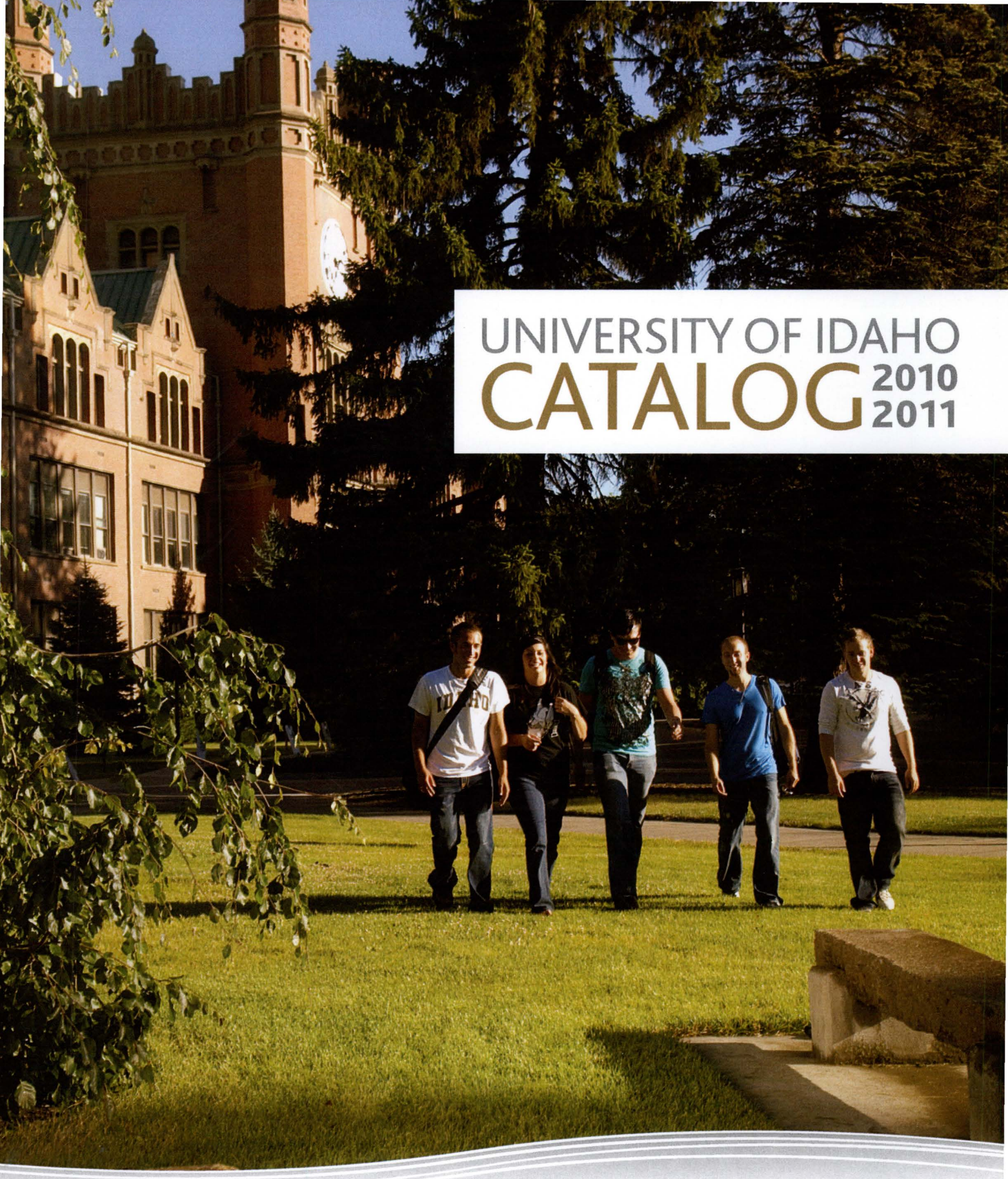

UNIVERSITY OF IDAHO CATALOG 2010 2011

University of Idaho
A LEGACY OF LEADING

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UNIVERSITY OF IDAHO GENERAL CATALOG

2010-2011 Academic Year



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INTRODUCTORY INFORMATION

General Catalog Expiration date: Last day of the Spring 2017 semester

Regents and Administration

(January 2010)

Board of Regents

Paul C. Agidius, *President*, Moscow
Richard Westerberg, *Vice-President*, Preston
Kenneth Edmunds, *Secretary*, Twin Falls
Emma Atchley, Ashton
Rod Lewis, Boise
Tom Luna, *State Superintendent of Public Instruction*, Boise
Don Soltman, Twin Lakes
Milford Terrell, Boise

University Administration

M. Duane Nellis, Ph.D., *President*
Douglas D. Baker, *Ph.D., 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*
Lloyd E. Mues, *M.A., Vice President for Finance and Administration*
Jeanne S. Christiansen, *Ph.D., Vice Provost for Academic Affairs*
Bruce Pitman, *Ph.D., Vice Provost for Student Affairs and Dean of Students*
Steven R. Neiheisel, *Ph.D., Assistant Vice President for Enrollment Management*
Richard Reardon *Ph.D.*, Interim *Associate Vice President and Center Executive Officer, Coeur d'Alene*
Trudy J. Anderson, *Ph.D., Associate Vice President and Center Executive Officer, Boise*
Robert W. Smith, *Ph.D., Associate Vice President and Center Executive Officer, Idaho Falls*
Mark A. Edwards, *Ph.D., Assistant to the President for Diversity, Equity and Community; and Associate Vice Provost for Student Affairs*
Lynn N. Baird, *M.P.A., Dean – University Library*
Nancy A. Krogh, *Ed.D., University Registrar*
Daniel D. Davenport, *Ph.D., Director of Student Financial Aid*
Michael E. Loehring, *M.S., Director of Undergraduate Admissions*

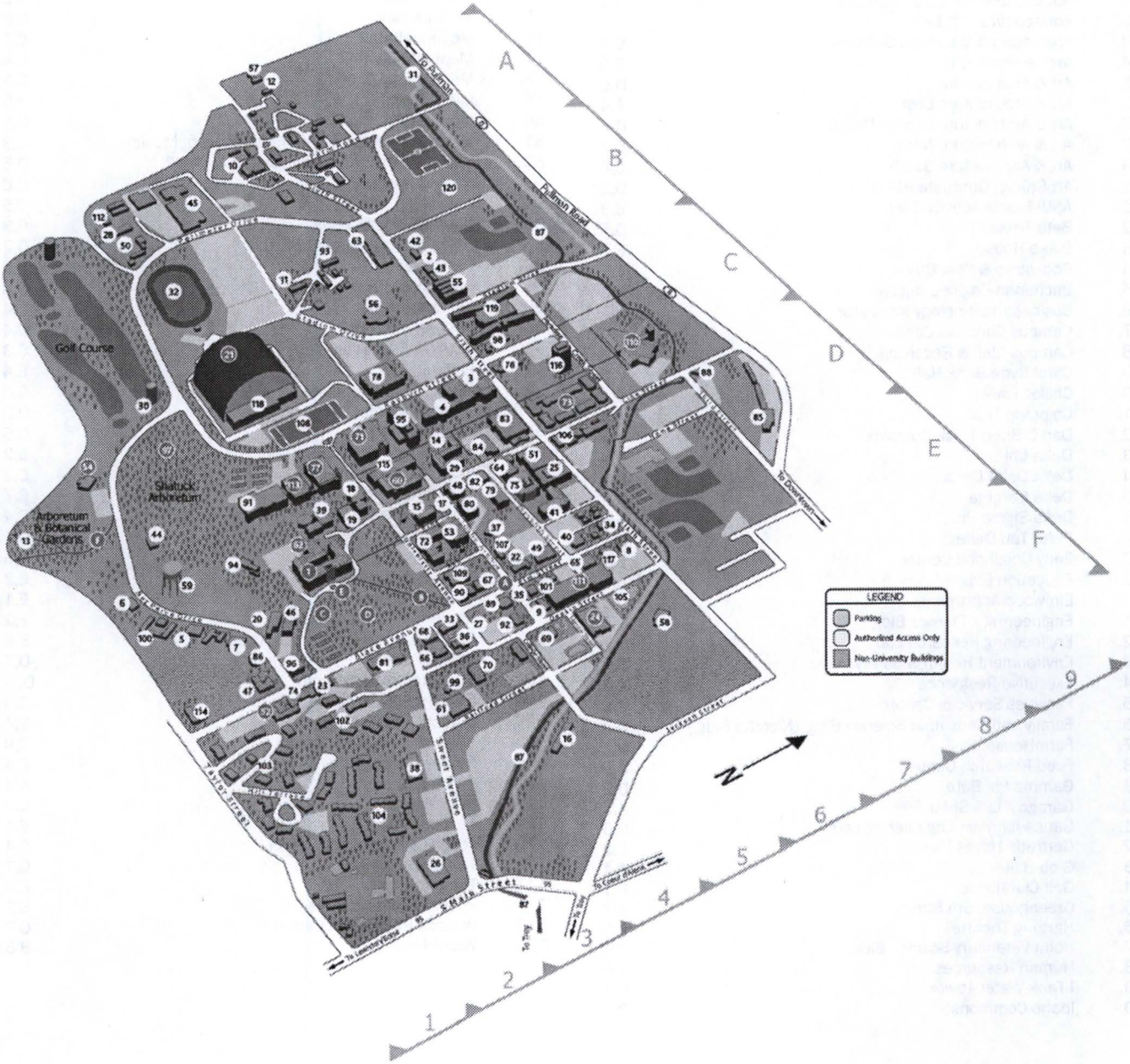
Colleges

Agricultural and Life Sciences – John E. Hammel, *Ph.D., Dean*
Art and Architecture – Mark E. Hoversten, M.F.A., *Dean*
Business and Economics – John S. Morris, *Ph.D., Dean*
Education – Cori Mantle-Bromley, *Ph.D., Dean*
Engineering – Donald M. Blackketter, *Ph.D., Dean*
Graduate Studies – Nilsa Bosque-Perez, *Interim Dean*
Law – Donald L. Burnett, Jr., *LL.M., Dean*
Letters, Arts, and Social Sciences – Katherine G. Aiken, *Ph.D., Dean*
Natural Resources – Kurt Pregitzer, *Ph.D., Dean*
Science – Scott A. Wood, *Ph.D., Dean*

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 http://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.

