 1980; Washington State University.

BORGIA, Daniel J.; 2013; Professor of Finance; Associate Dean, College of Business and Economics; Ph.D.; 1991; Kent State University.

BORING, Ronald; 2011; Adjunct Faculty of Psychology; Ph.D.; 2004; Carleton University.

BORIS, Marta; 2012; Assistant Professor of Modern Languages and Cultures; Ph.D.; 2012; University of Alabama.

BORRELLI, Kristy A.; 2013; Research Assistant Professor of Plant, Soil, and Entomological Sciences; Ph.D.; 2012; Washington State University.

BOSCHETTI, Luigi; 2012; Associate Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 2005; Politecnico di Milano.

BOSQUE-PEREZ, Nilsa A.; 1997; #Professor of Entomology; Affiliate Associate Professor of Environmental Science; Ph.D.; 1985; University of California Davis.

BRADY, Patricia A.; 1983; Adjunct Clinical Professor of Medical Science; M.D.; 1976; Ohio State University.

BRANDT, Elizabeth B.; 1988; Professor of Law; J.D.; 1982; Case Western Reserve University.

BRANEN, Joshua R.; 2007; Affiliate Assistant Professor of Food Science and Toxicology; Ph.D.; 2006; University of Idaho.

BRAUNS, Eric B.; 2005; #Associate Professor of Chemistry; Affiliate Associate Professor of Neuroscience; Ph.D.; 2001; University of South Carolina.

BREGITZER, Phillip; 1990; Adjunct Assistant Professor of Plant Science; Ph.D.; 1989; University of Minnesota.

BREHM, Matthew T.; 2006; Associate Professor of Architecture; M.Arch.; 1998; University of Oregon.

BRIDY, Annemarie; 2007; Associate Professor of Law; J.D.; 2004; Temple University.

BRIGHAM, Donald H. II; 1991; Lecturer in Landscape Architecture; B.L.A.; 1979; University of Idaho.

BROOKS, Erin S.; 2012; Assistant Professor of Biological and Agricultural Engineering; Ph.D.; 2003; University of Idaho.

BROOKS, Jeffrey S.; 2013; #Professor of Leadership and Counseling; Department Chair, Department of Leadership and Counseling; Ph.D.; 2003; University of Missouri.

BROOKS, Melanie C.; 2013; #Assistant Professor of Curriculum and Instruction; Ph.D.; 2009; Florida State University.

BROOKS, Randall H.; 1991; #Extension Professor and Clearwater County Extension Educator (Forestry and Agriculture); Ph.D.; 1991; Michigan Technology University.

BROOKS, Thomas M.; 2006; Adjunct Associate Professor of Fish and Wildlife Sciences; Ph.D.; 1998; University of Tennessee.

BROWN, Bradford D.; 1975; #Extension Professor of Soil Science and Crop Management; Ph.D.; 1985; Utah State University.

BROWN, Celeste J.; 2003; #Affiliate Associate Professor of Biological Sciences and Bioinformatics and Computational Biology; Ph.D.; 1989; University of Georgia.

BROWN, Helen; 2011; Senior Instructor of Movement Sciences; Ph.D.; 1983; University of North Carolina.

BROWN, Jack; 1992; #Professor of Plant Breeding and Genetics; Ph.D.; 1988; St Andrews.

BROWN, Katie N.; 2013; Assistant Professor of Family and Consumer Sciences; Ph.D.; 2012; Utah State University.

BROWN, Peter M.; 2004; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 2004; Colorado State University.

BRUCK, Hugh A.; 1995; Adjunct Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; 1994; California Institute of Technology.

BRUMBAUGH, Gordon W.; 2013; #Associate Professor of Animal and Veterinary Science; Director, Caine Veterinary Teaching Center; Ph.D.; 1986; University of Illinois.

BRUNSON, Mark W.; 2013; Adjunct Faculty of Forest, Rangeland, and Fire Sciences; Ph.D.; 1991; Oregon State University.

BRYANT, Patrick S.; 1991; Adjunct Assistant Professor of Chemical Engineering; Ph.D.; 1993; University of Idaho.

BUDWIG, Ralph S.; 1985; #Professor of Mechanical Engineering; Affiliate Faculty of Civil Engineering; Acting Director, Boise Engineering, College of Engineering; Ph.D.; 1985; Johns Hopkins University.

BUEHLER, David M.; 2009; Adjunct Assistant Professor of Computer Science and Electrical and Computer Engineering; Ph.D.; 2004; University of Idaho.

BUFFENBARGER, James R.; 2000; Adjunct Associate Professor of Computer Science; Ph.D.; 1990; University of California Davis.

BUFFINGTON, John M.; 2013; Adjunct Faculty of Civil Engineering; Ph.D.; 1998; University of Washington.

BUKVICH, Daniel J.; 1978; #Distinguished Professor of Music (percussion, music theory, jazz choirs); M.Mus.; 1978; University of Idaho.

BULGIN, Marie S.; 1977; Professor of Veterinary Medicine; D.V.M.; 1967; University of California Davis.

BURDGE, Julia; 2009; Adjunct Associate Professor of Chemistry; Ph.D.; 1994; University of Idaho.

BURNETT, Donald L.; 2002; Professor of Law; Interim President, University of Idaho; LL.M.; 1990; University of Virginia.

BURTIS, Melanie A.; 2006; Adjunct Assistant Professor of Curriculum and Instruction; Ph.D.; 2005; University of Idaho.

BURTON, Damon D.; 1983; #Professor of Physical Education; Ph.D.; 1983; University of Illinois.

BUTT, Darryl P.; 2011; Adjunct Professor of Chemical and Materials Engineering; Ph.D.; 1991; Penn State University.

BUZBAS, Erkan O.; 2013; Assistant Professor of Statistical Science; Ph.D.; 2009; University of Idaho.

BYERS, John A.; 1980; #Professor of Zoology; Affiliate Professor of Neuroscience; Ph.D.; 1980; University of Colorado.

CADWELL, Jillian R.; 2013; Adjunct Faculty of Civil Engineering; Ph.D.; 2008; University of Colorado.

CAIN, Kenneth D.; 1999; #Professor of Fishery Resources; Ph.D.; 1997; Washington State University.

CAISLEY, Robert C.; 2001; #Associate Professor of Theatre Arts; M.F.A.; 1993; Illinois State University.

CAMERON, Kelly; 1989; Adjunct Assistant Professor of Electrical Engineering; Ph.D.; 1989; University of Idaho.

CAMP, Stacey L.; 2008; #Assistant Professor of Anthropology; Ph.D.; 2008; Stanford University.

CAMPBELL, Alton G.; 1983; #Professor of Conservation Social Sciences; Associate Dean, College of Graduate Studies; Ph.D.; 1983; University of North Carolina.

CANFIELD-DAVIS, Kathryn M.; 2006; #Associate Professor of Leadership and Counseling; Ph.D.; 1996; Gonzaga University.

CANNON, John G.; 2008; #Assistant Professor of Curriculum and Instruction; Ph.D.; 2005; Virginia Polytechnic Institute.

CANZONERI, Beth R.; 2013; Reference and Instruction Resident Librarian with rank of Instructor; M.L.I.S.; 2012.

CAPLAN, Allan B.; 1992; #Associate Professor of Biological Sciences; Affiliate Associate Professor of Environmental Science; Ph.D.; 1980; University of Iowa.

CARLEY, Caroline D.; 2004; Adjunct Instructor of Anthropology; M.A.; 1979; University of Idaho.

CARLISLE, Juliet E.; 2013; #Assistant Professor of Political Science; Ph.D.; 2007; University of California Santa Barbara.

CARLSON, Lisa J.; 1993; #Professor of Political Science; Ph.D.; 1994; Rice University.

CARNEY, Kevin P.; 1995; Adjunct Assistant Professor of Chemistry; Ph.D.; 1987; University of Vermont.

CARTER, Diane L.; 2012; Senior Instructor of Psychology and Communication Studies; Ph.D.; 2011; Washington State University.

CARTER, Val. G.; 2012; Senior Instructor of Art and Design; M.F.A.; 1997; University of Arizona.

CASANOVES, Fernando; 2006; Adjunct Associate Professor of Statistical Science; Ph.D.; 2004; University of Cordoba.

CECIL, L. DeWayne; 1998; Adjunct Instructor in Geology and Geological Engineering; M.S.; 1990; Drexel University.

CELAYA, Lori; 2011; Assistant Professor of Spanish; Ph.D.; 2008; University of Tennessee.

CHAE, Myung-Hee; 2007; #Assistant Professor of Family and Consumer Sciences; Ph.D.; 2006; Virginia Polytechnic Institute.

CHAHINE, Mireille; 2003; #Associate Professor, Extension Dairy Specialist; Ph.D.; 2003; University of Minnesota.

CHAMBERS, Ian D.; 2008; #Assistant Professor of History; Ph.D.; 2006; University of California Riverside.

CHANDLER, Steven R.; 1981; #Professor of English; Affiliate Professor of Neuroscience; Director, MA-TESL; Ph.D.; 1979; University of Texas.

CHANG, Kevin; 2013; #Assistant Professor of Civil Engineering; Ph.D.; 2005; University of Washington.

CHAPMAN, Erin; 2010; #Assistant Professor of Family and Consumer Sciences; Ph.D.; 2009; Iowa State University.

CHAPPELL, Mark A.; 2013; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 1977; Stanford University.

CHARIT, Indrajit; 2007; #Assistant Professor of Materials Science and Engineering; Ph.D.; 2004; University of Missouri.

CHARLIER, Henry A. Jr.; 2006; Adjunct Assistant Professor of Biological Sciences; Ph.D.; 1997; Medical College of Wisconsin.

CHASE, Jennifer R.; 2006; Adjunct Professor of Biological Sciences; Ph.D.; 1998; Yale University.

CHEN, Jianli; 2007; #Assistant Professor of Wheat Breeding, Genetics and Genomics; Ph.D.; 2005; Virginia Polytechnic Institute.

CHEN, Jie; 2011; #Distinguished Professor of Political Science; Dean, College of Graduate Studies; UI Director, Confucius Institute; Ph.D.; 1991; Washington State University.

CHEW, Boon; 2011; Affiliate Professor of Food Sciences; Ph.D.; 1978; Purdue University.

CHEYNEY, Charles C.; 1985; Extension Professor and Butte County Extension Educator; M.S.; 1978; University of California Davis.

CHILDERS, Susan E.; 2003; #Assistant Professor of Geology; Ph.D.; 1997; University of Connecticut.

CHITTARO, Paul M.; 2011; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 2005; University of Windsor.

CHRISTIAN, Jerry D.; 1998; Adjunct Professor of Chemistry; Ph.D.; 1965; University of Washington.

CHRISTIANSON, David A.; 2013; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 2008; Montana State University.

CHUNG, Woodam; 2010; Adjunct Associate Professor of Plant, Soil and Entomological Sciences; Ph.D.; 2002; Oregon State University.

CHUNG, Yunhyung; 2007; Assistant Professor of Business; Ph.D.; 2007; Rutgers University.

CHURCH, James A.; 1987; #Extension Professor and Idaho County Extension Educator (Beef); M.S.; 1982; University of Idaho.

CLARK, Douglas W.; 2006; Adjunct Instructor of Curriculum and Instruction; B.S.; 1990; Oklahoma State University.

CLARK, Ken W.; 1999; Adjunct Assistant Professor of Religious Studies; Ph.D.; 1997; University of Idaho.

CLARK, Patrick E.; 2012; Adjunct Faculty of Forest, Rangeland, and Fire Sciences; Ph.D.; 1996; Oregon State University.

CLARK, William H.; 1989; Adjunct Assistant Professor of Entomology; M.S.; 1972; University of Nevada Reno.

CLAUSSEN, Cathryn L.; 2010; Adjunct Associate Professor in Law; J.D.; 1992; Georgetown University.

CLAYTON, Lydia A.; 2009; Assistant Extension Professor and Nez Perce County Extension Educator (Horticulture and Small Farms); M.S.; 2008; University of Idaho.

CLAYTON, Stephen R.; 2004; Adjunct Assistant Professor of Biological and Agricultural Engineering; Ph.D.; 2002; University of Idaho.

CLEMENT, Stephen L.; 1986; Adjunct Professor of Entomology; Ph.D.; 1976; University of California Davis.

CLEVELEY, C. Brian; 1991; #Senior Instructor of Virtual Technology and Design; Program Coordinator, Virtual Technology and Design; M.Arch.; 1986; University of Idaho.

CLIFTON, Amy E.; 2003; Adjunct Assistant Professor of Geological Sciences; Ph.D.; 2000; Rutgers University.

CLOUD, Joseph G.; 1977; #Professor of Zoology; Interim Director, WWAMI Medical Program; Ph.D.; 1974; University of Wisconsin.

COATS, Eric R.; 2006; #Associate Professor of Civil Engineering (P.E.) and; Ph.D.; 2005; Washington State University.

COGLIATI, Joshua; 2011; Adjunct Faculty of Nuclear Engineering; Ph.D.; 2010; Idaho State University.

COHEN, Jessica; 2008; #Assistant Professor of Mathematics Education; Ph.D.; 2008; Oregon State University.