Campus Map


A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
N
Golf Course
Shatuck Arboretum
Arboretum & Botanical Gardens
Pullman Road
To Pullman
To Downtown
Sweet Avenue
Taylor Street
Avenue Street
S Main Street
LEGEND
Parking
Authorized Access Only
Non-University Buildings

Map Key

1.	Administration Bldg.	D,2
2.	Ag. & Ext. Education	B,7
3.	Agricultural Biotechnology Bldg.	C,6
4.	Agricultural Science Bldg.	C,5
5.	Alpha Gamma Delta	C,1
6.	Alpha Gamma Rho	C,1
7.	Alpha Kappa Lambda	D,1
8.	Alpha Phi	E,6
9.	Alpha Tau Omega	C,4
10.	Animal Research Pavilion	A,5
11.	Aquaculture Research Institute	B,5
12.	Aquaculture Wet Lab	A,6
13.	Arboretum & Botanical Gardens	C,1
14.	Archie Phinney Hall	C,5
15.	Art & Architecture	D,5
16.	Art & Architecture East	F,4
17.	Art & Architecture Interior Design	D,5
18.	Art & Architecture North	C,4
19.	Art & Architecture South	C,4
20.	Art Studio, Graduate (GAS)	D,2
21.	ASUI-Kibbie Activity Center	B,3
22.	Beta Theta Pi	D,5
23.	Blake House	E,2
24.	Bookstore & Post Office	E,5
25.	Buchanan Engineering Lab	D,6
26.	Business Technology Incubator	F,2
27.	Campus Christian Center	E,4
28.	Campus Mail & Receiving	A,3
29.	Carol Ryrie Brink Hall	D,5
30.	Chiller Tower	B,2
31.	Chipman Trail	A,9
32.	Dan O'Brien Track Complex	A,3
33.	Delta Chi	E,4
34.	Delta Delta Delta	D,6
35.	Delta Gamma	E,5
36.	Delta Sigma Phi	E,4
37.	Delta Tau Delta	D,5
38.	Early Childhood Center	E,2
39.	Education Bldg	C,3
40.	Elmwood Apartments	D,6
41.	Engineering / Physics Bldg	D,6
42.	Engineering Research Lab	B,7
43.	Environment Health & Safety	B,7
44.	Executive Residence	C,1
45.	Facilities Services Center	A,4
46.	Family and Consumer Science Bldg. (Niccolls Bldg.)	D,2
47.	FarmHouse	D,2
48.	Food Research Center	D,5
49.	Gamma Phi Beta	D,5
50.	Garage / LES Shop	A,2
51.	Gauss-Johnson Engineering Lab	D,6
52.	Gertrude Hayes Hall	E,2
53.	Gibb Hall	D,4
54.	Golf Clubhouse	B,1
55.	Greenhouse, 6th Street	B,7
56.	Hartung Theatre	B,5
57.	Holm Veterinary Science Bldg.	A,6
58.	Human Resources	E,6
59.	I Tank Water Tower	C,1
60.	Idaho Commons	C,4
61.	Industrial Technology Education Bldg.	E,3
62.	J. A. Albertson Bldg.	D,3
63.	J. W. Martin Lab	B,6
64.	Janssen Engineering Bldg.	D,6
65.	Kappa Alpha Theta	E,6
66.	Kappa Delta	E,3
67.	Kappa Kappa Gamma	D,5
68.	Kappa Sigma	E,3
69.	Lambda Chi Alpha	E,5
70.	LDS Institute	E,4
71.	Library	C,4
72.	Life Sciences South	D,4
73.	Living & Learning Community	C,7
74.	Mary Forney Hall	E,2
75.	McClure Hall	D,6
76.	McConnell Hall	C,7
77.	Memorial Gym	C,4
78.	Menard Law Bldg	C,5
79.	Mines Bldg.	D,5
80.	Morrill Hall	D,5
81.	Music Bldg. (Lionel Hampton School of Music)	E,3
82.	Native American Student Center & CAMP	D,5
83.	Natural Resources Bldg.	C,6
84.	Navy Bldg.	C,5
85.	North Campus Center	D,9
86.	Office of Development Bldg.	D,2
87.	Paradise Path	F,3
88.	Parking and Transportation Services	D,8
89.	Phi Delta Theta	E,4
90.	Phi Gamma Delta	D,4
91.	Physical Education Bldg.	C,3
92.	Pi Beta Phi	E,4
93.	Poultry Hill Warehouse	B,6
94.	Radio-TV Center	D,2
95.	Renfrew Hall	C,5
96.	Ridenbaugh Hall (Music Annex)	E,2
97.	Shattuck Aboretum	C,2
98.	Shoup Hall	C,7
99.	Sigma Alpha Epsilon	E,4
100.	Sigma Chi	D,1
101.	Sigma Nu	E,5
102.	South Hill Apartments	E,2
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107.	Steel House Community	D, 5
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109.	Student Health Center	E,4
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114.	Targhee Hall	E,1
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116.	Theophilus Tower	C,7
117.	Theta Chi	E,6
118.	Vandal Athletic Center	B,3
119.	Wallace Residential Center	C,7
120.	Wicks Field	B,8

ACADEMIC CALENDAR FOR 2010-2011

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

Summer 2010

Monday, May 17	Beginning of Session I
Monday, May 31	Memorial Day – classes DO NOT meet
Monday, June 14	Beginning of Session II
Monday, June 28	Beginning of Session III – 6 Weeks
Monday, July 5	Independence Day – classes DO NOT meet
Monday, July 12	Beginning of Session III – 4 Weeks
Friday, Aug. 6	Last day of Classes

Fall Semester 2010

Thur-Sat, Aug. 12-14	WWAMI orientation
Monday, Aug, 16	WWAMI classes begin
Monday, Aug. 23	Classes begin (7:30 a.m.)
Monday, Aug. 30	Last day to add course or change course section on-line
Monday, Sept. 6	Labor Day – classes DO NOT meet
Friday, Sept. 17	Last day to drop a course without having a grade of 'W' recorded (the deadline for accelerated or short courses is when 12.5 percent of the class is completed)
Friday, Oct.29	Last day to withdraw from a course or from the university (the deadline for accelerated or short courses is when less than 60 percent of the class is completed) Last day to add a course with instructor permission
Mon-Fri, Nov. 22-26	Fall recess
Mon-Fri, Dec. 6-10	No-examination week College of Law finals begin
Mon-Fri, Dec. 6-17	WWAMI final examinations
Saturday, Dec. 11	Commencement
Mon-Fri, Dec. 13-17	Final examinations
Saturday, Dec. 18	Final examinations for online classes which have in-person finals Close of Fall semester (5:30 p.m.)

Intersession 2010-2011

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

Saturday, Dec. 18	Classes begin (7:30 a.m.)
Tuesday, Jan. 11	Close of Intersession (5:30 p.m.)

Spring Semester 2011

Thursday, Jan 6	WWAMI classes begin
Monday, Jan. 10	Law classes begin (7:30 a.m.)
Wednesday, Jan. 12	Classes begin (7:30 a.m.)
Monday, Jan. 17	Martin Luther King/Human Rights Day – Classes DO NOT meet
Thursday, Jan. 20	Last day to add course or change course section on-line
Thursday, Feb. 10	Last day to drop a course without having a grade of 'W' recorded (the deadline for accelerated or short courses is when 12.5 percent of the class is completed)
Monday, Feb. 21	Presidents' Day – classes DO NOT meet
Mon-Fri, March 14-18	Spring recess
Thursday, March 31	Last day to withdraw from a course or from the university (the deadline for accelerated or short courses is when less than 60 percent of the class is completed) Last day to add a course with instructor permission
Mon-Fri, May 2-6	No-examination week College of Law finals begin
Mon-Fri, May 2 -11	WWAMI final examinations
Mon-Fri, May 9-13	Final examinations
Saturday, May 14	Commencement

THE UNIVERSITY

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, architecture, engineering, natural resources, foreign languages, and law.

Additional university responsibilities include programs in business, economics, and education as well as the regional medical and veterinary medical education programs in which the state participates.

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.

Each year over 11,900 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. There are more than 920 faculty members in teaching and research, and 2,200 staff and professional personnel.

The University Library and the Law Library contain over 2 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 Moscow campus and adjacent farms cover nearly 800 acres. Other university lands, including the nearby university farms and experimental forests, exceed 10,000 acres.

The university is proud of its friendly campus atmosphere and sense of community. For example, the tradition of "Hello Walk" leading to the Administration Building dates from the 1920s, when the university president greeted students and members of the faculty and staff with a warm hello and friendly smile on his way to work. By end of summer, 2007 the university will have granted more than 100,000 degrees since its founding, including more than 2,700 in 2006.

The feeling of camaraderie that pervades the campus extends to Moscow, the university's "hometown." It is a thriving community of 21,000 friendly people 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: 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

1. **Type of Institution**

   The University of Idaho is a high research activity, land-grant institution committed to undergraduate and graduate-research education with extension services responsive to Idaho and the region's business and community needs. The university is also responsible for regional medical and veterinary medical education programs in which the state of Idaho participates.

   The University of Idaho will formulate its academic plan and generate programs with primary emphasis on agriculture, natural resources, metallurgy, engineering, architecture, law, foreign languages, teacher preparation and international programs related to the foregoing. The University of Idaho will give continuing emphasis in the areas of business, education liberal arts and physical, life, and social sciences, which also provide the core curriculum or general education portion of the curriculum.

2. **Programs and Services***

   Baccalaureate Education: Offers a wide range of baccalaureate degrees and professional programs.

   Graduate-Research: Offers a wide range of masters, doctoral and professional programs and also coordinates and conducts extensive research programs that are consistent with state needs

   Extension Services, Continuing Education and Distance Learning: Supports extension offices throughout the state in cooperation with federal, state and county governments, provides life-long learning opportunities and uses a variety of delivery methods to meet the needs of select, yet diverse constituencies in the state and region

   Associate Education: None

   Certificates/Diplomas: Offers academic certificates representing a body of knowledge that do not lead to a degree.

   Technical and Workforce Training: None

3. **Constituencies Served**

   The institution serves students, business and industry, the professions, and public sector groups throughout the state and region as well as diverse and special constituencies. The university also has specific responsibilities in research and extension programs related to its land-grant functions. The University of Idaho works in collaboration with other state and regional post-secondary institutions in serving these constituencies.

** Programs and Services are listed in order of emphasis.*

Vision, Values, and Directions

The University of Idaho is an internationally recognized land-grant institution combining research, graduate, and professional education with a strong undergraduate base in the liberal arts and sciences.

Our teaching and learning activities seek to engage every student in a transformative journey of discovery and understanding. Our 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 outreach and engagement facilitates lifelong learning and energizes the development of prosperous and environmentally sound communities, while enhancing the relevance and excellence of our academic enterprise. Programs in the arts and athletics aspire to high levels of accomplishment and visibility.

Our work is shaped by a passion for knowledge, innovation and creativity, by the rigor of high academic and ethical standards, by the attainment of each individual's full human potential, by the enrichment generated through diversity, and by the dissolution of cultural and organizational barriers. We are committed to improving our community, the

communities we serve, and the facilities necessary for us to fulfill our vision and mission.

We emphasize quality and access, focusing our efforts on sustaining strong programs and investing resources in strategic directions that advance the interests of Idaho in an increasingly interdependent and competitive world. Through collaboration across strong academic disciplines, and through the creation of public, private, and community partnerships, we will undertake bold initiatives to promote science, technology, and their applications; to invigorate the liberal arts and sciences; to catalyze entrepreneurial innovation; to steward the natural environment; and to develop the design, lifestyles and civic infrastructures of sustainable communities.

Purpose, Functions, and Objectives of the University of Idaho

The highest aspiration of a university is to imbue the human mind with knowledge, tolerance, and vision, and to stimulate a lasting attitude of inquiry. The University of Idaho shares this aspiration with universities everywhere. The particular purpose, functions, and objectives of the university have been defined as follows:

Purpose. In the widest sense, the purpose of the University of Idaho, a publicly supported comprehensive land-grant institution, is to serve the people of the state and nation as a major center for the preservation, advancement, and transmission of knowledge. Deriving from this purpose are the functions to be performed and the objectives to be achieved through the interaction of the various components and publics of the university.

Basic Functions and Objectives. Since its founding, the functions of the university have been viewed as threefold–teaching, research, and service. The broad objectives relating to these functions are, respectively:

1. To offer undergraduate and graduate academic programs of excellent quality in the liberal arts and sciences and in many professional disciplines so that qualified students may develop into responsible, thinking citizens, provided with a sound general education, prepared for a lifetime of learning, and equipped with the professional and technical skills needed by society.
2. To add to knowledge through research, scholarship, and creative activities in both fundamental and applied fields, and to seek ways of applying that knowledge to the betterment and enrichment of humanity.
3. To make readily available to all people of the state the results of research and the rich heritage of human culture embodied in the arts and sciences.

Unique Functions of the University. As a part of the coordinated system of higher education that encompasses the state universities and college and the public community colleges, the University of Idaho has historically had certain unique functions. Specifically, the university serves the state as:

1. Its comprehensive land-grant institution, with primary statewide responsibility for instruction, research, extension, and public service in agriculture, architecture, engineering, forestry and wildlife, law, mining and metallurgy, and in designated areas in the arts and sciences, business, and education.
2. The institution with principal responsibility for research, research-oriented graduate education, and the granting of the Ph.D. degree. As a concomitant of this responsibility, UI's faculty members conduct research as a clearly defined element of their professional duties.
3. The institution responsible for the state's role as a partner in regional cooperative programs in medical and veterinary medical education.
4. A center for professional education, operating accredited professional programs in architecture, chemistry, education, engineering, forestry, family and consumer sciences, law, music, and wildlife, fishery, and range sciences, and also offering comprehensive programs in the preparation of public-school teachers, administrators, and counselors.

Strategic Action Plan 2007-2010

1. Teaching and Learning Goal: Engage students in a transformational experience of discovery, understanding, and global citizenship.

Context: Our graduates will live, work, compete, and prosper in a global and multicultural environment. Consequently, graduates must learn the substance of their studies and understand the values, perspectives, skills, and experiences that advance humankind.

Objective A: Build and sustain competitive advantages through innovative curricula of distinction.

Strategies:

1. Develop learning outcomes at the University as well as at program levels for graduate and undergraduates.
2. Use learning outcomes assessment pro-actively as a means to keep teaching and learning vital, contemporary, and grounded.
3. Utilize distinctive Core curricula to engage students in participatory learning and to prepare them for the challenges of higher education.
4. Expand partnerships with industry, government, schools, and foundations that emphasize active learning opportunities such as internships, practica, athletics, and the arts.
5. Invest in field work and outreach as a means of contributing to learning and the land-grant responsibilities of the University.
6. Develop flexible course schedules and year-round programs to meet student needs throughout the University.
7. Establish curricular content that utilizes interdisciplinary student teams to solve complex learning tasks.

Objective B: Develop effective integrative learning activities to engage and expand student minds.

Strategies:

1. Enhance innovation, development, and recognition of high quality teaching and student learning.
2. Expand opportunities for students to experience self discovery through hands-on activities such as graduate-level and undergraduate research, creative activity and service learning, national student exchanges, internships, education abroad, disciplinary competitions, and engagement in professional societies.
3. Provide graduate and professional students with integrated experiences in teaching, research, creative activity, and outreach.
4. Integrate educational experiences with the living and learning environments.
5. Engage alumni and stakeholders as partners in student recruitment, retention, mentoring, learning, and post-graduation transition.
6. Engage students in personal mentoring and academic advising to facilitate their learning.
7. Engage students, staff, and faculty in curricular and co-curricular activities that enhance our understanding of our place in a diverse local and global community.

2. Scholarly and Creative Activity Goal: Achieve excellence in scholarship and creative activity through an institutional culture that values and promotes strong academic areas and interdisciplinary collaboration among them.

Context: Most scientific, social, economic, environmental, legal, and political problems are partly embedded in a complex system of interlinking causes and effects. The University is strategically positioned to effectively address these complex societal issues through interdisciplinary collaboration.

Objective A: Promote an environment that increases faculty engagement in interdisciplinary scholarship.

Strategies:

1. Establish administrative structures, policies, procedures, and incentives for faculty, departments, centers/institutes, and colleges to participate in interdisciplinary programs.
2. Ensure that individual levels of effort in interdisciplinary programs and grants are adequately recognized by their department and college.
3. Improve and strengthen faculty appointments, position descriptions, advancement, and recognitions to ensure interdisciplinary collaboration is attractive and effective.
4. Increase hiring to strengthen interdisciplinary scholarship that advances the University's strategic themes and land-grant mission.
5. Strengthen programs that encompass cultural, economic, legal, scientific, policy, environmental, and/or international dimensions.
6. Establish, renew, remodel, and reallocate facilities that encourage collaborative interdisciplinary inquiry and provide access to information resources and innovative technologies.
7. Increase grants that support interdisciplinary activities.

Objective B: Emphasize scholarly and creative activities that support the University's strategic themes, the research-extensive and land-grant missions, and strategically important graduate and professional programs.

Strategies:

1. Increase the number of competitive graduate assistantships.
2. Improve and expand start-up packages and compensation that attract and retain a diverse, competitive faculty in the scholarly modes of discovery, application, integration, and teaching.
3. Increase the number of endowed faculty positions and fellowships.
4. Allocate physical and financial resources for operation, maintenance, safety, and security of technical infrastructure facilities.
5. Strengthen library capacity, collections and technological innovation to improve access to information sources.
6. Partner with faculty and staff from all disciplines and professions to provide grant processing and management support, and proposal preparation assistance on proposals submitted to government agencies, private organizations and foundations, and industries.
7. Enhance scholarly modes of discovery, application and integration that address issues of importance to the citizens, government, economy, and environment in the state of Idaho.
8. Build strategic educational, research and/or technology transfer activities regionally, nationally, and abroad.

3. Outreach and Engagement Goal: Engage with the public, private and non-profit sectors through mutually beneficial partnerships that enhance teaching, learning, discovery, and creativity.

Context: The University has a long and strong history of extending agriculturally related teaching and research findings throughout the state. We seek to broaden that outreach and engagement to better link all academic areas of the University with the needs of constituents and stakeholders throughout Idaho.

Objective A: Build upon, strengthen, and connect the University of Idaho Extension with other parts of the University to engage in mutually beneficial partnerships with stakeholders.

Strategies:

1. Develop a coordinated university-wide funding strategy for University engagement that complements resources received from county, state, and federal sources.
2. Build an organizational system that empowers, encourages, and recognizes scholarly engagement relevant to the issues and needs of Idaho and our region.
3. Grow the capacity of the University to engage with communities by involving all faculty who have programs relevant to local, regional, national and international issues.
4. Engage with communities and organizations through flexible partnerships that share resources and respond to needs and expectations.
5. Partner with other educational institutions, industry, not-for-profits, and public agencies to enhance outreach delivery and quality.
6. Foster key industry/business relationships that benefit entrepreneurship and social and economic development through innovation and technology transfer.
7. Conduct periodic assessments of the needs of the state and work to address those needs.
8. Integrate sustainability into all facets of community engagement and outreach.
9. Broadly and intensively communicate the activity and impact of the University's engagement with society.

Objective B: Deliver undergraduate, graduate, continuing professional education, and Extension programs and opportunities for life long learning.