COHEN, Rajal G.; 2012; Assistant Professor of Psychology and Communication Studies; Ph.D.; 2008; Penn State University.

COLE, David N.; 1980; Adjunct Professor of Conservation Social Sciences; Ph.D.; 1977; University of Oregon.

COLE, Douglas G.; 1998; #Professor of Biological Sciences; Ph.D.; 1990; Washington State University.

COLEMAN, Mark; 2008; #Associate Professor and Director of the Intermountain Forest Tree Nutrition Cooperative; Ph.D.; 1988; University of Washington.

CONGLETON, James L.; 1980; #Professor of Fishery Resources; Assistant Leader of Idaho Cooperative Fish and Wildlife Research Unit; Ph.D.; 1970; University of California San Diego.

CONNELLY, John W.; 1987; #Adjunct Associate Professor of Fish and Wildlife Sciences; Ph.D.; 1982; Washington State University.

CONNOLE, Heidi L.; 2006; #Assistant Professor of Marketing; Ph.D.; 2005; Washington State University.

CONNOR, William P.; 2003; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 2001; University of Idaho.

CONNORS, James J.; 2008; #Associate Professor of Agricultural and Extension Education; Department Chair, Department of Agricultural and Extension Education; Ph.D.; 1992; Michigan State University.

CONTE DE LEON, Daniel F.; 2013; #Assistant Professor of Computer Science; Ph.D.; 2006; University of Idaho.

COOK, Stephen P.; 1999; #Associate Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1985; North Carolina State University.

COPELAND, Timothy S.; 2013; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 2004; Virginia Polytechnic Institute.

CORDON, Daniel A.; 2013; #Clincal Assistant Professor of Mechanical Engineering; Ph.D.; 2010; University of Idaho.

CORRY, Shauna J.; 2001; #Associate Professor of Architecture; Interior Design Program Chair; Ph.D.; 2000; Washington State University.

COSENS, Barbara; 2004; #Associate Professor of Law; L.L.M.; 2003; Lewis & Clark College.

COUTURE, Wendy; 2010; Associate Professor of Law; J.D.; 2003; Southern Methodist University.

COX, David F.; 2002; #Adjunct Professor of Electrical and Computer Engineering; Ph.D.; 1974; Utah State University.

CRAIG, Traci Y.; 2002; #Associate Professor of Psychology; Department Chair, Department of Psychology and Communication Studies; Ph.D.; 2002; Purdue University.

CRANE, Kelly K.; 2009; #Assistant Professor and Extension Specialist of Range Management; Ph.D.; 2002; University of Wyoming.

CRAWFORD, Anthony L.; 2011; Adjunct Faculty of Mechanical Engineering; Ph.D.; 2010; Idaho State University.

CRAWFORD, Douglas C.; 1999; Adjunct Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; 1991; University of Michigan.

CREPEAU, John C.; 1994; #Professor of Mechanical Engineering; Department Chair, Department of Mechanical Engineering; Ph.D.; 1991; University of Utah.

CRONK, Frank A.; 1972; #Professor of Art and Design; M.F.A.; 1972; University of Idaho.

CROOK, Harold D.; 2002; Adjunct Instructor of American Indian Studies.

CROOKSTON, Nicholas L.; 1978; Adjunct Professor of Forest, Rangeland, and Fire Sciences; M.S.; 1977; University of Idaho.

CROSS, Kelly L.; 2006; Adjunct Instructor of Leadership and Counseling; Ph.D.; 2005; Boise State University.

CSESZKO, Ferenc P.; 2003; #Associate Professor of Music; D.Mus.; 2000; University of Wisconsin.

CURRY, Stacie L.; 2006; Adjunct Instructor of Leadership and Counseling; Ed.D.; 2000; University of La Verne.

CUSHMAN, Samuel A.; 2011; Adjunct Professor of Plant, Soil and Entomological Sciences; Ph.D.; 2003; University of Massachusetts.

DACEY, Raymond; 1984; #Professor of Business and of Statistical Science; Affiliate Professor of Philosophy; Ph.D.; 1970; Purdue University.

DAKINS, Maxine E.; 1994; #Professor of Environmental Science; Ph.D.; 1994; SUNY at Syracuse.

DALEY LAURSEN, Steven B.; 2002; Professor of Forest, Rangeland, and Fire Sciences and Conservation Social Sciences; Ph.D.; 1984; University of Idaho.

DALTON, Joseph C.; 2000; #Associate Professor of Animal Science; Ph.D.; 1999; Virginia Polytechnic Institute.

DANDURAND, Louise-Marie; 2013; Affiliate Faculty of Plant, Soil, and Entomological Sciences; Ph.D.; 1990; University of California Riverside.

DARRAGH, Janine J.; 2013; #Assistant Professor of Curriculum and Instruction; Ph.D.; 2010; Washington State University.

DATTA, Somantika; 2010; #Assistant Professor of Mathematics; Ph.D.; 2007; University of Maryland.

DAVIS, Anthony S.; 2007; #Assistant Professor of Native Plant Regeneration and Silviculture; Department Head, Department of Forest, Rangeland, and Fire Sciences; Director, Center for Forest Nursery and Seedling Research; Ph.D.; 2006; Purdue University.

DAVIS, Tracy L.; 2008; #Assistant Professor of Animal and Veterinary Sciences (Reproduction Physiology); Ph.D.; 2004; Ohio State University.

DAY, H. Michael; 2013; Adjunct Faculty of Curriculum and Instruction; Ph.D.; 1981; University of Idaho.

DE CLERCK, Fabrice A.J.; 2009; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 2004; University of California Davis.

DE CLERCK-FLOATE, Rosemarie; 2003; Adjunct Associate Professor of Plant, Soil and Entomological Sciences; Ph.D.; 1991; Northern Arizona University.

DE HARO MARTI, Mario E.; 2007; Assistant Extension Professor and Gooding County Educator (Environmental Sci/CAFO); M.S.; 2007; University of Idaho.

DEAN, Adam J.; 2010; Adjunct Assistant Professor of Mechanical Engineering; Ph.D.; 2008; Penn State University.

DENNIS, Brian C.; 1981; #Professor of Wildlife Resources and Statistical Science; Affiliate Professor of Bioinformatics and Computational Biology; Ph.D.; 1982; Penn State University.

DERINGER, Nancy; 2008; #Assistant Professor of Family Economics and Family Studies; Ph.D.; 2005; University of Idaho.

DEVADOSS, Stephen; 1992; #Professor of Agricultural Economics; Ph.D.; 1985; Iowa State University.

DEYASI, Marco; 2010; #Assistant Professor of Art and Design; Ph.D.; 2007; Duke University.

DEYOUNG, Edwin J.; 2004; Affiliate Instructor of Geography; M.S.; 1996; Montana State University.

DEZZANI, Raymond J.; 2004; #Assistant Professor of Geography; Affiliate Faculty of Statistics; Ph.D.; 1996; University of California Riverside.

DI PASQUO, Mercedes; 2010; Adjunct Associate Professor of Geological Sciences; Ph.D.; 1999; University of Buenos Aires.

DICKIN, D. Clark; 2006; #Assistant Professor of Exercise Science; Ph.D.; 2002; Oregon State University.

DICKOW, Robert H.; 1984; #Associate Professor of Music (horn, theory, composition); Ph.D.; 1979; University of California Berkeley.

DIEBEL, Penelope L.; 1999; Adjunct Associate Professor of Agricultural Economics; Ph.D.; 1990; Virginia Polytechnic Institute.

DILLION, Lee B.; 2001; Instructor of Law; Interim Center Executive Officer, Boise; J.D.; 1979; University of Chicago.

DIXON, Raymond; 2011; Assistant Professor of Curriculum and Instruction; Ph.D.; 2010; University of Illinois.

DOEBELI, Michael W.; 2005; Adjunct Associate Professor of Biological Sciences; Ph.D.; 1992; University of Basel.

DOLECHECK, Suzann; 2013; Extension Assistant Professor and Extension Educator; M.S.; 1987; University of Minnesota.

DOLNY, Dennis G.; 1984; #Professor of Exercise Science; Ph.D.; 1985; Kent State University.

DONELICK, Margaret Burke; 1998; Adjunct Assistant Professor of Geology and Geological Engineering; Ph.D.; 1991; Dalhousie University.

DONELICK, Raymond A.; 1998; Adjunct Assistant Professor of Geology and Geological Engineering; Ph.D.; 1988; Rensselaer Polytechnic.

DONOHOE, Gregory W.; 2002; #Associate Professor of Electrical and Computer Engineering; Chair, Department of Computer Science; Ph.D.; 1989; University of New Mexico.

DOUGHERTY, Richard H.; 2011; Adjunct Professor of Food Sciences; Ph.D.; 1970; North Carolina State University.

DOUMIT, Matthew E.; 2008; #Professor of Animal and Veterinary Sciences (Meat Specialist); Ph.D.; 1994; Michigan State University.

DOYLE, J. Casey; 2011; #Assistant Professor of Art and Design; M.F.A.; 2007; Ohio State University.

DREW, Mark L.; 2011; Adjunct Faculty of Fish and Wildlife Sciences; D.V.M.; 1987; University of Minnesota.

DROWN, David C.; 1980; #Associate Professor of Chemical Engineering; Ph.D.; 1975; University of Idaho.

DROWN, Stephen R.; 1994; #Professor of Landscape Architecture; Affiliate Professor of Architecture and Environmental Science; Program Coordinator, Landscape Architecture; M.L.A.; 1974; State University of New York (SUNY).

DUGAN, Frank M.; 2008; Adjunct Associate Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1992; Washington State University.

DUMROESE, Kasten R.; 2002; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1996; University of Idaho.

DUVALL, Steven F.; 2007; #Assistant Professor of Leadership and Counseling; Ph.D.; 1990; University of Kansas.

DYAR, Melinda D.; 2000; Adjunct Associate Professor of Geological Sciences; Ph.D.; 1985; Massachusetts Institute of Technology (MIT).

DYE, Lorie; 1994; Extension Professor and Jefferson County Extension Educator (Family Relations); M.S.; 1991; Brigham Young University.

DYRE, Brian P.; 1996; #Associate Professor of Psychology; Affiliate Associate Professor of Neuroscience; Ph.D.; 1993; University of Illinois.

EAGLEWOMAN, Angelique A.; 2008; Associate Professor of Law; L.L.M.; 2004; University of Tulsa.

EATON, Michelle M.; 2008; Affiliate Assistant Professor of Family and Consumer Sciences; M.S.; 2000; Kansas State University.

EBERHARTER-MAKI, Elaine; 2006; Adjunct Instructor of Leadership and Counseling; J.D.; 1984; University of Idaho.

EBERLEIN, Charlotte V.; 1989; #Professor of Weed Science; Associate Dean, College of Agricultural and Life Sciences; Director, UI Extension; Ph.D.; 1981; University of Minnesota.

EBORN, Benjamin M.; 2003; Associate Extension Professor and Teton County Extension Educator (Agriculture and Community Development); M.S.; 2002; University of Idaho.

EDERER, Martina; 2013; Clinical Assistant Professor of Biological Sciences; Ph.D.; 1994; University of Idaho.

EDWARDS, Charles G.; 2011; Adjunct Professor of Food Sciences; Ph.D.; 1989; Penn State University.

EDWARDS, Dean B.; 1986; #Professor of Mechanical Engineering; Affiliate Professor of Electrical and Computer Engineering; Ph.D.; 1977; California Institute of Technology.

EDWARDS, Mark A.; 2008; Affiliate Assistant Professor of Sociology, Anthropology and Justice Studies; Assistant to the President for Diversity, Equity and Community; Associate Vice Provost for Student Affairs; Ph.D.; 1997; South Dakota State University.

EDWARDS, W. Daniel; 1987; #Associate Professor of Chemistry; Ph.D.; 1976; University of Missouri.

EIGENBRODE, Sanford D.; 1995; #Professor of Entomology; Affiliate Associate Professor of Environmental Science; Ph.D.; 1990; Cornell University.

EISENBARTH, Christopher A.; 2003; #Assistant Professor of Community Health; Ph.D.; 2003; Oregon State University.

EITEL, Jan U.; 2012; Research Assistant Professor of Forest, Rangeland, and Fire Sciences; Affiliate Faculty of Curriculum and Instruction; Ph.D.; 2008; University of Idaho.

EITEL, Karla B.; 2009; Research Assistant Professor of Conservation Social Sciences; Ph.D.; 2009; University of Idaho.

EKINS, James P.; 2013; Extension Assistant Professor and Area Education Coordinator; M.S.; 2002; University of Oregon.

EL-BADAWY, Sherif; 2012; Adjunct Faculty of Civil Engineering; Ph.D.; 2006; Arizona State University.

ELBAKIDZE, Levan G.; 2008; #Assistant Professor of Agricultural Economics; Ph.D.; 2004; Texas A&M University.

ELGER, Donald F.; 1987; #Professor of Mechanical Engineering; Ph.D.; 1986; Oregon State University.

ELLIOT, William J.; 2003; Adjunct Professor of Biological and Agricultural Engineering, and of Geography; Ph.D.; 1988; Iowa State University.