Strategies:

1. Design and implement an institutional system that promotes access to program/course delivery statewide and facilitates faculty in course/program design and development.
2. Develop an array of academic and outreach programs based on community needs and University expertise.
3. Determine effective program delivery modes as a function of site, available technology, partnerships, and learner characteristics.
4. Implement a fee structure that provides adequate budgetary support based on a realistic costs matrix.
5. Have programs and stakeholders reflect the faces and places of Idaho, including those who have been underserved or underrepresented.
6. Grow and support community internships and service learning activity as opportunities for students and communities to engage for mutual benefit.

4. Organization, Culture, and Climate Goal: Create and sustain an energized community that is adaptable, dynamic, and vital to enable the University to advance strategically and function efficiently.

Context: To implement the first three goals of the strategic plan requires an organization adaptive to change and opportunity, and a community characterized by openness and trust. The University needs to create formal and informal organizational structures, policies, and processes that enable us to be effective while also fostering a climate of participatory decision making and mutual respect. The success of the change processes will be enhanced if they are conducted in an open, welcoming climate that enhances our ability to work through difficult issues in a respectful manner.

Objective A: Sustain and enhance a positive work climate to enhance the quality of University life.

Strategies

1. Develop a socially healthy and welcoming environment characterized by trust and respect that allows for open communications about difficult issues and differences.
2. Ensure that the University is a safe work and educational environment for its employees and students through proper training and monitoring.
3. Recruit and retain a diverse body of students, staff, and faculty to enrich the quality of the University's activities.
4. Align employees' position descriptions and reward structures with institutional priorities.
5. Create formal and informal opportunities for students, staff, and faculty to learn from each other and build meaningful collaborations.
6. Provide all new students and employees the opportunity for diversity and cultural competence training as a component of their initial orientation and offer ongoing training for all students, staff, and faculty.
7. Provide ongoing opportunities for self discovery and personal and professional growth through cultural, social, recreational, diversity, wellness, and continuing professional development programming.

Objective B: Sustain and enhance an organizational structure, policies, and procedures that enable the University to attain its other goals.

Strategies

1. Advance an attitude of making choices, taking actions, and developing mechanisms for making investments in people, programs, places, and processes.
2. Reduce academic, structural, and administrative barriers and enhance rewards for collaboration across the University in all of its locations.
3. Employ best practices and distribute authority-responsibility-accountability to efficiently and effectively manage the people, programs, and places of the University.
4. Enhance accountability measures and employ them to assess our progress on strategic issues.
5. Build strong support from the public sector and private donors to accelerate the attainment of our University goals.
6. Utilize the athletic and art programs to enhance the visibility and image of the University through competitive and integrity-based programs that unite students, faculty, staff, alumni, and their communities.
7. Develop a fund raising effort across the University and its constituents to generate and sustain the resources necessary to implement the strategic plan.
8. Enhance the efforts of our valued alumni, friends, advisory board members, and volunteer organizations in attracting and retaining students and generating gifts to support the advancement of the University goals.

9. Strengthen financial and administrative operations so that they meet the needs of faculty, staff, and students, and those of our constituents and stakeholders.
10. Establish facilities that encourage collaborative interdisciplinary inquiry using information resources and innovative technologies.
11. Foster a university that is academically, culturally, fiscally, and environmentally sustainable.

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 http://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 2 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 Graduated 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 UI Administration Building, Room 140, phone 208/885-6721. Some services provided by ITS include:

- **Help Desk services** – including 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 500 PC and Macintosh computers, also computer access for individuals with disabilities. Some labs are open 23 hours a day. Also located throughout campus are 100 walk-up kiosks.
- **Wireless Laptop Checkout** – available in the Idaho Commons, Library, Living and Learning Center (LLC), and SUB.
- **Campus Wireless Network** – is available in the core of campus. The wireless network utilizes the 802.11b/g and some 802.11a network standards.
- **Center for Teaching Innovation** – providing both high-end tools and high-level instruction to faculty and staff interested in using technology
- **Technology Enhanced Classrooms** – support and training for the university's media-enhanced classrooms.
- **Media Center** – providing media presentation equipment to campus and off-campus users.
- **Telephone Services** – providing complete telephony service and infrastructure support.
- **Management Information Systems** – aids in the analysis, maintenance, and installation of purchased software for administrative clients.
- **Network and Systems** – provides network and server-based services including: e-mail; Internet access; high-speed campus data network; wide-area network connecting university sites across Idaho; server-based personal and shared file space; print queues; wiring and fiber optics for data and voice networks.
- **Document Imaging** – provides an infrastructure for the scanning, retention, and management of documents relative to the operations of the university. Combined with the university's Records Management, retention schedules can also be applied to the scanned documents.
- **Vandal Card** – As the official UI identification card, the Vandal Card can be used to access 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** – Records Management provides guidance, training, and policy regarding university records, and also maintains the retention schedule for the university. Records Management also provides a physical storage area for university records, and manages the confidential document destruction program.
- **E-Commerce (Marketplace)** – ITS provides managed ecommerce services to the university community. Among other services, the site https://marketplace.uidaho.edu serves as an electronic commerce site available for use by university groups for web-based commerce.

The ITS web page can be found on the World Wide Web at www.uidaho.edu/its and provides detailed coverage of the functions and services of this unit.

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.

University Research Office

The mission of the University Research Office 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 Research Office 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 Research 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 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 Advanced Microelectronics and Biomolecular Research. CAMBR is an interdisciplinary research center with expertise in electronics, molecular biology, organic and surface chemistry, and nano technology. At CAMBR advanced microelectronics are created for both government and commercial applications. There are currently many CAMBR-designed processors flying in space, supporting missions including the Hubble Space Telescope, Mars Odyssey and other NASA and DoD spacecraft. Technology developed at CAMBR includes commercial foundry-based Radiation Tolerant electronics, capable of operating error-free in the natural space environment, and Ultra Low Power (ULP) electronics that operate at 0.5 volts and consume orders of magnitude less power than traditional space borne devices. CAMBR has the expertise to custom design Very Large Scale Integrated (VLSI) circuits providing high data rate, low power applications which push the environmental and density capabilities of commercial processes. In addition to developing electronics for government agencies, CAMBR has designed commercial processors for Hewlett Packard, Amplex, Broadcom and Advanced Hardware Architectures. CAMBR consists of a team of 14 professional VLSI designers and professors, experienced at complex digital and analog VLSI.

CAMBR has an active program in electronic biosensors utilizing nano technology, molecular biology, organic and surface chemistry, and electronics. CAMBR has a quality nano technology facility and partnership with the Cornell NanoScale Facility (CNF), part of the National Nanotechnology Initiative. CAMBR creates nano devices at CNF taking advantage of the $250 million equipment base at CNF. The electronic biosensors target applications in food safety, pathogen detection and cancer diagnosis. Biosensor partnership exist with Micron Technologies and the Mayo Clinic.

CAMBR provides graduate education opportunities at the master's and doctoral levels for individuals interested in multidisciplinary research programs associated with engineering and the life sciences. CAMBR was created at the University of Idaho in 1985 as the Microelectronics Research Center (MRC), transitioned to the University of New Mexico in 1992, named as the NASA Institute of Advanced Microelectronics in 1995, and returned to the University of Idaho in 2002. CAMBR is located at the University of Idaho Research Park in Post Falls.

Center for Applied Thermodynamic Studies. The Center for Applied Thermodynamic Studies (CATS) was established at the College of Engineering in 1975. Since its inception, the primary focus of the research in CATS has been the development of standard reference quality thermodynamic property formulations for fluids of engineering interest. In addition to equation of state development, CATS research areas include the extended corresponding states methods and mathematical formulation development for transport properties of cryogenic fluids, refrigerants, and natural gases. In conjunction with this research, CATS also develops linear and nonlinear regression techniques and fluid properties database. The CATS Experimental Laboratory houses a dual-sinker densimeter and a magnetic suspension balance. The apparatus is used to determine the density of pure gases and gas mixtures.

CATS is an integral part of the research program of the College of Engineering. Graduate and undergraduate students in mechanical and chemical engineering are employed as research assistants in the work of the center. Many students have participated in theses and short-term projects as a part of their academic programs. Research at the center has also resulted in a significant strengthening of the undergraduate and graduate courses in engineering thermodynamics.

Center for Business Development and Entrepreneurship. The Center for Business Development and Entrepreneurship (CBDE) is a 'virtual' organization within the College of Business and Economics. The CBDE provides an administrative framework and support services for faculty-led business outreach efforts. The goals of the CBDE are to support business development in Idaho and the region served by the University, while providing students with practical experience in 'project' settings. Outreach activities supported by the CBE faculty include non-credit seminars and workshops, business consulting projects involving students working in project teams, and research projects addressing particular business problems such as market research, productivity improvement and economic impact analysis.

Center for ETHICS* (Ethical Theory and Honor in Competition and Sport). The Center for ETHICS*, Department of Health, Physical Education, Recreation and Dance, 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 Intelligent Systems Research. The Center for Intelligent Systems Research (CISR) operates as a center in the Microelectronics Research and Communications Institute (MRCI), University Research Office. CISR does research, teaching, and outreach in the development of intelligent autonomous systems. These systems include, but are not limited to, self-propelled autonomous vehicles operating under on-board intelligent computer control. Other computer-controlled electrical, mechanical, and chemical systems also fall under the purview of CISR. CISR provides a structure of collaboration among researchers, students, and industrialists concerned with the development of autonomous machines controlled by intelligent computers.

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 Poplulations (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.

Environmental Biotechnology Institute. The Environmental Biotechnology Institute (EBI), University Research Office, supports environmental and ecological research at the University of Idaho in areas such as microbial physiology and genetics, subsurface microbiology, ecosystem processes and dynamics, bioreactor design, microbial community characterization, astrobiology, and bioremediation of soils and water contaminated by toxic chemicals. EBI supports research by developing research proposals and providing instruments, facilities, and services, including molecular biology computing, capillary electrophoresis, liquid/chromatography/mass spectrometry, ion chromatography, electrospray tandem mass spectrometry, MALDI QTof MS/MS mass spectrometry, supercritical fluid extraction, and access to inductance coupled plasma atomic emission, HPLC, SEM, and TCLP testing capability. The Institute has full capability for recombinant DNA research and maintains a Molecular Ecology and Genomics Laboratory to support preparation and experimentation with oligonucleotide arrays. EBI assists in the multidisciplinary training of predoctoral and postdoctoral scientists from departments that award graduate degrees in environmental fields.

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.

Glaciological and Arctic Sciences Institute. Established by the Board of Regents in 1975, the Glaciological and Arctic Sciences Institute is a cooperative summer program with the University of Alaska and the Foundation for Glacier and Environmental Research, Seattle, WA. It promotes academic opportunities and administers field work on the Juneau Icefield on the Alaska-B.C.-Yukon border. The two-month field training and research involvement on the Western Hemisphere's fifth largest icefield is expeditionary and interdisciplinary in nature and emphasizes the environmental and earth systems sciences. It includes field geology, exploration geophysics, glaciology, Pleistocene stratigraphy, process geomorphology, glacio-hydrology, arctic geobotany, remote sensing, and allied areas of the atmospheric sciences and survey and mapping. This program has an international scope and is the only one of its kind in the U.S. The summer session is in an expedition mode and runs for nine consecutive weeks during July and August. Upwards of 40 staff and students participate, including undergraduate and graduate students from many universities. Some high school science teachers, and a select number of high ability high school senior students have been included. In recent years, NASA, the National Science Foundation, the M. J. Murdock Charitable Trust, the U.S. Army Research Office, the Department of Defense, the National Geographic Society, and the Foundation for Glacier Research have supported partial field scholarship. Because these awards are limited and competitive, early application is encouraged. Experiential training is emphasized and field credits can be earned, including graduate thesis research.

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 provides 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 master's 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 Materials and Advanced Processes. The Institute for Materials and Advanced Processes (IMAP) in the College of Engineering, composed of scientists from a number of colleges and disciplines within the University of Idaho, supports, directs, and coordinates research in the areas of materials and advanced processing. The former area includes both structural (i.e., load bearing) and functional (e.g., electronic/magnetic devices) materials. The latter includes research on materials processing using high energy sources such as plasma, laser, and electron beam, as well as processing of polymer, ceramic, and composite materials.

Other programs in the advanced materials arena cover topics including low density metals, intermetallic compounds, and hydrogen effects in metals.

Pervasive to the whole activity is application of material science and engineering and transition of the research programs to real-world applications.

Institute for Pacific Northwest Studies. The Institute for Pacific Northwest Studies, College of Letters, Arts, and Social Sciences, enhances awareness of history and life in the region comprising Oregon, Washington, Idaho, western Montana, Alaska, and western Canada. It fosters scholarly investigation as well as popular understanding of the Pacific Northwest and seeks to relate developments there to those in the rest of the United States, Canada, and the world. The institute promotes inter-institutional and interdisciplinary cooperation among investigators in such areas as anthropology, history, literature, political science, and sociology, and the dissemination of the resulting knowledge through monographs, lectures, seminars, workshops, and popular forums.

Intermountain Forest Nutrition Cooperative. The Intermountain 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 University Research Office or through the facility itself.

Laboratory of Anthropology. The Alfred W. Bowers Laboratory of Anthropology serves as a research unit within the Department of Sociology and 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.

Microelectronics Research and Communications Institute. The Microelectronics Research and Communications Institute (MRCI), University Research Office, first established at the University of Idaho in 1983, focuses its research efforts on the application, development, design, and testing of high performance electronic circuits and systems. Since 1995, MRCI's capabilities have expanded into other disciplines such as avionics, computer security, neurocomputing, communications and information engineering, electromagnetics, and intelligent controls systems. Partnerships with local and national industries as well as governmental agencies continue to provide research opportunities for University of Idaho graduate and undergraduate students. The MRCI also collaborates with ERI and NIATT and with several University of Idaho departments to enhance multidisciplinary research endeavors. Additionally, two research centers approved by the Idaho State Board of Education (SBOE) reside in the MRCI: Center for Intelligent Systems Research (CISR) and Center for Secure and Dependable Systems (CSDS).

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.

Remote Sensing Research Unit. The Remote Sensing Research Unit, 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 adjunct 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.

Wilderness Research Center. The university-wide Wilderness Research Center (WRC), created in 1969, is located in the College of Natural Resources. The staff conducts and facilitates research by faculty, cooperators, and graduate students on wilderness and related topics. The WRC sponsors a Distinguished Lecture Series and teaches several wilderness-related undergraduate and graduate classes. Research focuses on (1) wilderness ecosystem research and monitoring and (2) use of wilderness for recreation, personal growth, therapy, education, and leadership development.

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.
- 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 Products, B.S.For.Prod.
Forest Resources, B.S.For.Res.
Interdisciplinary Studies, B.S.I.S.
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.
Physical Education, B.S.P.E.
Rangeland Ecology and Management, B.S.Rangeland Ecol.-Mgt.
Recreation, B.S.Rec.
Resource Recreation and Tourism, B.S.Res.Rc.
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.
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 Education, Ed.D.
Doctor of Philosophy, Ph.D.

Programs Offered

Programs offered by the university are shown in the list below. Entries followed by degree abbreviations are major curricula leading to the degrees indicated. 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 and academic minors are recorded only on the student's final transcript.) In parentheses after each major curriculum is the college/unit through which the program is offered. The abbreviations used are:

CALS – College of Agricultural & Life Sciences
CAA – College of Art and Architecture
CBE – College of Business & Economics
CLASS – College of Letters, Arts & Social Sciences
CNR – College of Natural Resources
COGS – College of Graduate Studies
COS – College of Science
Ed – College of Education
Engr – College of Engineering
Law – College of Law

Graduate degrees, except the degree of Juris Doctor, are offered through the College of Graduate Studies.

Accountancy (CBE) M.Acct.
Accounting (CBE) B.S.Bus.
Adult/Organizational Learning and Leadership (Ed) M.S., Ed.S.AO.L.L. Doctoral programs in this field are offered under "Education."
Advertising (CLASS) B.A., B.S.
Agribusiness (CALS) B.S.Ag.Econ.
Agricultural Economics (CALS) B.S.Ag.Econ.
Agricultural Education (CALS) B.S.Ag.Ed., M.S.
Agricultural Science, Communication and Leadership (CALS) B.S.Ag.L.S.
Agricultural Systems Management (CALS) B.S.Ag.L.S.
Air Force Officer Education Program, cooperative with Washington State University
American Studies (CLASS) B.A., B.S.
Animal Physiology (CALS) Ph.D.
Animal Science (CALS) M.S.
Animal and Veterinary Science (CALS) B.S.A.V.S.
Anthropology (CLASS) B.A., B.S., M.A.
Applied Economics (CALS) M.S.
Architecture (CAA) B.S.Arch., M.Arch., M.S.
Army Officer Education Program
Art (CAA) B.A., M.F.A., M.A.T.
Art Education (CAA) B.S.Art Ed.
Athletic Training (Ed) B.S.P.E.
Biochemistry (CALS), B.S.Biochem.
Bioinformatics and Computational Biology (COGS) M.S., Ph.D.
Biological and Agricultural Engineering (Engr) B.S.B.A.E., M.S., M.Engr., Ph.D.
Biology (COS) B.A., B.S., M.S., Ph.D.
Bioregional Planning and Community Design (COGS) M.S.
Broadcasting and Digital Media (CLASS) B.A., B.S.
Business Economics (CBE) B.S.Bus.; see also "Economics"
Career and Technical Education (Ed) B.S.Ed. Doctoral programs in this field are offered under "Education."
Chemical Engineering (Engr) B.S.Ch.E., M.S., M.Engr., Ph.D.
Chemistry (COS) B.S., M.S., Ph.D.
Child, Family, and Consumer Studies (CALS) B.S.F.C.S.
Civil Engineering (Engr) B.S.C.E., M.S., M.Engr., Ph.D.
Clothing, Textiles and Design (CALS) B.S.F.C.S.
Computer Engineering (Engr) B.S.Comp.E., M.S., M.Engr.
Computer Science (Engr) B.S.C.S., M.S., Ph.D.
Counseling and Human Services (Ed) M.S., M.Ed., Doctoral programs in this field are offered under "Education."
Creative Writing (CLASS) M.F.A.
Curriculum and Instruction (Ed) M.Ed.; see also "Elementary Education" and "Secondary Education." Doctoral programs in this field are offered under "Education."
Dance (Ed) B.S.Dan.
Early Childhood Development and Education (CALS & Ed), B.S.Erly.Chldhd.Dev.Ed.
Ecology and Conservation Biology (CNR) B.S.Ecol.-Cons.Biol.
Economics (CLASS) B.A., B.S.; see also "Business Economics"
Education (Ed) Ed.D., Ph.D.
Educational Leadership (Ed) M.Ed., Ed.S.Ed.Ldrshp. Doctoral programs in this field are offered under "Education."
Electrical Engineering (Engr) B.S.E.E., M.S., M.Engr., Ph.D.
Elementary Education (Ed) B.S.Ed.; see also "Curriculum and Instruction"
Engineering Management (Engr) M.Engr.
English (CLASS) B.A., M.A., M.A.T.
Entomology (CALS) M.S., Ph.D.
Environmental Engineering (Engr) M.S., M.Engr.
Environmental Science (CLASS & COGS) B.S.Env.S., M.S., Ph.D.
Exercise Science and Health (Ed) B.S.P.E. Doctoral programs in this field are offered under "Education."
Family and Consumer Sciences (CALS) M.S.