ELLIS, Lance T.; 2009; Assistant Extension Professor and Fremont County Extension Educator (Livestock and Crops); M.T.D.; 2009; Idaho State University.

ELLISON, Brian; 2013; Professor of Political Science; Director, Martin School of International Studies; Ph.D.; 1993; Colorado State University.

ELSHABINI, Aicha; 2006; #Professor of Electrical and Computer Engineering; Ph.D.; 1978; University of Colorado.

ELY, Robert E.; 2007; #Assistant Professor of Mathematics Education; Ph.D.; 2007; University of Wisconsin.

EMTMAN, Richard A.; 1989; Adjunct Clinical Professor of Medical Science; M.D.; 1981; University of Washington.

ENGEL, Cheryl; 1998; Instructor in Curriculum and Instruction.

ENGELHARDT, Maxwell; 1992; Adjunct Professor of Statistics; Ph.D.; 1969; University of Missouri.

ENGLAND, James J.; 1995; #Professor of Veterinary Medicine; Director, Caine Veterinary Teaching Center; D.V.M.; 1981; Colorado State University.

ENLOE, Loraine D.; 2006; #Associate Professor of Music (Instrumental Music Education); Ph.D.; 2007; University of North Carolina.

ERICKSON, Luke V.; 2006; Extension Associate Professor and Madison County Extension Educator (FCS/Finance); M.S.; 2006; Utah State University.

EVELETH, Daniel M.; 1997; #Professor of Human Resource Management; Ph.D.; 1996; Washington State University.

EVENSON, Sandra; 1994; #Professor of Family and Consumer Sciences; Ph.D.; 1994; University of Minnesota.

EWERS, Timothy G.; 2003; #Associate Extension Professor, 4-H/Youth Development Specialist; Affiliate Associate Professor of Environmental Science; Ph.D.; 2001; University of Idaho.

FAIRLEY, Jerry P.; 2000; #Associate Professor of Hydrogeology; Affiliate Assistant Professor of Environmental Science; Ph.D.; 2000; University of California Berkeley.

FALK, Jeremy; 2011; #Assistant Professor of Agricultural and Extension Education; Ph.D.; 2011; Ohio State University.

FALKOWSKI, Michael J.; 2011; Adjunct Assistant Professor of Forest Ecology and Biogeosciences; Ph.D.; 2008; University of Idaho.

FALLAHI, Esmaeil; 1990; #Professor of Plant Science; Ph.D.; 1983; Oregon State University.

FANCY, Steven G.; 1996; Adjunct Associate Professor of Fish and Wildlife Sciences; Ph.D.; 1986; University of Alaska.

FARMER, Mitchell T.; 2011; Adjunct Faculty of Mechanical Engineering; Ph.D.; 1988; University of Illinois.

FAUX, Cynthia M.; 2007; Adjunct Professor of Geological Sciences; Ph.D.; 2000; Yale University.

FAY, John J.; 2005; Adjunct Professor of Fish and Wildlife Sciences; Ph.D.; 1974; City University.

FELLMAN, John K.; 1977; #Adjunct Associate Professor of Plant Science; Ph.D.; 1982; University of Idaho.

FERGUSON, Dennis E.; 1980; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1991; University of Idaho.

FERGUSON, Jason J.; 2007; #Assistant Professor of Art and Design; M.F.A.; 2007; University of Delaware.

FERRILL, Kyle; 2011; Assistant Professor of Music (Voice); D.M.; 2005; Florida State University.

FIEDLER, Fritz R.; 2000; #Associate Professor of Civil Engineering (P.E.); Ph.D.; 1997; Colorado State University.

FIFE, Tianna E.; 2007; Assistant Extension Professor and Twin Falls County Extension Educator (Animal and Veterinary Science); M.S.; 2007; University of Idaho.

FILLER, Jeff R.; 2000; Adjunct Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; 1989; Washington State University.

FINDLAY, J. Reed; 1994; Extension Professor and Bannock County Extension Educator (Crops/Urban Horticulture); M.S.; 1993; Brigham Young University.

FINEGAN, Bryan G.; 2002; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Dr.Scient.; 1985; University of Helsinki.

FINKELNBURG, Douglas C.; 2013; Assistant Extension Professor and Extension Educator, Northern District; M.S.; 2006; University of Idaho.

FINNEY, Mark A.; 2004; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1991; University of California Berkeley.

FLERCHINGER, Gerald N.; 1990; Adjunct Assistant Professor of Biological and Agricultural Engineering; Ph.D.; 1987; Washington State University.

FLETCHER, T. Rick; 1989; #Associate Professor of Chemistry; Ph.D.; 1986; University of California Davis.

FLINT, Stephan D.; 2009; Adjunct Instructor of Forest, Rangeland, and Fire Sciences; M.S.; 1977; Utah State University.

FLORES, Stephan P.; 1987; #Associate Professor of English; Director, Honors Program; Ph.D.; 1988; University of Michigan.

FODOR, Julie A.; 1993; #Associate Professor of Education; Interim Director of the Idaho Center on Disabilities and Human Development; Ph.D.; 1993; University of Utah.

FOLTZ, John C.; 1991; #Professor of Agricultural Economics and Rural Sociology; Term Dean, College of Agricultural and Life Sciences; Director of Academic Programs; Ph.D.; 1991; Purdue University.

FOLTZ, Randy B.; 2000; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1993; University of Idaho.

FOLWELL, Annette L; 2000; #Associate Professor of Communication; Ph.D.; 1997; University of Oklahoma.

FONNESBECK, Jacqueline E.; 2003; Adjunct Assistant Professor of Chemistry; Ph.D.; 1997; Montana State University.

FOOTE, Roy F.; 1978; Adjunct Professor of Electrical Engineering; M.S.E.E.; 1976; University of Idaho.

FORBES, Jim; 2010; Instructor of Entrepreneurship; M.S.; 2000; San Diego State University.

FORCE, Jo Ellen; 1979; #Professor of Forest, Rangeland, and Fire Sciences; Affiliate Professor of Environmental Science; Ph.D.; 1978; Ohio State University.

FORNEY, Larry J.; 2000; #Professor of Biology; Affiliate Professor of Bioinformatics and Computational Biology; Ph.D.; 1982; Michigan State University.

FORNSHELL, Gary C.G.; 1992; Extension Professor and Multi-county Extension Educator (Aquaculture); M.S.; 1986; Auburn University.

FORTUNATO, Elizabeth; 2000; #Associate Professor of Biological Sciences; Ph.D.; 1994; University of California San Diego.

FOSTER, James A.; 1990; #Professor of Biological Sciences; Affiliate Professor of Computer Science, Philosophy, and Bioinformatics and Computational Biology; Ph.D.; 1990; Illinois Institute of Technology.

FOX, Robert V.; 2006; Adjunct Assistant Professor of Chemistry; Ph.D.; 2003; University of Idaho.

FRADKIN, Steven C.; 2005; Adjunct Associate Professor of Fish and Wildlife Sciences; Ph.D.; 1997; Dartmouth College.

FRANCO, David; 2013; #Assistant Professor of Architecture; M.Arch.; 2001; Architectural School of Madrid ETSAM-UPM.

FRANK, Steven M.; 1999; Adjunct Assistant Professor of Chemistry; Ph.D.; 1989; Washington State University.

FRAZIER, Tim G.; 2009; #Assistant Professor of Geography; Ph.D.; 2009; Penn State University.

FREEBURG, Tyranne J.; 2013; Extension Assistant Professor and Extension Educator (Southern District); M.S.; 2006; University of Idaho.

FREEMUTH, John; 1992; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1985; Colorado State University.

FREMIER, Alexander K.; 2013; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 2007; University of California Davis.

FRENCH, H. Graeme; 1992; Adjunct Clinical Professor of Medical Science; M.D.; 1985; Tulane University.

FRENZEL, James F.; 1990; #Associate Professor of Electrical Engineering; Affiliate Associate Professor of Neuroscience; Ph.D.; 1989; Duke University.

FRENZEL, Karen Z.; 1990; Assistant Professor of Electrical Engineering; Ph.D.; 1986; Duke University.

FREY, Rodney P.; 1998; #Professor of American Indian Studies and Anthropology; Director, General Education; Ph.D.; 1979; University of Colorado.

FRITZ, Sharon K.; 1996; Associate Professor of Curriculum and Instruction; Psychologist, Student Counselor Center, with rank of Associate Professor; Ph.D.; 1996; University of Idaho.

FRYXELL, Glen E.; 2002; Adjunct Associate Professor of Chemistry; Ph.D.; 1986; University of North Carolina.

FUERST, Peter G.; 2010; #Assistant Professor of Biological Sciences and WWAMI Medical Education; Ph.D.; 2003; Iowa State University.

FUJITA, Rachel; 2012; Assistant Professor of Art and Design; M.F.A.; 2007; School of Visual Arts.

FUJITA, Yoshiko; 2004; Adjunct Assistant Professor of Environmental Science; Ph.D.; 1997; Stanford University.

FUNABIKI, Ruth Patterson; 1977; Head of Technical Services with rank of Associate Professor; M.L.S.; 1973; Kent State University.

FURNISS, Malcom M.; 1982; Adjunct Professor of Entomology and of Forest, Rangeland, and Fire Sciences; M.S.; 1966; University of Idaho.

FUTRELL, Jean H.; 2000; Adjunct Professor of Chemistry; Ph.D.; 1958; University of California Berkeley.

GALINDO, Ed; 2005; Adjunct Assistant Professor of American Indian Studies and Environmental Science; Ph.D.; 2003; Utah State University.

GALLANT, Francis X.; 2006; Affiliate Assistant Professor of Counseling and School Psychology, Special Education and Educational Leadership; Ph.D.; 1998; University of Idaho.

GAN, Jian; 2005; Adjunct Assistant Professor of Materials Science and Engineering; Ph.D.; 1999; University of Michigan.

GANGULI, Amy C.; 2009; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 2005; Oklahoma State University.

GANJYAL, Girish M.; 2012; Adjunct Faculty of Food Science; Ph.D.; 2004; University of Nebraska.

GAO, Fuchang; 1999; #Professor of Mathematics; Affiliate Professor of Bioinformatics and Computational Biology; Ph.D.; 1999; University of Connecticut.

GARDINER, Mary E.; 2001; #Professor of Educational Leadership; Ph.D.; 1990; University of Virginia.

GARDNER, Jay C.; 2009; Professor of Military Science; M.S.; 1999; Naval Postgraduate School.

GARRISON, Leonard L.; 2006; #Associate Professor of Music (Flute, Aural Skills); D.M.; 1993; Northwestern University.

GARRISON-JOHNSTON, Mariann T.; 2008; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 2003; University of Idaho.

GASKIN, John F.; 2008; Adjunct Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; 2002; Washington University.

GASSMANN, Andre; 2012; Adjunct Faculty of Plant, Soil, and Entomological Sciences; Ph.D.; 1990; University of Neuchatel.

GATHERCOAL, Paul H. Jr.; 2008; #Professor of Curriculum and Instruction; Department Chair, Department of Curriculum and Instruction; Ph.D.; 1990; University of Oregon.

GAYLORD, T. Gibson; 2007; Adjunct Assistant Professor of Animal and Veterinary Science; Ph.D.; 2000; Texas A&M University.

GEARHART, Amanda L.; 2012; Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 2011; North Dakota State University.

GEGO, Edith; 1998; Adjunct Assistant Professor of Biological and Agricultural Engineering; Ph.D.; 1993; University of Gembloux.

GEIST, Dennis J.; 1990; #Professor of Geology; Ph.D.; 1985; University of Oregon.

GELLES, David S.; 1996; Adjunct Professor of Materials Science and Engineering and Metallurgical Engineering; Sc.D.; 1971; Massachusetts Institute of Technology (MIT).

GEMBERLING, Alan J.; 1986; Professor of Music (trombone, wind ensemble, jazz band); M.Mus.; 1988; University of Idaho.

GERGELY, Kevin J.; 2009; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 2003; University of Idaho.

GERMINO, Matthew J.; 2013; Adjunct Faculty of Forest, Rangeland, and Fire Sciences; Ph.D.; 2000; University of Wyoming.

GERTMAN, David I.; 2013; Adjunct Faculty of Psychology and Communication Studies; Ph.D.; 1980; Catholic University of America.

GERVASE, Mary M.; 2006; Adjunct Instructor of Leadership and Counseling; Ph.D.; 1995; University of New Mexico.

GESE, Eric M.; 2008; Adjunct Associate Professor of Fish and Wildlife Sciences; Ph.D.; 1995; University of Wisconsin.

GESELL, Thomas F.; 1994; Adjunct Professor of Physics; Ph.D.; 1971; University of Tennessee.

GESSLER, Paul E.; 1997; #Associate Professor of Forest, Rangeland, and Fire Sciences; Affiliate Associate Professor of Environmental Science; Ph.D.; 1996; Australian National University.

GILLERMAN, Virginia S.; 1989; Affiliate Professor of Geology; Supervisory Research Geologist; Ph.D.; 1982; University of California Berkeley.

GILLESPIE, Donna R.; 2001; Associate Extension Professor and Minidoka County Extension Educator (Area 4-H/Youth and Family Consumer Science); M.S.; 1977; University of Idaho.

GILLHAM, Patrick F.; 2006; #Associate Professor of Sociology and Anthropology; Ph.D.; 2003; University of Colorado.

GINN, Timothy R.; 2010; Adjunct Professor of Biological and Agricultural Engineering; Ph.D.; 1988; Purdue University.

GLASS, Robert J. Jr.; 2014; Adjunct Faculty of Geological Sciences; Ph.D.; 1988; Cornell University.

GLAZE, Benton; 2000; #Associate Extension Professor and Extension Beef Cattle Specialist; Ph.D.; 1998; Kansas State University.

GLEASON, Diana; 2012; Assistant Professor of Law; M.L.I.S.; 1997; University of Washington.

GOBLE, Dale D.; 1982; #Professor of Law; Affiliate Professor of Environmental Science; J.D.; 1978; University of Oregon.

GOC KARP, Grace; 1993; #Professor of Physical Education; Ph.D.; 1984; University of Idaho.

GODCHAUX, Martha M.; 2000; Adjunct Professor of Geological Sciences; Ph.D.; 1969; University of Oregon.

GODFREY, Bruce R.; 2013; Librarian with the rank of Assistant Professor; M.L.I.S.; 2013; University of North Texas.

GOFF, Kenneth M.; 2006; Adjunct Associate Professor of Materials Science and Engineering; Ph.D.; 1991; Georgia Institute of Technology.

GOLDMAN, Paul; 2013; Clinical Full Professor of Leadership and Counseling; Ph.D.; 1974; University of Chicago.

GOODWIN, Anthony R.H.; 1993; Adjunct Assistant Professor of Chemical Engineering and Mechanical Engineering; Ph.D.; 1987; University College.

GOODWIN, Peter; 1996; #Professor of Civil Engineering (P.E.); Affiliate Professor of Biological and Agricultural Engineering; Ph.D.; 1986; University of California Berkeley.

GORMAN, Thomas M.; 1987; #Professor of Forest Products; Affiliate Professor of Architecture and Civil Engineering; Associate Dean of Outreach, College of Natural Resources; Ph.D.; 1987; SUNY at Syracuse.

GOSSETT, Linda S.; 1989; Extension Professor and Extension Educator (EFNEP); M.P.A.; 1997; Boise State University.

GOULD, William A.; 2009; Adjunct Associate Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1998; University of Colorado.

GRADEN, Dale T.; 1992; #Professor of History; Ph.D.; 1991; University of Connecticut.

GRADER, George W.; 2009; Adjunct Assistant Professor of Geological Sciences; Ph.D.; 2003; University of Idaho.

GRAHAM, Jennifer L.; 2011; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 2004; University of Missouri.

GRAHAM, Russell T.; 1979; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1981; University of Idaho.

GRAY, Beulah H.; 2003; Adjunct Professor of Animal and Veterinary Science; Ph.D.; 1966; University of Minnesota.

GRAY, C. Wilson; 1980; Extension Professor and Extension Agricultural Economist; M.S.; 1976; University of California Davis.

GREEN, Deborah L.; 2008; Digital Initiatives Librarian with rank of Assistant Professor; M.L.I.S.; 2007; University of South Carolina.

GREENFIELD, Robin G.; 1997; Affiliate Assistant Professor of Special Education and Project Coordinator; Ph.D.; 1991; University of Oregon.

GREENLEE, Michael J.; 2002; Head of Public Services with rank of Associate Professor; J.D.; 2002; Indiana University.

GREGSON, James A.; 2001; #Professor of Curriculum and Instruction; Associate Dean, College of Education; Ed.D.; 1990; Virginia Polytechnic Institute.

GRIBB, Molly M.; 2003; Adjunct Associate Professor of Civil Engineering; Ph.D.; 1993; University of Wisconsin.

GRIEB, Terrance; 1996; #Professor of Finance; Ph.D.; 1996; University of Cincinnati.

GROENEWOLD, Gary S.; 2000; #Adjunct Associate Professor of Chemistry; Ph.D.; 1983; University of Nebraska.

GRUSSING, LuVerne D.; 1986; Adjunct Assistant Professor of Conservation Social Sciences; M.Ed.; 1976; University of Minnesota.

GUNN, Danielle; 2000; Associate Extension Professor and Fort Hall Extension Educator (4-H/Beef/Range); M.S.; 2007; University of Idaho.

GUNTER, Mickey E.; 1989; #Professor of Geology; Department Chair, Department of Geological Sciences; Ph.D.; 1987; Virginia Tech.

GUPTA, Sanjay K.; 2009; Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; 1997; Kanpur University.

HAAN, Sarah C.; 2012; Associate Professor of Law; J.D.; 2000; Columbia University.

HADLEY, Erik J.; 2011; Affiliate Assistant Professor of History; Ph.D.; 2007; State University of New York (SUNY).

HAFEZ, Saad L.; 1984; #Professor of Nematology; Interim Superintendent, Parma Research and Extension Center; Ph.D.; 1980; University of California Davis.

HAGGERTY, Robert J.; 1985; #Affiliate Assistant Professor of Agricultural and Extension Education, and of Food Science and Toxicology; Interim Director for International Programs, College of Agricultural and Life Sciences; Ph.D.; 1997; University of Idaho.

HAGLUND, Bruce T.; 1982; #Professor of Architecture; Affiliate Professor of Environmental Science; M.Arch.; 1982; University of Oregon.

HAINES, Douglas C.; 2000; Associate Professor of Marketing; Ph.D.; 1996; University of Oregon.

HALL, Cassidy S.; 2013; Clinical Assistant Professor and Technology Integration Specialist; M.Ed.; 2006; Mansfield University.

HALL, Jeffrey D.; 2013; Adjunct Faculty of Curriculum and Instruction; Ph.D.; 2010; Fuller Theological Seminary.

HALL, John B.; 2008; #Professor of Animal and Veterinary Sciences (Beef Specialist); Superintendent, Nancy M Cummings Research Center; Ph.D.; 1991; University of Kentucky.

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HALTINNER, KRISTIN; 2013; Assistant Professor of Sociology and Anthropology; Ph.D.; 2013; University of Minnesota.

HAM, Sam H.; 1978; #Professor of Communication Psychology; Ph.D.; 1982; University of Idaho.

HAMBY, Cynthia; 2013; Adjunct Faculty of Food Science; M.Ed.; 1983; Georgia State University.

HAMILTON, Melinda; 2013; #Associate Research Professor of Education; STEM Education Director; Ph.D.; 1990; Utah State University.

HAMMEL, John E.; 1982; #Professor of Soil Science and Soil Physics; Ph.D.; 1979; Washington State University.

HAMPTON, Richard; 1995; Adjunct Professor of Plant Pathology; Ph.D.; 1957; Iowa State University.

HAMPTON, Stephanie E.; 2004; #Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 2001; Dartmouth College.

HAN, Keonghee T.; 2007; #Assistant Professor of Literacy; Ph.D.; 2006; University of Nevada Reno.

HANN, Wendel J.; 1988; Adjunct Associate Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1982; University of Idaho.

HANNINEN, Gail E.; 2006; Adjunct Instructor of Leadership and Counseling; Ed.D.; 1989; University of Idaho.

HANSEN, James A.; 2005; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 1998; University of Wyoming.

HANSEN, Lyle J.; 2005; Assistant Extension Professor and Jerome County Extension Educator (Financial Management); M.S.; 2004; Kansas State University.

HANSON, Thor R.; 2013; Adjunct Faculty of Forest, Rangeland, and Fire Sciences; Ph.D.; 2006; University of Idaho.

HARBERTSON, James F.; 2011; Adjunct Associate Professor of Food Science; Ph.D.; 2003; University of California Davis.

HARBOUR, Jerry L.; 1991; Adjunct Assistant Professor of Psychology; Ph.D.; 1988; Oklahoma State University.

HARDY, Brooke; 2013; Clinical Assistant Professor of Law; J.D.; 2007; University of Florida.

HARDY, Ronald W.; 1996; #Professor of Animal Science; Affiliate Professor of Fishery Resources; Director, Aquaculture Research Institute; Ph.D.; 1978; University of Washington.

HARMON, Lisa L.; 2013; Instructor of Biological Sciences; M.S.; 2008; University of Idaho.

HARMON, Luke J.; 2007; #Associate Professor of Biological Sciences; Affiliate Faculty of Statistics; Ph.D.; 2005; Washington University.

HARRIS, Charles C. Jr.; 1984; #Professor of Environmental Management, Policy and Planning; Affiliate Professor of Environmental Science; Ph.D.; 1983; University of Michigan.

HARRISON, Steven N.; 1990; Extension Professor and Caribou County Extension Educator (Farm Management); M.S.; 1989; Brigham Young University.

HARRISON, W. Scott; 1999; #Assistant Professor of Computer Science; Ph.D.; 1999; Tulane University.

HART, Kenneth N.; 1989; Extension Professor and Lewis County Extension Educator (Farm/Crop Management); M.S.; 1992; University of Idaho.

HART, Patricia S.; 1976; Assistant Professor of Journalism and Mass Media; Ph.D.; 1997; Washington State University.

HARTMAN, Mimi; 2005; Adjunct Instructor of Family and Consumer Sciences; M.A.; 1990; Immaculata University.

HARTVIGSEN, M. Kip; 2004; Adjunct Assistant Professor of Curriculum and Instruction; Ph.D.; 1980; Washington State University.

HARTZELL, Patricia L.; 1994; #Professor of Biological Sciences; Ph.D.; 1986; University of Illinois.

HARVEY, Alan E.; 1980; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1968; Washington State University.

HATTEN, Timothy D.; 2013; Adjunct Faculty of Plant, Soil, and Entomological Sciences; Ph.D.; 2006; University of Idaho.

HAYES, Steven L.; 1999; #Adjunct Professor of Mechanical Engineering; Ph.D.; 1992; Texas A&M University.

HAYNES, James B.; 1989; Adjunct Assistant Professor of Chemical Engineering; Ph.D.; 1989; University of Idaho.

HE, Brian (Bingjun); 2001; #Associate Professor of Agricultural Engineering; Affiliate Assistant Professor of Food Science and Toxicology; Ph.D.; 2000; University of Illinois.

HEALY, Beverly A.; 1969; Extension Professor and Ada County Extension Educator (Family Resource Management); M.Ed.; 1983; Northwest Nazarene University.

HECKENDORN, Robert B.; 1999; #Associate Professor of Computer Science; Affiliate Assistant Professor of Bioinformatics and Computational Biology; Ph.D.; 1999; Colorado State University.

HEDMAN, Matthew; 2013; #Assistant Professor of Physics; Ph.D.; 2002; Princeton University.

HEGAZY, Mostafa A.; 2013; #Clinical Assistant Professor of Movement Sciences; Ph.D.; 2009; Arizona State University.

HEGGLAND, Sara J.; 2006; Adjunct Associate Professor of Biological Sciences; Ph.D.; 1995; Kent State University.

HEGLUND, Patricia J.; 2003; Adjunct Assistant Professor of Biological Sciences; Ph.D.; 1992; University of Missouri.

HEIMGARTNER, Candi K.; 2013; Instructor of Biological Sciences; M.S.; 1999; University of Idaho.

HEINSE, Robert; 2008; #Assistant Professor of Soil Physics; M.Sc.; 2003; University of Leipzig.

HEMATI, Saied; 2013; Assistant Professor of Electrical and Computer Engineering; Ph.D.; 2005; Carleton University.

HENAGER, Charles H. Jr.; 1995; Adjunct Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; 1983; University of Washington.

HENDRICKSON, John R.; 2011; Adjunct Associate Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1996; Texas A&M University.

HENICK-KLING, Thomas; 2011; Adjunct Professor of Food Science; Ph.D.; 1986; University of Adelaide.

HENRICH, Kristin J.; 2008; Reference/Instruction Librarian with rank of Assistant Professor; M.L.S.; 2008; Indiana University.

HENSCHEID, Jean M.; 2013; Assistant Clinical Professor of Leadership and Counseling; Ph.D.; 1996; Washington State University.

HERKES, John W.; 2008; Affiliate Assistant Professor of Biological and Agricultural Engineering; M.Engr.; 2000; University of Idaho.

HESFORD, Walter A.; 1979; #Associate Professor of English; Director, Undergraduate Studies; Ph.D.; 1975; Harvard University.

HESS, Herbert L.; 1993; #Professor of Electrical Engineering; Ph.D.; 1993; University of Wisconsin.

HESS, Susan M.; 1994; #Associate Professor of Music (bassoon); Assistant Director, Lionel Hampton School of Music; D.M.A.; 1996; University of Colorado.

HESSBURG, Paul J. Sr.; 2009; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1984; Oregon State University.

HEYERDAHL, Emily K.; 2004; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1997; University of Washington.

HICKE, Jeffrey A.; 2006; #Associate Professor of Geography; Ph.D.; 2000; University of Colorado.

HIGGINS, Lorie L.; 2002; #Assistant Professor of Rural Sociology and Rural Community Development; Affiliate Assistant Professor of Environmental Science; Ph.D.; 2001; Washington State University.

HIGUERA, Philip E.; 2009; #Assistant Professor of Fire Ecology; Ph.D.; 2006; University of Washington.