Finance (CBE) B.S.Bus.
Fire Ecology and Management (CNR) B.S.Fire.Ecol.Mgmt.
Fishery Resources (CNR) B.S.Fish.Res., A doctoral program in this field is offered under "Natural Resources."
Food and Nutrition (CALS) B.S.F.C.S.
Food Science (CALS) B.S.F.S., M.S., Ph.D.
Foreign Language (CLASS) B.A.
Forest Products (CNR) B.S.For.Prod., A doctoral program in this field is offered under "Natural Resources."
Forest Resources (CNR) B.S.For.Res., A doctoral program in this field is offered under "Natural Resources."
French (CLASS) B.A.
General Management (CBE) M.B.A.
General Studies (CLASS) B.G.S.
Geography (COS) B.S., M.S., Ph.D.
Geological Engineering (Engr) M.S.
Geological Sciences (COS) B.S.
Geology (COS), M.S., Ph.D.
History (CLASS) B.A., B.S., M.A., Ph.D.
Hydrology (COS) M.S.
Industrial Technology Education (Ed) M.Ed.
Information Systems (CBE) B.S.Bus.
Interdisciplinary Studies (CLASS & COGS) B.A., B.S., M.A., M.S. (May also be offered under the B.S.I.S. by colleges other than CLASS)
Interior Design (CAA) B.I.D.
International Studies (CLASS) B.A.
Journalism (CLASS) B.A., B.S.
Landscape Architecture (CAA) B.S.L.A., M.L.A.
Latin-American Studies (CLASS) B.A.
Law (Law) J.D.
Management and Human Resources (CBE) B.S.Bus.
Marketing (CBE) B.S.Bus.
Materials Science and Engineering (Engr) B.S.M.S.E., M.S., Ph.D.
Mathematics (COS) B.S., M.S., M.A.T., Ph.D.
Mechanical Engineering (Engr) B.S.M.E., M.S., M.Engr., Ph.D.
Medical Education (WWAMI), cooperative with University of Washington
Medical Technology (CALS) B.S.
Metallurgical Engineering (Engr) M.S.
Metallurgy (Engr) M.S.
Microbiology (CALS) B.S.Microbiol.
Microbiology, Molecular Biology and Biochemistry (CALS) M.S., Ph.D.
Molecular Biology and Biotechnology (CALS) B.S.M.B.B.
Movement and Leisure Sciences (Ed) M.S.
Music (CLASS) M.A., M.Mus.
Music: Applied Music(CLASS) B.A., B.S.
Music: Business (CLASS) B.Mus.
Music: Composition (CLASS) B.Mus.
Music: History and Literature (CLASS) B.A., B.S.
Music: Instrumental Performance (CLASS) B.Mus.
Music: Theory (CLASS) B.A., B.S.
Music: Vocal Performance (CLASS) B.Mus.
Music Education: Instrumental (CLASS) B.Mus.
Music Education: Vocal (CLASS) B.Mus.
Music Education: Vocal-Instrumental (CLASS) B.Mus.
Musical Theatre (CLASS) B.F.A.
Natural Resources (CNR) M.N.R., M.S., Ph.D.
Natural Resources and Environmental Science (COGS) P.S.M.
Navy-Marine Officer Education Program
Neuroscience (COGS) M.S., Ph.D.
Nuclear Engineering (Engr) M.S., M.Engr., Ph.D. (limited to students enrolled at Idaho Falls)
Organizational Sciences (CLASS) B.A., B.S.
Philosophy (CLASS) B.A., B.S., M.A.
Physical Education (Ed) B.S.Ed., M.Ed. Doctoral programs in this field are offered under "Education."
Physics (COS) B.A., B.S., M.S., Ph.D.
Plant Science (CALS) M.S., Ph.D.
Political Science (CLASS) B.A., B.S., M.A., Ph.D.
Production/Operations Management (CBE) B.S.Bus.
Psychology (CLASS) B.A., B.S., M.S.
Public Administration (CLASS) M.P.A.
Public Relations (CLASS) B.A., B.S.
Rangeland Ecology and Management (CNR) B.S.Rangeland Ecol.-Mgt., A doctoral program in this field is offered under "Natural Resources."
Recreation (Ed) B.S.Rec.
Resource Recreation and Tourism (CNR) B.S.Res.Rc. A doctoral program in this field is offered under "Natural Resources."
School Psychology (Ed) Ed.S.Sch.Psych.
Secondary Education (Ed) B.S.Ed.; see also "Curriculum and Instruction."
Sociology (CLASS) B.A., B.S.
Soil and Land Resources (CALS) M.S., Ph.D.
Spanish (CLASS) B.A.
Special Education (Ed) M.Ed., Doctoral programs in this field are offered under "Education."
Statistical Science (COS) M.S.
Studio Art (CAA) B.F.A.
Sustainable Crop and Landscape Systems (CALS) B.S.Ag.L.S.
Teaching English as a Second Language (CLASS) M.A.
Technology Training and Development (Ed) B.S.Tech., M.S.
Theatre Arts (CLASS) B.A., B.S., B.F.A., M.F.A.
Virtual Technology and Design (CAA) B.S.
Water Resources (COGS) Ph.D., M.S.
Wildlife Resources (CNR) B.S.Wildl.Res., A doctoral program in this field is offered under "Natural Resources."

Academic Minors Offered

A student may elect to pursue one or more of the academic minors listed below. See regulation J-9 in Part 3 on page 49.

Accounting
Addictions
Advertising
Aerospace Studies
Aging Studies
Agribusiness
Agricultural Extension Education
Agricultural Systems Management
American Government/Public Law
American Indian Studies
American Studies
Animal Science
Anthropology
Aquaculture
Architecture
Art
Biochemistry
Bioethics
Biology
Broadcasting and Digital Media
Business
Chemistry
Classical Studies
Coaching
Communication Studies
Comparative/International Politics
Computer Science
Conservation Social Sciences
Crop Science
Dance
Economics
English

Entomology
Environmental Communication
Fire Ecology and Management
Fishery Resources
Food Science
Forest Operations
Forest Products
Forest Resources
French
Geological Engineering
Geology
German
History
Horticulture
Interdisciplinary Studies
Interior Design
International Business
International Political Economy (Econ and PolS)
International Studies
Journalism
Justice Studies
Landscape Architecture
Manufacturing Engineering
Materials Science and Engineering
Mathematics
Mechanical Engineering
Metallurgical Engineering
Microbiology
Military Science
Molecular Biology and Biochemistry
Music
Natural Resource Economics
Natural Resources
Naval Science
Outdoor Recreation Leadership (HPERD and CSS)
Parks, Protected Areas, and Wilderness Conservation
Philosophy
Physics
Plant Protection
Political Science
Psychology
Public Administration and Policy
Public Relations
Rangeland Ecology and Management
Religious Studies
Sociology
Soil Science
Spanish
Sport Science
Statistics
Sustainable Tourism and Leisure Enterprises (HPERD and CSS)
Teaching English as a Second Language
Technical Theatre
Theatre Arts
Wildlife Resources
Women's Studies
Writing

Academic Certificates Offered

See Academic Certificates on page 55 in Part 4. Requirements for certificates offered by a department may be found in the relevant department section in Part 5. Requirements for university-wide certificates are listed in Part 4.

College of Agricultural and Life Sciences

Agricultural and Extension Education

- Sustainable Small Acreage Farming and Ranching

College of Business and Economics

Business

- Entrepreneurship

College of Education

- Emergency Planning and Management
- Human Safety Performance

Department of Curriculum and Instruction

- Technical Workforce Training

Department of Leadership and Counseling

- Adult Basic Education/GED Instructor
- Human Resource Development

College of Engineering

Department of Chemical and Materials Engineering

- Advanced Materials Technology

Department of Civil Engineering

- Structural Engineering
- Water Resources Engineering
- Applied Geotechnics

Department of Computer Science

- Secure and Dependable Computing Systems

Department of Electrical and Computer Engineering

- Analog Integrated Circuit Design
- Electrical Machines and Drives
- Power System Protection and Relaying
- Semiconductor Theory and Devices

Department of Mechanical Engineering

- Heating, Ventilation, and Air Conditioning (HVAC) Systems

Program in Nuclear Engineering

- Nuclear Criticality Safety

College of Graduate Studies

Program in Bioregional Planning and Community Design

- Bioregional Planning and Community Design

Program in Environmental Science

- Environmental Contamination Assessment
- Environmental Water Science

College of Letters, Arts and Social Sciences

Department of Philosophy

- Global Justice
- Professional Ethics

Department of Psychology and Communication Studies

- Organizational Dynamics

Department of Sociology and Anthropology

- Archaeological Technician
- Diversity and Stratification (Interdisciplinary certificate)

College of Natural Resources

- Restoration Ecology

Department of Conservation Social Sciences

- Environmental Education

Department of Forest Ecology and Biogeosciences

- Fire Ecology, Management and Technology

College of Science

Department of Biological Sciences

- Reproductive Biology

Department of Geography

- Geographic Information Systems

Bi-State Department of Statistical Science

- Six Sigma Innovation & Design
- Statistics

University-wide Certificate

- University of Idaho Leadership Certificate

THE STUDENT

Undergraduate Admission to the University

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

Students who are pursuing a baccalaureate degree are classified as undergraduates: freshmen (fewer than 26 semester credits), sophomores (fewer than 58 semester credits), juniors (fewer than 90 semester credits), or seniors.

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 freshman, 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 Undergraduate Admissions Office 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 Undergraduate Admissions Office. 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 nonrefundable application fee of $50 for domestic students and $70 for international applicants. Review of the application will be delayed until this fee is received. This fee is not charged to students applying for non-degree status or to applicants seeking re-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 Admissions Office at least three weeks prior to the beginning of classes. International applicants have different deadlines (see "International Admission Requirements" on page 23).

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 and information on registration procedures 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 contact the Undergraduate Admissions Office to reactivate the application if entrance at a later time is desired.

Freshman Admission Requirements

Freshman 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	790 - 1600
2.50 - 2.59	And	17 - 36	Or	870 - 1600
2.40 - 2.49	And	19 - 36	Or	930 - 1600
2.30 - 2.39	And	21 - 36	Or	1000 - 1600
2.20 - 2.29	And	23 - 36	Or	1070 - 1600

** Unweighted*

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

1. 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.
2. Applicants with fewer than 14 semester hours of transfer credit completed after high school graduation must meet both freshman and transfer admission requirements, including submission of the

required test scores. (See "Freshmen Admission Requirements" above.)

3. 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 freshman requirements for admission and submit all of the appropriate high school documentation regardless of the number of transferable credits completed. See Freshman Admission Requirements.