HILL, Rod; 2002; #Associate Professor of Growth Biology; Ph.D.; 1995; Central Queensland University.

HILL, Susan G.; 1992; Adjunct Assistant Professor of Psychology; Ph.D.; 1988; Virginia Polytechnic Institute.

HINES, Steven L.; 2000; Associate Extension Professor and Twin Falls County Extension Educator (Crops); M.S.; 1996; University of Idaho.

HINZ, Hariet L.; 2003; Adjunct Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; 1999; University of Fribourg.

HIRNYCK, Ronda E.; 2003; Associate Extension Professor and Extension Educator (Pesticide); M.S.; 1983; University of Nebraska.

HIROMOTO, Robert E.; 2002; #Professor of Computer Science; Ph.D.; 1978; California State University Long Beach.

HODGIN, Jere Lee; 2005; #Associate Professor of Theatre; M.F.A.; 1973; University of Georgia.

HOFF, Raymond J.; 1962; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1968; Washington State University.

HOFFMAN, Katie J.; 2008; Assistant Extension Professor and Lemhi County Educator (Youth Development); M.S.; 2008; University of Idaho.

HOHENLOHE, Paul; 2011; #Assistant Professor of Biological Sciences; Affiliate Faculty of Statistical Sciences; Ph.D.; 2000; University of Washington.

HOLLANDS, Justin G.; 1994; Adjunct Assistant Professor of Psychology; Ph.D.; 1993; University of Toronto.

HOLLINGSHEAD, Alexsandra; 2013; #Assistant Professor of Special Education; Ed.D.; 2013; University of Cincinnati.

HOLYOKE, Laura B.; 2004; #Assistant Professor of Curriculum and Instruction; Ph.D.; 2004; Gonzaga University.

HONDO, Carolyn; 2006; Adjunct Instructor of Leadership and Counseling; Ph.D.; 2005; University of Idaho.

HONG, Yang-Ki; 2006; Adjunct Professor of Materials Science and Engineering; Ph.D.; 1981; University of Utah.

HONG, Zonglie; 2005; #Assistant Professor of Biological Sciences; Ph.D.; 1990; University of Novi Sad.

HOPPER, Brian C.; 2003; Psychologist, Counseling and Testing Center, with rank of Associate Professor; Psy.D.; 2002; George Fox University.

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HORNE, Jon S.; 2011; Affiliate Faculty of Fish and Wildlife Resources; Ph.D.; 2005; University of Idaho.

HORNING, Janet M.; 2006; Adjunct Instructor of Leadership and Counseling; Ph.D.; 2004; University of Idaho.

HOSTE, Ann; 2010; Professor of Theatre; M.F.A.; 1984; University of Texas.

HOVERSTEN, Mark E.; 2007; Professor of Landscape Architecture; Dean, College of Art and Architecture; M.F.A.; 1983; University of Iowa.

HOWE, Steven D.; 2009; #Adjunct Professor of Nuclear Engineering; Ph.D.; 1980; Kansas State University.

HRDLICKA, Patrick J.; 2006; #Associate Professor of Chemistry; Affiliate Associate Professor of Biological Sciences and Neuroscience; Ph.D.; 2006; University of Southern Denmark.

HU, Gongshe; 2006; Adjunct Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; 1995; Kansas State University.

HU, Xiao; 2008; Instructor of Architecture; M.S.; 2003; University of Nebraska.

HUBBS, Graham; 2010; Assistant Professor of Philosophy; Ph.D.; 2008; University of Pittsburgh.

HUBER, Kerry C.; 2013; Adjunct Faculty of Food Science; Ph.D.; 1998; Purdue University.

HUDAK, Andrew T.; 2004; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences, Forest, Rangeland, and Fire Sciences, and Geography; Ph.D.; 1999; University of Colorado.

HUGHES, Robert M.; 2001; Adjunct Associate Professor of Fish and Wildlife Sciences; Ph.D.; 1979; Oregon State University.

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HUNTER, Benjamin A.; 2006; Reference/Instruction Librarian with rank of Associate Professor; M.L.S.; 2005; University of North Carolina.

HUNTER, Lauren; 2009; Assistant Extension Professor and Blaine County Extension Educator (Crops); M.A.; 2008; Appalachian State University.

HUTCHINSON, Pamela J.; 1999; #Associate Professor of Weed Science; Ph.D.; 1991; University of Nebraska.

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IVES, Thomas W.; 2008; Adjunct Associate Professor of Mechanical Engineering; Ph.D.; 1997; Texas A&M University.

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JACKSON, Russell E.; 2012; Assistant Professor of Psychology and Communication Studies; Ph.D.; 2007; University of Texas.

JAGER, Rebecca; 2010; #Assistant Professor of History; Affiliate Faculty of American Indian Studies; Ph.D.; 2002; University of New Mexico.

JAGLOIS ORR, Mary T.; 2013; Clinical Assistant Professor of Curriculum and Instruction; M.S.; 2007; University of Idaho.

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JAIN, Theresa B.; 2001; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 2001; University of Idaho.

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JEFFERY, Clinton L.; 2007; #Associate Professor of Computer Science; Ph.D.; 1993; University of Arizona.

JEFFREY, Justin; 2008; Assistant Professor of Philosophy (Ethics); Ph.D.; 2007; University of North Carolina.

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JENKINS, Kurt J.; 2002; Adjunct Professor of Fish and Wildlife Sciences; Ph.D.; 1985; University of Idaho.

JENNINGS, Michael D.; 2010; #Associate Research Professor of Geography; Ph.D.; 2003; University of California Santa Barbara.

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JENSEN, Kirstin D.; 2009; Assistant Extension Professor and Idaho County Extension Educator (Health and Nutrition); M.A.; 1999; Pacific Lutheran University.

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JOHNSON, Brian K.; 1992; #Professor of Electrical Engineering; Ph.D.; 1992; University of Wisconsin.

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JOHNSON, Janis A.; 2004; #Assistant Professor of English; Ph.D.; 1999; Tulane University.

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JOHNSON, Keith A.; 2001; Adjunct Professor of Fish and Wildlife Sciences; Ph.D.; 1975; Oregon State University.

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JOHNSON, Timothy R.; 2000; #Associate Professor of Statistics; Ph.D.; 2001; University of Illinois.

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JOHNSON-MAYNARD, Jodi; 2000; #Associate Professor of Soil and Water Management; Affiliate Associate Professor of Environmental Science; Ph.D.; 1999; University of California Riverside.

JOHNSTON, Kevin; 2004; Senior Instructor of Recreation; M.S.; 2003; University of Idaho.

JONES, Wayne B.; 1993; Associate Extension Professor and Bonneville County Extension Educator (Potatoes/Urban Horticulture); M.S.; 1982; Utah State University.

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JOURNEAU, Christophe; 2011; Adjunct Faculty of Mechanical Engineering; Ph.D.; 2006; University of Orleans.

JOYCE, Paul; 1991; #Professor of Mathematics and of Statistics; Affiliate Professor of Bioinformatics and Computational Biology; Dean, College of Science; Ph.D.; 1988; University of Utah.

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JUDGE, Mary Ann; 1988; Senior Instructor in English; Director of the Writing Center; M.A.; 1990; University of Idaho.

JUNG, S.J.; 1990; #Professor of Geological Engineering; Ph.D.; 1989; West Virginia University.

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KAPPLER-CROOKSTON, Irina A.; 1985; Senior Instructor in Foreign Languages and Literatures (Spanish); Department Chair, Department of Modern Languages & Cultures; M.A.; 1988; Washington State University.

KARASEV, Alexander V.; 2006; #Associate Professor of Plant Pathology; Affiliate Associate Professor of Bioinformatics and Computational Biology; Ph.D.; 1984; Moscow State University.

KARSKY, Thomas J.; 1977; Extension Professor of Agricultural Engineering; Extension Farm Safety Specialist; M.S.; 1974; North Dakota State University.

KATTENHORN, Simon A.; 1998; #Professor of Geology; Ph.D.; 1998; Stanford University.

KAVANAGH, Kathleen L.; 1999; #Associate Professor of Forest, Rangeland, and Fire Sciences; Affiliate Associate Professor of Environmental Science; Ph.D.; 1993; Oregon State University.

KAY, Brandy L.; 2012; Extension Assistant Professor and Extension Educator 4H Youth Programs; M.P.A.; 2011; Boise State University.

KEANE, Robert E.; 2000; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1994; University of Idaho.

KEEFE, Robert F.; 2012; Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 2011; University of Idaho.

KEHOE, Sharon; 1997; Adjunct Assistant Professor of Religious Studies; Ph.D.; 1997; California Institute of Integral Studies.

KEIM, Delphine D.; 1997; #Associate Professor of Art and Design; M.F.A.; 1995; Kent State University.

KELLIHER, Kevin R.; 2006; #Assistant Professor of Neurobiology, Biological Sciences and WWAMI; Ph.D.; 2001; Boston University.

KELLY-RILEY, Diane O.; 2013; #Assistant Professor of English; Writing Program Administrator; Ph.D.; 2006; Washington State University.

KENADY, Reid M.; 2008; Adjunct Associate Professor of Forest, Rangeland, and Fire Sciences; M.S.; 1962; University of Washington.

KENNEDY, Brian P.; 2005; #Associate Professor of Fishery Biology and Ecology; Affiliate Faculty of Biological Sciences and Geological Sciences; Ph.D.; 2000; Dartmouth College.

KENNEDY, J. Rory; 2007; Adjunct Assistant Professor of Chemistry; Ph.D.; 1987; Northwestern University.

KENT, Amanda K.; 2009; Assistant Extension Instructor and Blaine County Extension Educator (4-H Youth Development); B.S.; 2007; University of Idaho.

KENYON, Jeremy; 2010; Reference/Instruction Librarian with rank of Assistant Professor; M.L.S.; 2009; Indiana University.

KERN, Anne L.; 2007; #Assistant Professor of Curriculum and Instruction; M.S.; 1995; Portland State University.

KHERICHA, Soli; 2005; Adjunct Professor of Mechanical Engineering; Ph.D.; 1987; Iowa State University.

KHRISTOFOROVA, Nadezhda K.; 2000; Adjunct Professor of Environmental Sciences; D.Sc.; 1985; Institute of Evolution Morphology & Ecology of Animals.

KIE, John G.; 2001; Adjunct Professor of Fish and Wildlife Sciences; Ph.D.; 1977; University of California Berkeley.

KILLINGER, Karen M.; 2011; Affiliate Assistant Professor of Food Science; Ph.D.; 2005; Texas Technology University.

KIMMONS, Royce; 2013; #Assistant Professor of Curriculum and Instruction; Director, Doceo Center for Technology Integration; Ph.D.; 2012; University of Texas.

KINDER, Cynthia A.; 1999; Associate Extension Professor and Camas/Gooding County Extension Educator (4-H/Alfalfa); M.S.; 1999; University of Idaho.

KINGERY, James L.; 1977; #Associate Professor of Forest, Rangeland, and Fire Sciences; Affiliate Associate Professor of Environmental Science; Ph.D.; 1985; University of Idaho.

KINLOCH, Bohun; 2001; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1968; North Carolina State University.

KINZIGER, Michael L.; 1993; #Associate Professor of Recreation; Ph.D.; 1992; University of New Mexico.

KIPARSKY, Michael; 2010; Assistant Research Professor of Geography; Ph.D.; 2010; University of California Berkeley.

KITCHEL, K. Allen; 1998; #Associate Professor of Curriculum and Instruction; Ph.D.; 2006; University of Idaho.

KITTELL, Ellen E.; 1993; #Associate Professor of History; Ph.D.; 1983; University of Illinois.

KITZROW, Martha A.; 1989; Professor of Curriculum and Instruction; Affiliate Professor of Psychology; Licensed Psychologist, Counseling and Testing Center, with rank of Professor; Ph.D.; 1990; Oregon State University.

KLISKEY, Andrew D.; 2013; Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1992; University of Otago.

KLOPFENSTEIN, Ned B.; 1999; Adjunct Assistant Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1985; Iowa State University.

KNICK, Steven; 2011; Adjunct Faculty of Fish and Wildlife Sciences; Ph.D.; 1987; University of Montana.

KNOWLTON, William B.; 2004; Adjunct Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; 1988; University of California Berkeley.

KNUDSEN, Guy R.; 1987; #Professor of Plant Pathology; Ph.D.; 1984; Cornell University.

KRANTZ, Robert W.; 2011; Adjunct Faculty of Geological Sciences; Ph.D.; 1986; University of Arizona.

KRAUT, Marla A.; 1991; #Associate Professor of Accounting; Department Chair, Department of Accounting; Ph.D.; 1991; University of Arizona.

KRINGS, Axel W.; 1995; #Professor of Computer Science; Ph.D.; 1993; University of Nebraska.

KRONE, Stephen M.; 1995; #Professor of Mathematics; Affiliate Professor of Bioinformatics and Computational Biology; Ph.D.; 1990; University of Massachusetts.

KROTH, Michael S.; 2005; #Associate Professor of Adult and Organizational Learning; Ph.D.; 1997; University of New Mexico.

KRUMPE, Edwin E.; 1979; #Professor of Wilderness Management; Interim Department Head, Department of Conservation Social Sciences; Director, Wilderness Research Center; Ph.D.; 1979; Colorado State University.