If a freshman 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 on page 22).

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. High school records may aid in the scholarship selection process, so submission of high school credentials, although not required, is recommended.
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 freshman requirements for admission and submit all the appropriate high school documentation regardless of the number of transferable credits completed. See Freshman Admission Requirements on page 21.
4. Applicants with fewer than 14 semester hours of transfer credit since high school graduation must meet both freshman and transfer admission requirements, including submission of the required test scores. (See "Freshman Admission Requirements on page 21," above.)

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 on page 22).

Re-admission Requirements

Students returning after two years from last attendance must complete an Application for Readmission and submit official transcripts from all colleges or universities attended since last enrolling at UI. (Also see regulation B-1 on page 43) Application forms are available on-line at www.uidaho.edu/admissions.

Returning students who were in good academic standing when they left the UI are guaranteed readmission. 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 in part 3 on page 52). 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 on page 49). 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 on page 22).

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 2.80 or higher. Strict limitations exist for use of non-degree credits toward a graduate degree. Please refer to the College of Graduate Studies section in Part 4.

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 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 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 Computer Based TOEFL or 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 Deferred Admission. Deferred admission may be granted to applicants who qualify academically, but have not yet achieved UI's minimum English language proficiency requirement. Students granted deferred 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 reactivate their application for admission to the academic department. Those who are granted deferred admission may qualify for concurrent enrollment.

International Student Concurrent Enrollment. Students admitted under deferred 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 deferred 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 International 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 on page 37 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 on page 49 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 on page 49).
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 on page 48.)

General Education Requirements for Transfer Students

One of the requirements for a UI baccalaureate degree is fulfillment of the general-education or "core-curriculum" 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 Part 3 of 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 written 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 29 doctoral programs, 7 specialist programs, and 77 master's programs. Graduate students are able to pursue degrees full- or part-time.

All of the graduate programs are available on the main campus in Moscow. Graduate programs in education disciplines are available at UI's Coeur d'Alene and Boise centers, graduate programs in engineering and natural resources are available at UI's Boise center, and graduate programs in engineering disciplines and several physical science disciplines are available at the Idaho Falls center.

More than 750 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.

(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 department administering the program in which the student seeks to enroll. For individual departmental admission requirements please refer to part 5 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 department in which they wish to major **before** submitting the application for graduate admission. All admission decisions are made at the departmental level with final admission granted 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 department for review once all required documents have been received by the Graduate Admissions Office. 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
$55.00	$60.00

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

Some departments 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 give out information without written authorization to anyone other than the applicant. 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 departments. 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 department. Applicants wishing to take the Computer Based GRE on campus should contact the Counseling and Testing Center.

Transcripts and Application for Graduate Admission

Graduate 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, 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 of instruction used in previous university-level academic work.

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 semester or summer session. If an applicant does not register for the term indicated, it will be necessary for the applicant to notify the Graduate Admissions Office if he or she should desire to enter for a subsequent session or semester.

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.

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 department 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 department 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 department 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 department 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.

Departments 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 department 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 any departmental 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.

Dual Level Curricula for Graduate Students. A graduate student may enroll in an undergraduate curriculum and be in both programs simultaneously. 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 who have not been admitted as undergraduate or law students in the past need to officially apply for admission at the appropriate level. Students in dual-level curricula will be assessed graduate fees for all courses.

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. Seniors desiring to have the class placed on a graduate transcript must submit to and have approved by the Graduate College a "Course Level Adjustment" form that lists the course(s) to be placed on the graduate transcript. If the form is not filed, the course(s) will automatically be placed on the undergraduate transcript. 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 on page 43). 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 sent by the certifying agency directly to the Graduate Admissions Office. 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 orinternet 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. Applicants wishing to take the Computer Based TOEFL or the MELAB on campus should contact the Counseling and Testing Center.

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 department's English language requirement prior

to being granted full admission and commencing their degree programs. Please note that not all academic departments grant 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 on page 37 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. Priority consideration for awarding College of Graduate Studies tuition waivers will be given to applicants who meet those deadlines.)

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 approve rate changes each April. For the most current rate information, go to www.students.uidaho.edu/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 (208/885-6731, www.registrar.uidaho.edu). Information regarding fees is available from the Student Accounts Office (208/885-7447, www.students.uidaho.edu/studentaccounts).

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. College of Art and Architecture students enrolled in academic courses for landscape architecture, interior design, and the architecture professional program pay the graduate fee and the architecture dedicated fee in addition to the undergraduate student fee and, if applicable, nonresident tuition. Students carrying ten or more credits will pay the full-time Architecture fee; students carrying nine credits or less pay the part-time Architecture fee. See the Student Accounts website, www.students.uidaho.edu/studentaccounts, for current fee rates.

Graduate/Professional Fee. Graduate students pay this fee in addition to the undergraduate student fee and, if applicable, nonresident tuition. Undergraduate and non-degree students enrolling in graduate courses must also pay the appropriate graduate fee. Students carrying eight or more credits will pay the full-time Graduate/Professional fee; students carrying seven credits or less pay the part-time Graduate/Professional fee. See the Student Accounts website, www.students.uidaho.edu/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 eight or more credits will pay the full-time Law fee; students carrying seven credits or less pay the part-time Law fee. See the Student Accounts website, www.students.uidaho.edu/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. In addition, students in certain divisions may need to pay special fees (see "Special Fees" below). See the Student Accounts website, www.students.uidaho.edu/studentaccounts, for fee payment deadlines.

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.students.uidaho.edu/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 undergraduate student fees. Students carrying ten or more credits will pay the full-time nonresident tuition; students carrying nine credits or less pay the part-time nonresident fee. See the Student Accounts website, www.students.uidaho.edu/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

Add/Drop Fee ($5). This fee is charged each time an Add/Drop Form is filed after the fourth week of classes.

Admission Application Fee. For information concerning the application fee, see the section headed "Application Procedures" at the beginning of Part 2 of the catalog.

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.students.uidaho.edu/studentaccounts, for current fee rates.

Diploma 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 charges a general shop fee and the College of Education that charges special fees for physical education courses. See the Student Accounts website, www.students.uidaho.edu/studentaccounts for current fee rates.

Late Registration Service Charge ($50). Charging this fee is an incentive for students to complete their registration early. Students who register after the first day of classes must pay this fee.

Late Registration Fee ($50). Students who are allowed to register after the sixth day of classes must pay this fee in addition to the Late Registration Service Charge.

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 lab & course fees on the Student Accounts website, www.students.uidaho.edu/studentaccounts.

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 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.

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 spouse must be on a board appointment at least half time. If the employee has been on a continuous half-time appointment for fewer than four years, during the fall or spring semester the spouse is limited to two courses not to exceed nine credits. The maximum credits in the summer are four. If the employee has been on a continuous half-time appointment more than four years, the benefit is unlimited. 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.students.uidaho.edu/studentaccounts.

Thesis/Dissertation Binding Fee ($16). 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.registrar.uidaho.edu.

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

A payment plan is available for those students who wish to participate. Please contact Student Accounts for additional information at (208) 885-7447.

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 less a $50 administrative fee for full-time students and a $20 administrative fee for part-time students. 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 educational 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 is 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, 90 percent of fee and tuition charges less the applicable administrative fee is refunded.
3. When the official date of withdrawal is after the close of the second week of classes but before the close of the fourth week of classes, 50 percent of fee and tuition charges less the applicable administrative fee is refunded.
4. When the official date of withdrawal is after the close of the fourth week of classes but before the close of the eighth week of classes, 25 percent of fee and tuition charges less the applicable administrative fee is refunded.
5. When the official date of withdrawal is after the close of the eighth week of classes, no refund is given.

University Residences

The University of Idaho's residence halls, graduate housing and family apartments are home to many students attending the University of Idaho. As a residential campus, the University of Idaho gives students the opportunity to live on campus and participate in a unique blend of social and academic activities. There are numerous student leadership positions, educational programming and social events. Students can choose from a number of residence hall communities. For married students, families, graduate students, and students over 25,1-4 bedroom apartments are available. For single graduate students, furnished studio apartments are available that include: In-house computer lab, all utilities, cable television hook-up and Internet hook-up. All of these options draw students closer to the campus environment allowing them to share in the on-campus experience.

Residence Halls

Living in the residence halls offers many conveniences and amenities. Every room has two Internet connections, an extended cable package, and cable hookup all provided at no extra charge. Computer labs, study lounges and TV lounges are available to all residents. Complete laundry facilities can be found in every building. The students in the Wallace Residence Center, Theophilus Tower, Living Learning Communities and McConnell Halls have easy access to a game room, food court, convenience store and study lounges.

Theme Communities: The residence halls have a number of communities to choose from including academic traditional (students from different academic majors), quiet, alcohol-free, transfer/non-traditional, first-year, civics and service, engineering/computer science, business and economics, women's, men's, co-ed, scholars, outdoors and recreation, college of natural resources, global village (international and American students sharing each other's cultures), and a fine arts community, all offering students strong ties to academics, success, and hall programs.

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:

Living and Learning Communities: Scholars, College of Natural Resources, Engineering and Computer Science, Global Village and Academic Traditional Buildings.

For more detailed information and to reserve student housing, please contact University Residences at 208/885-6571 or 800/681-9361 or via e-mail at housing@uidaho.edu or apply online at www.students.uidaho.edu/housing.

Graduate Student Housing

The university offers housing for graduate students who are enrolled in the College of Graduate Studies, College of Law, or WWAMI Program. These one-room studio apartments, located in the North Campus Center, are furnished with a bed, Microfridge©, air conditioning, and hot plates. Graduate Housing provides an in-house computer lab, a laundry room, an Internet connection in each room and cable hookup.

Apartment Housing

For married students, students with children, graduate students, and students over 25 years old, the university offers affordable housing options. One-, two-, three- and two four-bedroom, unfurnished apartments are available. To apply for an apartment, e-mail housing@uidaho.edu, call 800/681-9361 or 208/885-6571, or write to University Residences/Apartment Housing, PO Box 442010, Moscow, ID 83844-2010.