KUHL, Joseph C.; 2009; #Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; 2000; University of Wisconsin.

KUHLMAN, Kimberly R.; 2002; Adjunct Assistant Professor of Geological Sciences; Ph.D.; 1998; University of Wisconsin.

KYRIOS, Alex C.; 2012; Metadata/Catalog Librarian with rank of Assistant Professor; M.S.; 2011; University of North Carolina.

KYTE, Michael D.; 1986; #Professor of Civil Engineering (P.E.); Director, National Institute for Advanced Transportation Technology; Ph.D.; 1986; University of Iowa.

LADINO, Jennifer; 2010; #Assistant Professor of English; Ph.D.; 2006; University of Washington.

LAFLIN, Maureen E.; 1991; Professor of Law; J.D.; 1982; St Louis University.

LAFRENTZ, Benjamin R.; 2010; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 2007; University of Idaho.

LANDIS, Thomas D.; 2009; Adjunct Professor of Forest, Rangeland, and Fire Sciences; Ph.D.; 1974; Colorado State University.

LANINGA, Tamara; 2008; #Assistant Professor of Sustainable Land Use Planning; Ph.D.; 2007; University of Colorado.

LANTING, Rhea K.; 1994; Extension Professor and Twin Falls County Extension Educator (Nutrition, Health and Food Safety/4-H); M.S.; 2001; University of Idaho.

LAPATRA, Scott E.; 1997; Adjunct Associate Professor of Fish and Wildlife Sciences; Ph.D.; 1989; Oregon State University.

LARKIN, John A.; 1998; Adjunct Assistant Professor of Art and Design; B.F.A.; 1984; University of Idaho.

LASSAHN, Gordon D.; 1992; Adjunct Associate Professor of Physics; Ph.D.; 1970; Iowa State University.

LATORELLA, Kara A.; 2006; Adjunct Assistant Professor of Psychology and Communication Studies; Ph.D.; 1997; SUNY at Buffalo.

LATTIN, William C.; 2013; Adjunct Faculty of Environmental Science; Ph.D.; 2008; University of Idaho.

LAUMATIA, Laura A.; 2013; Adjunct Faculty of Bioregional Planning and Community Design; M.S.; 2009; University of Idaho.

LAUNCHBAUGH, Karen L.; 1996; #Associate Professor of Forest, Rangeland, and Fire Sciences; Department Head, Department of Rangeland Ecology and Management; Ph.D.; 1992; Utah State University.

LAURIOLA, Rosanna; 2008; Assistant Professor of Foreign Languages and Literatures (Classics); Ph.D.; 2002; University of Florence.

LAW, Joseph D.; 1989; #Associate Professor of Electrical Engineering; Associate Dean of Undergraduate Academics, College of Engineering; Ph.D.; 1991; University of Wisconsin.

LAWRENCE, John J.; 1993; #Professor of Production/Operations Management and of Statistics; Ph.D.; 1993; Penn State University.

LAWRENCE, Torrey E.; 1998; #Professor of Music (tuba, euphonium, bands); Director, Lionel Hamption School of Music; M.Mus.; 1996; Northwestern University.

LEACH, David B.; 2002; Adjunct Clinical Professor of Medical Science; M.D.; 1997; University of Kentucky.

LEACHMAN, Jacob W.; 2010; Adjunct Assistant Professor of Mechanical Engineering; Ph.D.; 2010; University of Wisconsin-Madison.

LEAVITT, Julee L.; 2008; Adjunct Assistant Professor of Curriculum and Instruction; Ph.D.; 2007; University of Idaho.

LEE, Jooho; 2008; #Assistant Professor of Political Science; Ph.D.; 2007; Syracuse University.

LEE, Jungmin; 2013; Adjunct Faculty of Plant, Soil, and Entomological Sciences; Ph.D.; 2004; Oregon State University.

LEE, Stephen S.; 1993; #Associate Professor of Statistics; Affiliate Associate Professor of Neuroscience, and of Bioinformatics and Computational Biology; Ph.D.; 1991; Florida State University.

LEE, Tracie; 2007; Instructor of Production/Operations Management; M.I.M.; 1997; Thunderbird School.

LEE-PAINTER, J. David; 1995; #Professor of Theare Arts; M.F.A.; 1991; Illinois State University.

LENTZ, Rodrick D.; 1997; Adjunct Assistant Professor of Soils; Ph.D.; 1991; University of Minnesota.

LEU, Matthias; 2006; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 2000; University of Washington.

LEWIN, Paul A.; 2013; #Assistant Extension Professor and Extension Specialist of Agricultural Economics and Rural Sociology; Ph.D.; 2011; Oregon State University.

LEWIS, Gregory S.; 2002; Affiliate Associate Professor of Animal and Veterinary Science; Ph.D.; 1978; West Virginia University.

LEWIS, Leroy C.; 1982; Adjunct Instructor in Chemistry; Ph.D.; 1968; Oregon State University.

LEWIS, Margaret J.; 2002; Adjunct Assistant Professor of Psychology; Ph.D.; 1998; Ohio State University.

LEWIS, Reed S.; 1995; Affiliate Associate Professor of Geology; Ph.D.; 1990; Oregon State University.

LEYTEM, April B.; 2004; Adjunct Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; 1999; North Carolina State University.

LI, Jun; 2006; Adjunct Professor of Chemistry; Ph.D.; 1992; Chinese Academy of Sciences.

LIDE, Chen; 2010; Assistant Professor and Extension Waste Management Engineer of Biological and Agricultural Engineering; Ph.D.; 2008; Iowa State University.

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LILLARD, Monique C.; 1987; Professor of Law; J.D.; 1983; University of California Los Angeles.

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LIND, Douglas; 1991; #Professor of Philosophy; Affiliate Professor of Environmental Science; Department Chair, Department of Philosophy; Ph.D.; 1991; University of Pennsylvania.

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LOCK, Barbara Z.; 2010; Instructor of Law, Tax Clinic; LL.M.; 1998; University of Washington.

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LOFTUS, Kelli; 2011; Associate Extension Professor, Northern District; M.S.W.; 2002; Eastern Washington University.

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LONG, Elaine M.; 1992; Adjunct Associate Professor of Family and Consumer Sciences; Ph.D.; 1991; University of Idaho.

LONG, Jerrold A.; 2007; #Associate Professor of Law; J.D.; 2000; University of Colorado.

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LOVELACE, Kathi J.; 2008; Assistant Professor of Business; Ph.D.; 2002; University of Massachusetts.

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LUONG, Tran Dinh; 2009; Adjunct Assistant Professor of Mathematics; Ph.D.; 2009; University of Idaho.

LYNDS, Ranie M.; 2012; Adjunct Faculty of Geological Sciences; Ph.D.; 2005; University of Wyoming.

LYSOHIR, Marilyn; 1991; Adjunct Assistant Professor of Art and Design; M.F.A.; 1979; Washington State University.

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WALLIN, David O.; 2008; Adjunct Professor of Fish and Wildlife Sciences; Ph.D.; 1990; University of Virginia.

WALTNER, Scott S.; 2003; Assistant Professor, Dairy Production Medicine Veterinarian; D.V.M.; 1996; University of Washington.

WANG, Hong; 1997; #Professor of Mathematics; Ph.D.; 1992; University of Calgary.

WARD-CLOSE, Malcolm; 1992; Adjunct Professor of Materials Science and Engineering and Metallurgy; Ph.D.; 1977; University of Birmingham.

WARHEIT, Kenneth I.; 2004; Adjunct Assistant Professor of Fish and Wildlife Sciences; Ph.D.; 1990; University of California Berkeley.

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WATSON, Philip S.; 2008; #Assistant Professor of Agricultural Economics; Ph.D.; 2008; Colorado State University.

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WILHELM, Frank M.; 2007; #Assistant Professor of Limnology; Ph.D.; 1999; University of Alberta.

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YE, Hengchun; 1998; #Adjunct Associate Professor of Geography; Ph.D.; 1995; University of Delaware.

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YOPP, David; 2012; Associate Professor of Mathematics; Affiliate Faculty of Curriculum and Instruction; D.A.; 1998; Idaho State University.

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YOUNG, William P.; 2003; Adjunct Assistant Professor of Biological Sciences; Ph.D.; 1996; Washington State University.

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ZACHARIAS, Mark; 2005; Adjunct Assistant Professor of Environmental Science; Ph.D.; 2001; University of Guelph.

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ZHU, Meijun; 2012; Adjunct Faculty of Food Science; Ph.D.; 2004; Iowa State University.

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ZIMMER, Martin J.; 1990; Adjunct Associate Professor of Range Management; M.Ed.; 1988; University of Idaho.

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ABRAHAM, Terry P.; 1984-2005; Head Emeritus, Department of Special Collections and Archives in the University Library, with rank of Professor.

ADAMS, David L.; 1971-1998; Professor Emeritus of Forest Resources.

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ADELE, Gail H.; 1974-2003; Professor Emerita of Mathematics.

ALLDAFFER, Robert C.; 1955-1983; Extension Professor Emeritus.

ANDEREGG, Doyle E.; 1967-1999; Professor of Biology and Associate Dean Emeritus.

ANDERSON, Bruce C.; 1978-2005; Professor Emeritus of Pathology.

ANDERSON, Clifton E.; 1972-1997; Extension Professor of Agricultural Information.

ARAJI, Ahmed; 1968-2011; Professor Emeritus of Agricultural Economics.

BAIRD, Dennis W.; 1974-2007; Social Science Librarian Emeritus with rank of Professor.

BALDRIDGE, Donald C.; 1969-1987; Professor Emeritus of History.

BALDRIDGE, Jo A.; 1972-1991; Associate Registrar Emerita.

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BATTAGLIA, Richard A.; 1991-2010; Professor Emeritus of Animal Science.

BEESON, Richard W.; 1972-1994; Professor Emeritus of Sociology.

BELL, Thomas O.; 1966-1994; Professor of Education and Provost Emeritus.

BELT, George H. Jr.; 1965-1998; Professor Emeritus of Forest Resources.

BENNETT, David H.; 1975-2003; Professor Emeritus of Fishery Resources.

BENNETT, Earl H. II; 1977-2003; Professor of Geology and Dean Emeritus.

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BIKKIE, James A.; 1973-1995; Professor Emeritus of Vocational Teacher Education.

BILLER, Ernest F.; 1991-2012; Professor Emeritus of Adult, Career, and Technology Education.

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BIZEAU, Elwood G.; 1967-1985; Professor Emeritus of Wildlife Resources.

BLACK, James L.; 1966-1984; Professor Emeritus of Adult Education.

BLANTON, Paul L.; 1958-1990; Professor of Architecture and Dean Emeritus.

BLOOMSBURG, George L.; 1961-1992; Professor Emeritus of Agricultural Engineering.

BOBECK, Gene E.; 1967-1995; Professor Emeritus of Metallurgy.

BOHL, Williams H.; 1990-2014; Extension Professor Emeritus.

BOLZ, Darrell G.; 1971-1999; Extension Professor Emeritus.

BOWLER, William B. Jr.; 1978-2006; Professor Emeritus of Architecture.

BRAMWELL, Keith A.; 1979-2002; Extension Professor Emeritus.

BRANDAL, Willy; 1980-2006; Professor Emeritus of Mathematics.

BRANEN, A. Larry; 1983-2010; Professor of Food Science and Associate Vice President of Northern Idaho Emeritus.

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BRANNON, Ernest L.; 1988-2002; Professor Emeritus of Fishery Resources and Animal Science.

BRECKENRIDGE, Roy M.; 1978-2013; Professor Emeritus of Geology.

BRIDGES, George; 1985-2001; Professor Emeritus of Foreign Languages and Literatures.

BROCKWAY, Charles E.; 1965-1998; Professor Emeritus of Agricultural Engineering and Civil Engineering.

BULL, Richard C.; 1967-1979; Professor Emeritus of Animal Science.

BUNTING, Stephen C.; 1978-2014; Professor Emeritus of Forest and Fire Ecology.

BURCAW, G. Ellis; 1966-1988; Professor Emeritus of Anthropology.

BUSH, John H. Jr.; 1974-2002; Professor Emeritus of Geology.

CALNON, Mark B.; 1945-1973; Extension Professor Emeritus.

CALVERT, James E. Jr.; 1967-2001; Professor of Mathematics and Department Chair Emeritus.

CAMPBELL, Howard E.; 1963-1981; Professor Emeritus of Mathematics.

CANNEY, George F.; 1978-2007; Professor Emeritus of Education.

CARLSON, John E.; 1970-1999; Professor Emeritus of Rural Sociology.

CARPENTER, Gene P.; 1966-1997; Research and Extension Professor Emeritus of Entomology.

CARVER, Robert D.; 1991-2001; Extension Professor Emeritus of Agricultural Economics.

CASSETTO, James M.; 1976-2006; Professor Emeritus of Industrial Technology Education.

CAUDILLO, Jess D.; 1978-2003; Professor Emeritus of Recreation.

CHAMBERLAIN, Valerie E.; 1986-2003; Professor Emerita of Geochemistry.

CHAN, Samuel S. M.; 1963-1989; Professor Emeritus of Mining Engineering.

CHANG, (Karl)Kang-Tsung; 1986-2005; Professor Emeritus of Geography and Cartography.

CHAPMAN, Frederick L.; 1977-1993; Professor Emeritus of Theatre Arts.

CHAVEZ, Edmund M.; 1951-1987; Professor of Communication and Manager of W. H. Kibbie/ASUI Activity Center Emeritus.

CHELDELIN, Kathleen C.; 1982-2002; Extension Professor Emerita.

CHRISTENSON, Charles O.; 1964-1999; Professor Emeritus of Mathematics.

CHRYSLER, Russell L.; 1959-1974; Professor of Marketing and Department Chair Emeritus.

COBB, John I.; 1969-2009; Professor Emeritus of Mathematics.

COCHRAN, Ruth; 1990-2005; Reference Librarian Emerita with rank of Assistant Professor.

COFFMAN, Richard B.; 1978-2010; Professor Emeritus of Economics.

COLE, J. Roger; 1976-2013; Professor Emeritus of Music.

COLSON, Dennis C.; 1975-2007; Professor Emeritus of Law.

COLT, W. Michael; 1979-2002; Extension Professor Emeritus of Horticulture.

CONDITT, Paul C.; 1961-1994; Gifts Librarian Emeritus with rank of Professor.

COOK, Wilbur F.; 1980-2006; Extension Professor Emeritus.

COOLEY, James H.; 1957-1992; Professor Emeritus of Chemistry.

COOMBS, Don. H.; 1973-1998; Professor Emeritus of Communication.

COSTELLO, Patrick D.; 1999-2013; Professor Emeritus of Law.

CRAWFORD, Donald L.; 1976-2006; Professor Emeritus of Microbiology.

CRAWFORD, Ronald L.; 1987-2010; Professor of Microbiology, Molecular Biology Biochemistry and Director of the Environmental Biotechnology Institute Emeritus.

CROSS, Virgil S.; 1940-1967; Extension Professor Emeritus.

CROWLEY, Donald W.; 1983-2013; Professor Emeritus of Political Science.

CURTIS, Mary Lee; 1984-2003; Extension Professor Emerita.

CZUCHAJOWSKI, Leszek; 1986-2005; Professor Emeritus of Chemistry.

DACEY, Jill A.; 1984-2010; Professor Emerita of Art and Design.

DAHL, Becky L.; 1971-2002; Extension Professor Emerita.

DAHMEN, Jerome J.; 1947-1985; Professor Emeritus of Animal Science.

DALLIMORE, Clarence E.; 1955-1983; Extension Professor Emeritus.

DANGERFIELD, Byron J.; 1981-2006; Professor Emeritus of Management Information Systems and Dean Emeritus.

DAVIS, Jack L.; 1967-1992; Professor Emeritus of English.

DAVIS, James R.; 1968-1999; Research Professor Emeritus of Plant Pathology.

DAVIS, John C.; 1993-2014; Professor Emeritus of Teacher Education.

DAVIS, Karen R.; 1969-1987; Research Professor Emerita of Home Economics Research.

DAVIS, Raynold D.; 1961-1989; Extension Professor Emeritus of Agriculture.

DAVIS, Richard C.; 1987-2002; Manuscripts-Archives Librarian Emeritus with rank of Professor.

DAWSON, Jack L.; 1982-2008; Professor Emeritus of Education and Dean Emeritus.

DEAN, Leslie L.; 1950-1975; Research Professor Emeritus of Plant Science.

DELKA, Gary G.; 1990-2004; Professor Emeritus of Educational Administration.

DEMUTH, Howard B.; 1985-1997; Professor Emeritus of Electrical Engineering.

DEN BRAVEN, Karen R.; 1987-2014; Professor Emerita of Mechanical Engineering and Director Emerita of NIATT.

DESANTIS, Mark E.; 1978-2007; Professor Emeritus of Zoology.

DESHAZER, James A.; 1991-2001; Professor of Agricultural Engineering and Department Head Emeritus.

DEUTCHMAN, Philip A.; 1968-2002; Professor Emeritus of Physics.

DIERKER, Paul F.; 1966-1998; Professor Emeritus of Mathematics.

DINOTO, Michael J.; 1970-2003; Professor Emeritus of Economics.

DOERANN, Judith; 1975-1998; Professor Emerita of Educational Administration and of Statistics.

DOWDING, Edwin A.; 1975-1999; Professor Emeritus of Agricultural Engineering.

DOZIER, Richard J.; 1971-2002; Professor Emeritus of English.

DUNHAM, Charles S.; 1959-1989; Extension Professor Emeritus of Agriculture.

DUNNAM, Anthony K.; 1979-1998; Professor Emeritus of Computer Science.

DUPREE, Mary H.; 1971-2008; Professor Emeritus of Music.

DUREN, Edward P.; 1960-1998; Extension Professor Emeritus of Animal Science.

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FIEZ, Edward A.; 1970-1999; Extension Professor Emeritus of Animal Science.

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FORCE, Ronald W.; 1982-2006; Dean Emeritus of Library Services with rank of Professor.

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HALL, William B.; 1965-1991; Professor Emeritus of Geology.

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KESSEL, Elizabeth M.; 1965-1987; Professor Emerita of Home Economics.

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KOHL, Fred E.; 1950-1983; Extension Professor Emeritus.

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KUSKA, James J.; 1973-2002; Professor Emeritus of Landscape Architecture.

LABAR, George W.; 1995-2004; Professor Emeritus of Fishery Resources.

LAPEYRE, Elisabeth; 1975-1999; Professor Emerita of Foreign Languages and Literatures.

LASKOWSKI, Michael B.; 1988-2009; Professor Emeritus of Physiology.

LASSEY, Marie L.; 1975-1996; Professor Emerita of Sociology.

LATHEN, Calvin W.; 1967-2003; Professor Emeritus of Recreation and Director Emeritus.

LAWROSKI, Mary A.; 1965-1998; Extension Professor Emerita.

LEMMON, E. Clark; 1985-2006; Professor Emeritus of Mechanical Engineering.

LEONARD, Robert R.; 1966-1990; University Physician and Director of the Student Health Service Emeritus.

LEWIS, D. Craig; 1975-2007; Professor Emeritus of Law.

LIDDIL, Audrey C.; 1988-2014; Extension Professor Emerita.

LINCOLN, Stuart D.; 1976-1996; Professor Emeritus of Veterinary Science.

LIU, Chia-Tsang; 1976-1999; Extension Professor Emeritus of Crop Science.

LOGAN, Norman R.; 1947-1977; Professor Emeritus of Music.

LONG, Roger B.; 1966-1997; Professor Emeritus of Agricultural Economics.

LOTTMAN, Robert P.; 1966-1991; Professor Emeritus of Civil Engineering.

LOUCKS, Robert R.; 1967-1999; Extension Professor Emeritus.

LUFT, LeRoy D.; 1989-2001; Professor Emeritus of Agricultural Economics.

LUSCHNIG, Cecelia E.; 1975-2003; Professor Emerita of Foreign Languages and Literatures.

LYLE, Corinne M.; 1973-1998; Extension Professor Emerita of Rural Sociology.

LYMAN, R. Ashley; 1976-2007; Professor Emeritus of Economics and Statistics.

MACDONALD, James; 1975-2010; Professor Emeritus of Law.

MACHLIS, Gary E.; 1979-2013; Professor Emeritus of Forest Resources.

MACPHEE, Craig; 1957-1981; Professor Emeritus of Fishery Resources.

MAHONEY, Ron; 1983-2010; Extension Professor Emeritus.

MAKI, Gary; 1969-2009; Professor of Electrical and Computer Engineering and Director of CAMBR Emeritus.

MANKIN, J. D.; 1971-1988; Extension Professor Emeritus of Animal Science.

MARLER, Frankie L.; 1974-1999; Extension Professor Emerita.

MARTEN, Dwaine J.; 1964-1994; Professor Emeritus of Physical Education.

MARTIN, Robert G.; 1990-2007; Professor Emeritus of Sociology.

MAUCHLEY, G. Jay; 1978-2009; Professor Emeritus of Music.

MAUCHLEY, Sandra L.; 1970-2003; Professor Emerita of Music.

MCCAFFREY, Joseph P.; 1981-2009; Professor Emeritus of Entomology.

MCCANDLESS, Carol M.; 1955-1990; Extension Professor Emerita of Home Economics.

MCCLURE, Wendy R.; 1987-2014; Professor Emerita of Architecture.

MCCROSKEY, William B.; 1964-1992; Professor Emeritus of Architecture.

MCCURDY, Sandra M.; 1999-2014; Extension Professor Emerita of Family and Consumer Sciences.

MCDOLE, Robert E.; 1969-1990; Extension Professor Emeritus of Soils.

MCKEAN, Thomas A.; 1974-2003; Professor Emeritus of Zoology.

MCKETTA, Charles W.; 1977-2002; Research Professor Emeritus of Forest Resources.

MEAD, Rodney A.; 1968-1999; Professor Emeritus of Zoology.

MEDEMA, E. Lee; 1977-1998; Professor Emeritus of Forest Resources.

MEDSKER, Shirley R.; 1967-1993; Professor Emerita of Home Economics.

MELDRUM, Barbara R.; 1965-1996; Professor Emerita of English.

MENSER, Harry A.; 1980-1987; Research Professor of Horticulture Emeritus & Superintendent of the Sandpoint Research & Extension Center Emeritus.

MERK, Lawrence H.; 1967-2001; Professor of Business and Director Emeritus Center for Business Development and Research.

MICHALSON, Edgar L.; 1969-1995; Professor Emeritus of Agricultural Economics.

MICHEL, Elinor L.; 1967-2003; Professor Emerita of Education.

MIH, Dora H.; 1972-1996; Reference Librarian Emerita with rank of Professor.

MILES, Paul L.; 1965-1995; Professor Emeritus of Communication.

MILLER, Bruce L.; 1986-2012; Professor Emeritus of Microbiology, Molecular Biology, and Biochemistry.

MILLER, John C.; 1970-2008; Professor Emeritus of Animal Science.

MILLER, Laura J.; 1970-1990; Professor Emerita of Home Economics.

MILLER, Robert W.; 1986-2001; Professor Emeritus of Music.

MILLER, Stanley M.; 1985-2011; Professor Emeritus of Geological Engineering.

MILLER, Stephanie S.; 2001-2012; Professor Emerita of Theatre and Film.

MILLER, Thomas H.; 1983-1999; Professor Emeritus of Computer Science.

MILLIGAN, James H.; 1972-2001; Professor Emeritus of Civil Engineering.

MINK, Leland L.; 1978-2002; Professor of Geology and Director, Idaho Water Resources Research Institute Emeritus.

MOHAN, Philip J.; 1971-1999; Professor Emeritus of Psychology.

MOLNAU, Myron P.; 1969-1999; Professor Emeritus of Agricultural Engineering.

MONTGOMERY, Beverly A.; 1969-1999; Extension Professor Emerita.

MOODY, Michael W.; 1972-2006; Professor Emeritus of Foreign Languages and Literatures (Spanish).

MOORE, James A.; 1974-2002; Professor Emeritus of Forest Resources.

MORIN, Bernice M.; 1944-1983; Director of Food Services and Adjunct Professor of Home Economics Emerita.

MORRIS, John (Jack) S.; 1973-2011; Professor Emeritus of Management and Dean Emeritus.

MOWRY, Thomas M.; 1989-2007; Professor Emeritus of Entomology.

MUNDT, John P.; 1985-2002; Professor Emeritus of Agricultural Education.

MUNETA, Paul; 1959-1996; Professor Emeritus of Food Science.

MURRAY, Glen A.; 1967-1999; Professor Emeritus of Agronomy and Crop Physiology.

NASKALI, Richard J.; 1967-2003; Arboretum Director with rank of Professor Emeritus.

NAYLOR, Denny V.; 1966-1999; Professor Emeritus of Soil Science.

NEHER, Richard S.; 1974-1998; Professor Emeritus of Music.

NELSON, Charles K.; 1969-1998; Professor Emeritus of Computer Science.

NELSON, Jack K.; 1990-1998; Professor Emeritus of Education.

NELSON, Lewis Jr.; 1978-1996; Extension Professor Emeritus of Wildlife Resources.

NEUENSCHWANDER, Leon F.; 1976-2002; Professor Emeritus of Forest Resources.

NEUHAUS, Ralph J.; 1967-2009; Professor Emeritus of Mathematics.

NEWCOMB, Shirley A.; 1949-1988; Professor Emerita of Home Economics.

NIELSEN, Ralph; 1964-1994; Special Projects, Librarian Emeritus with rank of Professor.

NILES, Marcia S.; 1991-2006; Professor Emeritus of Accounting and Department Chair Emeritus.

NYSTROM, Esther A.; 1944-1969; Extension Professor Emerita.

OHLENSEHLEN, Robert M.; 1978-2005; Extension Professor Emeritus.

OHMS, Richard E.; 1957-1983; Extension Professor Emeritus.

O'KEEFFE, Lawrence E.; 1965-1998; Professor of Entomology and Department Head Emeritus.

OLSON, Norman C.; 1971-1989; Professor of Management, Department Head, and Dean Emeritus.

OLSON, Philip D.; 1973-2005; Professor Emeritus of Business.

OLSSON, Kurt O.; 1974-2009; Professor of English and Department Chair Emeritus.

OMAN, Paul W.; 1984-2014; Professor Emeritus of Computer Science.

OSBORNE, Harold L.; 1972-2003; Extension Professor Emeritus of Forest Resources and Forest Manager.

OSIENSKY, James L.; 1985-2013; Professor Emeritus of Hydrogeology.

OTHBERG, Kurt L.; 1980-2011; Professor Emeritus of Geology.

OWEN, Glenn B.; 1964-1977; Director of Institutional Services Emeritus.

OWENS, Connie; 1982-2002; Lecturer Emerita in Communication.

PACE, Lois W.; 1972-1981; Extension Professor Emerita.

PALS, Douglas A.; 1977-2003; Professor Emeritus of Agricultural Education.

PANTING, Rauhn R.; 1978-2013; Extension Professor Emeritus.

PARISH, William R.; 1947-1983; Professor Emeritus of Electrical Engineering.

PARK, Jin Y.; 1979-2011; Professor Emeritus of Chemical Engineering.

PARKS, William H.; 1972-1994; Professor Emeritus of Business Strategies.

PARR, Joan K.; 1971-2004; Extension Professor Emerita.

PARTON, Robert R.; 1967-1988; Director of Housing and Food Service Emeritus.

PARTRIDGE, Arthur D.; 1960-1997; Professor Emeritus of Forest Resources.

PASSANANTE, Joy; 1977-2014; Professor Emerita of English.

PEAVY, Howard; 1993-2010; Professor Emeritus of Civil Engineering and Associate Dean Emeritus.

PEDRAS, Melvin J.; 1985-2006; Professor Emeritus of Education.

PEEBLES, Stephen L.; 1960-1996; Extension Professor Emeritus.

PEEK, James M.; 1973-1999; Professor Emeritus of Wildlife Resources.

PERRAUD, Louis A.; 1982-2008; Professor Emeritus of Foreign Languages and Literatures.

PETERSON, Charles L.; 1973-2006; Professor Emeritus of Biological and Agricultural Engineering.

PETERSON, Floyd H.; 1969-1989; Professor of Music and Director Emeritus.

PETERSON, Hazel C.; 1971-1987; Professor Emerita of Physical Education.

PETERSON, James N.; 1975-2000; Professor Emeritus of Electrical Engineering.

PLACE, T. Alan; 1970-2002; Professor Emeritus of Mechanical Engineering.

POLLARD, Richard R.; 1990-2011; Professor Emeritus of Educational Administration.

POTRATZ, Clarence J.; 1966-1994; Professor of Mathematics and Statistics and Department Chair Emeritus.

POTTER, Gretchen L.; 1966-1976; Professor Emerita of Home Economics.

PRIGGE, G. Raymond; 1975-1999; Extension Professor Emeritus of Agriculture.

PRISBREY, Keith A.; 1976-2007; Professor Emeritus of Metallurgy.

PRITCHETT, Jane; 1981-2002; Lecturer Emerita in Communication.

PROBASCO, Robert C.; 1968-1999; Professor Emeritus of Computer Science.

PYLE, Jan M.; 1972-1997; Catalog Librarian Emeritus with rank of Professor.

RABE, Fred W.; 1965-1992; Professor Emeritus of Zoology.

RALSTON, Dale R.; 1970-1999; Professor Emeritus of Hydrology.

REECE, James R.; 1970-2008; Professor Emeritus of Foreign Languages and Literatures and Department Chair Emeritus.

REESE, D. Nels; 1979-2008; Professor Emeritus of Architecture.

REESE, Kerry P.; 1984-2014; Professor Emeritus of Fish and Wildlife Sciences and Department Head Emeritus.

REID, Rolland R.; 1955-1994; Professor of Geology, Department Head, and Dean Emeritus.

REXFORD, Villa R.; 1962-1996; Extension Professor Emerita.

REYNOLDSON, Roger L.; 1985-1998; Professor of Educational Administration and Director of the University of Idaho Boise Center Emeritus.

RIGAS, Anthony L.; 1966-1993; Professor of Electrical Engineering and Director of Engineering Outreach Emeritus.

ROBBINS, Jo A.; 1991-2012; Extension Professor Emerita.

ROBERTS, Florence; 1976-1993; Professor Emerita of English.

ROBERTS, Lorin W.; 1957-1991; Professor Emeritus of Botany.

ROBERTSON, Larry D.; 1986-2003; Professor Emeritus of Plant Genetics.

ROSE, Alan; 1969-1999; Professor Emeritus of Foreign Languages and Literatures.

ROURKE, Arthur W.; 1972-1999; Professor of Zoology and Department Chair Emeritus.

ROUYER, Alwyn R.; 1970-2003; Professor Emeritus of Political Science.

ROYALTY, William D.; 1969-2002; Professor Emeritus of Mathematics.

RUBY, Mary Lou; 1960-1999; Extension Professor Emerita.

SANDERS, Kenneth D.; 1975-2008; Professor Emeritus of Rangeland Ecology and Management and Range Extension Specialist.

SANDVOL, Larry E.; 1972-2000; Extension Professor Emeritus of Entomology.

SASSER, R. Garth; 1967-1999; Professor Emeritus of Animal Science.

SCHELDORF, Jay J.; 1966-1999; Professor Emeritus of Chemical Engineering.

SCHENK, John A.; 1961-1988; Professor Emeritus of Forest Resources.

SCHERMERHORN, Richard W.; 1971-1989; Professor of Agricultural Economics and Department Head Emeritus.

SCOTT, Roger L.; 2003-2014; Professor Emeritus of Industrial Technology.

SCRIPTER, Sam M. W.; 1971-2002; Professor Emeritus of Geography.

SEARS, Forrest E.; 1966-1997; Professor Emeritus of Theatre Arts.

SHANE, William H.; 1969-1996; Extension Professor Emeritus.

SHARP, D. Wayne; 1963-1999; Extension Professor Emeritus.

SHOWELL, Jean C.; 1980-1996; Extension Professor Emerita.

SIEMS, Peter L.; 1965-1997; Professor Emeritus of Geology.

SIMMONS, George M.; 1975-1998; Professor Emeritus of Chemical Engineering.

SIPAHIGIL, Teoman; 1970-2002; Professor Emeritus of English.

SKINNER, Lynn J.; 1971-2006; Professor Emeritus of Music Education and Director Emeritus of the University of Idaho Lionel Hampton Jazz Festival.

SLADE, H. Eugene; 1942-1974; Business Manager Emeritus.

SMITH, Arthur D.; 1973-2003; Professor Emeritus of Law.

SMITH, Larry J.; 1980-2009; Extension Professor Emeritus.

SMITH, Lewis B.; 1967-1992; Professor Emeritus of Education.

SMITH, Rosa L.; 1961-2002; Extension Professor Emerita.

SOUTH, Peter J.; 1976-1990; Professor Emeritus of Veterinary Science.

SPEVACEK, Robert J.; 1968-1998; Professor Emeritus of Music.

SPOMER, George G.; 1972-1999; Professor Emeritus of Botany.

STECIAK, Judith A.; 1995-2014; Professor Emerita of Mechanical Engineering.

STEIGER, Monte L.; 1982-2002; Library Associate Dean Emeritus with rank of Professor.

STEINHORST, R. Kirk; 1977-2007; Professor Emeritus of Statistics.

STELLMON, M. William; 1964-1992; Professor Emeritus of Agricultural Information.

STIMPSON, Janice K.; 1971-2010; Extension Professor Emerita.

STOCK, Molly W.; 1974-2006; Professor Emeritus of Forest Resources and Computer Science.

STOLTZ, Robert L.; 1975-2002; Extension Professor Emeritus of Entomology.

STOSZEK, Karel J.; 1975-1999; Professor Emeritus of Forest Resources.

STRANAHAN, Clyde H.; 1942-1974; Extension Professor Emeritus.

STURGUL, John R.; 1992-2009; Professor Emeritus of Mining Engineering.

SUMPTION, Brian F.; 1985-2010; Professor Emeritus of Architecture.

TAYLOR, Roy E.; 1968-1992; Extension Professor Emeritus of Agricultural Engineering.

TELIN, Matt E.; 1968-1995; Registrar Emeritus.

THOMAS, Charles M.; 1959-1990; Extension Professor Emeritus of Agriculture.

THOMAS, Gordon P.; 1984-2010; Professor Emeritus of English.

THOMPSON, Charles J.; 1965-1996; Professor Emeritus of Physical Education.

THOMPSON, David E.; 1999-2007; Professor Emeritus of Mechanical Engineering and Dean Emeritus.

TOVEY, DeVere; 1938-1978; Extension Professor Emeritus.

TOVEY, Weldon R.; 1962-1998; Professor of Engineering Science and Associate Dean Emeritus.

TUNG, Mason; 1962-1990; Professor Emeritus of English.

TURNER, Betty J.; 1975-1988; Extension Professor Emerita of Home Economics.

TYLUTKI, Edmund E.; 1956-1991; Professor Emeritus of Botany.

ULLIMAN, Joseph J.; 1974-1998; Professor Emeritus of Forest Resources.

VAN HOUTEN, Karen J.; 1969-2003; Professor Emerita of Computer Science.

VENT, Herbert J.; 1960-1980; Professor Emeritus of Education.

VETTRUS, Dean L.; 1961-1993; General Manager of ASUI and Student Union Emeritus.

VINCENT, Jack E.; 1994-2008; Borah Professor Emeritus of International Relations.

VON BRAUN, Margrit; 1980-2011; Professor Emerita of Chemical Engineering.

VOORHEES, Jack R.; 1969-1975; Professor of Naval Science and Department Head Emeritus.

VOXMAN, Mary H.; 1982-2003; Senior Instructor Emerita of Mathematics.

VOXMAN, William L.; 1970-2003; Professor Emeritus of Mathematics.

WAGNER, Francis G.; 1992-2012; Professor Emeritus of Forest Products.

WALKER, David J.; 1977-2002; Professor Emeritus of Agricultural Economics.

WALKER, Diane B.; 1968-1999; Professor Emerita of Dance.

WALKER, Norman L.; 1969-1993; Extension Professor Emeritus.

WALLACE, Alfred T.; 1967-2002; Professor Emeritus of Civil Engineering.

WALLENHAUPT, Katherine M.; 1973-1999; Extension Professor Emerita.

WALLINS, Roger P.; 1970-2002; Professor of English and Associate Dean Emeritus.

WANAMAKER, Nancy J.; 1976-2007; Professor Emerita of Family and Consumer Sciences and Department Head Emerita.

WARD, Alton C. S.; 1965-2003; Professor Emeritus of Veterinary Medicine.

WATTENBARGER, David W.; 1969-2001; Extension Professor Emeritus.

WATTS, Frederick J.; 1968-1993; Professor of Civil Engineering and Department Chair Emeritus.

WEBB, Linda I.; 1980-2009; Extension Professor Emerita.

WEGMAN, Jerry L.; 1977-2010; Professor Emeritus of Business Law.

WENNY, David L.; 1979-2005; Professor Emeritus of Forest Regeneration.

WEST, Dennis D.; 1979-2009; Professor Emeritus of Foreign Languages and Literatures (Spanish).

WEST, Joan M.; 1981-2009; Professor Emeritus of Foreign Languages and Literatures (French).

WHARTON, William C.; 1975-2009; Professor Emeritus of Music.

WHITE, Donald R.; 1968-1991; Extension Professor Emeritus of Forest Resources.

WHITE, Florence A.; 1978-1999; Professor Emerita of Education.

WHITLOCK, Alan J.; 1994-2013; Instructor Emeritus of Psychology and Communication Studies.

WIESE, Maurice V.; 1978-2002; Research Professor of Plant Pathology and Chair Emeritus.

WILLETT, Gerald A. Jr.; 1977-1995; Professor Emeritus of Civil Engineering.

WILLIAMS, Barbara C.; 1998-2014; Professor Emerita of Biological and Angricultural Engineering.

WILLIAMS, Doris K.; 1983-1999; Professor Emerita of Family and Consumer Sciences.

WILLIAMS, Larry G.; 1956-1990; Professor Emeritus of Agricultural Engineering.

WILSON, Lucia L.; 1950-1972; Extension Professor Emerita.

WITHERS, Russell V.; 1961-1999; Professor Emeritus of Agricultural Economics.

WOLF, Virginia; 1964-1982; Professor Emerita of Physical Education.

WOOD, Mary Lee; 1964-1999; Extension Professor Emerita of Family and Consumer Sciences.

WOOLSTON, William P.; 1973-2011; Professor Emeritus of Art and Design.

WRAY, George T.; 1969-2002; Professor Emeritus of Art.

WRIGGLE, Larry K.; 1965-1993; Professor Emeritus of Education.

YEH, Wei J.; 1990-2012; Professor Emeritus of Physics.

YOUNG, Nancy J.; 1998-2013; Reference Librarian Emerita with rank of Professor.

ZEIGER, Dinah L.; 2008-2013; Professor Emerita of Journalism and Mass Media.

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