Elmwood

Single students 19 and over and married students without children have the option of living in Elmwood. Located right in the heart of campus (behind the Student Union Building) this housing community boasts their own parking lot. The lower level and the main floor are one bedroom apartments, while the third floor units are one bedroom with a loft. Internet connection is included in all units. These units are unfurnished.

Note: University Residences has no affiliation with off-campus housing or the Greek system (Fraternities and Sororities).

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.

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.

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" on page 31.

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 veterans 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 on page 53 in part 3).

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.uiathletics.com/.

Idaho has a proud athletic tradition and strong program in 16 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.

Western Athletic Conference members include Boise State, Fresno State, Hawaii, Louisiana Tech, Nevada, New Mexico State, San Jose State, and Utah State.

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.

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 in 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: (1) Developing and maintaining competitive, integrity-based athletic programs; (2) Uniting students, faculty, staff, alumni, and the community; (3) Educating and graduating student-athletes; and (4) 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 multiculturalimsm 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.

Office of Undergraduate Recruitment

Student Union Bldg. Rm. 135; 208/885-6163; nss@uidaho.edu; http://www.uidaho.edu/futurestudents.aspx.

The Office of Undergraduate Recruitment represents the University of Idaho to prospective students and assists those students, parents and counselors with decisions about higher education. Staff members visit high schools and present programs about the university to interested students, attend college fairs, distribute a wide range of literature, coordinate the flow of information from UI's colleges to students who express particular educational interests, and answer questions raised by students, counselors, and parents.

Office of Undergraduate Recruitment also sponsors a campus visitation program that offers prospective students an opportunity to spend any weekday campus. Visiting students and their families may tour campus and living groups. NSS can arrange for overnight lodging with advanced notice, arrange appointments with faculty members, and suggest activities that prospective students may attend. NSS also hosts several major on- and off-campus events for prospective students and their parents, including Vandal Friday and Vandal Transfer Day in the spring and Vandal Preview in the fall. For more information, call the Office of Undergraduate Recruitment, 208/885-6163, or 88-88-UIDAHO (888/884-3246).

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, bookstore, 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 deli/espresso 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.

Ronald E. McNair Post Baccalaureate Achievement Program

Morrill Hall Room 207; 208/885-6748; mcnair@uidaho.edu; www.uidaho.edu/mcnair.

The goal of McNair is to increase the attainment of the Ph.D. by students from underrepresented segments of society. The McNair Achievement Program is a federally funded educational assistance (TRIO) program designed to prepare undergraduate participants for doctoral studies through involvement in research and other scholarly activities.

McNair participants have demonstrated strong academic potential and are chosen from disadvantaged backgrounds. Program staff and faculty mentors guide these participants through their undergraduate experience, encourage their entrance into graduate programs, and track their progress to successful completion of advanced degrees.

Services provided by the program include: research opportunities for participants; mentoring; seminars and other scholarly activities designed to prepare students for doctoral studies; summer internships; tutoring; academic counseling; assistance in obtaining student financial aid; assistance in securing admission and financial aid for enrollment in graduate programs.

To be eligible to apply for the McNair Achievement Program, a student must be either a U.S. citizen or permanent legal resident; must qualify as a low-income AND first generation (neither parent/guardian has earned a baccalaureate degree) college student, OR a member of a group underrepresented in graduate education; must have obtained sophomore, junior, or senior status; must have at least a 2.80 GPA; and must be considering pursuing a doctoral degree (Ph.D.). All candidates must have completed at least their sophomore year of college. Students must apply and be accepted into the McNair Program. Potential Scholars should access the McNair website for more information and applications.

Statistics Assistance Center

Idaho Commons 329; 208/885-4683; www.webs.uidaho.edu/statsac/index.htm

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 Statistics 150, 251, 301, and 401. 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 Bi-State Department of Statistical Science Office (Brink 415A; 208/885-2929) for scheduled times. Students can visit the SAC on a drop-in basis during scheduled times for help with homework problems. The SAC is next to a Student Computing Lab that has a number of computers that provide supporting software for statistics courses.

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 to apply 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 Academic Competitiveness Grants (ACG), National Science & Mathematics Access to Retain Talent Grants (SMART), Federal Supplemental Educational Opportunity Grants (FSEOG), Leveraging Educational Assistance Partnership Program (LEAPP), Federal or Idaho State Work Study Programs (FWS or IDWS), 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/finaid. In addition to the FAFSA, all students who are new to the university must also have an 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, ACG, SMART 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.

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 and return a master promissory note to the financial aid office. 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, ACG, SMART, 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, ACG, Smart 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 (up to a maximum of 12 credits each semester) 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, up to a total of 12 attempted credits.

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. 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.

Students suspended (other than those suspended due to 150 percent of attempted credits) from receiving aid may reinstate their aid eligibility by successfully completing 12 credits with a GPA of 2.00 or better during a single term without federal or state financial aid. The student must submit a written request for the reinstatement to the Student Financial Aid Services Office. Students may also petition their academic college dean's office for waiver of the financial aid suspension.

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 (up to a maximum of 9 credits each semester) 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, up to a maximum of 9 attempted hours.

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, up to a maximum of 10 attempted credits.

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 a written petition from the student, the student's academic dean (or designee) may recommend a waiver of all satisfactory academic progress criteria due to special circumstances in a signed memorandum to the director of Student Financial Aid Services. 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.

Tutoring and Academic Assistance Programs (TAAP)

Idaho Commons 306; 208/885-6307; taap@uidaho.edu; www.students.uidaho.edu/taap

The mission of TAAP 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 Learning Services. taap@uidaho.edu Tutoring and Learning Services (TLS) 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), the College Success Series (a weekly offering of academic success workshops), 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, 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.

Writing Center

Idaho Commons 323; 208/885-6644
http://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; website 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 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 on page 37 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 on page 48.
5. **Experiential learning.** Credit may be awarded to students for knowledge and/or competence gained in foreign travel. See regulation I-2 on page 48. 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	Program Eligibility					Other Requirements
					Fr	So	Jr	Sr	Grad	
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	Architecture majors
Autonomous University of Guadalajara	Mexico	Semester, year, summer	P/F	2.50	X	X	X	X		
Autonomous University of Yucatán	Mexico	Semester, year, summer	P/F	2.50	X	X	X	X	X	19 credits Spanish
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		Architecture majors
College Year in Athens	Greece	Semester, year, summer	A-F	2.70	X	X	X	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
Massey University	New Zealand	Semester, year	P-F	2.75	X	X	X	X	X	
Mikkeli Polytechnic	Finland	Semester, year	P/F	2.50		X	X	X	X	Forestry, environmental science, business majors

Study Abroad Program	Placement Sites	Duration	Grades	Reqd GPA	Program Eligibility					Other Requirements
					Fr	So	Jr	Sr	Grad	
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		8 credits Spanish
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 Brighton, Chelsea School	England	Semester, year	P/F	2.75			X	X		PE, dance, rec majors
University of Copenhagen, Faculty of Life Sciences	Denmark	Semester, year, summer	P/F	2.50	X	X	X	X	X	Agriculture, animal science, plant science, forestry majors
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*

Study Abroad Program	Placement Sites	Duration	Grades	Reqd GPA	Program Eligibility					Other Requirements
					Fr	So	Jr	Sr	Grad	
University Studies Abroad Consortium (USAC)	40 institutions in Australia, Chile, China, Costa Rica, 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)

Schiller International University: International Studies Program (CEB 4, 208/885-2815)

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

Yucatán: Foreign Languages & Literatures (Admin 312A, 208/885-8995), and MMBB (FRC 105, 208/885-6580)

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.

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

Academic Petitions Committee. Student petitions for exceptions to the requirements and procedures in this catalog section (Part 3) should be presented to the Academic Petitions Committee on forms available in college offices.

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.

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.

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 on page 21" or "Graduate Admission to the University" on page 25 in Part 2.) 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 professors are given the authority to grant or deny access to classes by visiting scholars.

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.

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 of Part 4 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 on page 49.)

B-9. 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-10. Pass-Fail Option.

B-10-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 Part 5; (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 core curriculum; (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-10-d on page 43 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-10-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-10-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-10-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-11. 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. Students may change their registration as provided in the "Semester Schedule for Changes in Registration" accompanying this regulation. All registration changes are effective on the date they are filed with the registrar. Students may not drop a course by simply staying out of class.

Semester Schedule for Changes in Registration

See Academic Calendar on page 7 for dates. The schedule for changes in enrollment in accelerated or short courses during summer session is prorated, based on the number of class meeting hours (see notes below). The calendar in the Summer Bulletin lists the dates for Summer Session.

Desired Change	First 6 days of semester*	7th day of class through 4th week*	5th week to end of 2nd week following midterms**	After end of 2nd week following midterms***
Drop course	Drop course on-line, if permitted (see regulation C-3). No grade recorded and credits do not count in 20-credit limit for withdrawal.****		Signature of advisor required for undergrad students. File form with registrar. Grade recorded as W (withdrawal) and counted in 20-credit limit for withdrawal.****	For compelling reasons only, upon successful petition to Academic Petitions Committee (file petition through dean's office). Grade recorded as W (withdrawal) and counted in 20-credit limit for withdrawal.****
Add course (for regular credit or audit)	Add course on-line.	Signature of instructor required. File form with registrar.	Signatures of instructor and advisor required for undergrad students. Signature of instructor required for grad, law, and non-degree students. File form with registrar.	For compelling reasons only, upon successful petition to the Academic Petitions Committee (file petition through dean's office).
Change course section	Change section on-line.	Permission of instructor of new section is required. File form with registrar.		
Change from regular credit to audit.	Signature of the instructor required. File form with registrar.		Signatures of instructor and advisor required for undergrad students. Signature of instructor required for grad, law, and non-degree students. File form with registrar. Grade recorded as W and counted in 20-credit limit for withdrawal.	For compelling reasons only, upon successful petition to the Academic Petitions Committee (file petition through dean's office).
Reduce number of credits in course.	Signature of the instructor required. File form with registrar.		For compelling reasons only, upon successful petition to the Academic Petitions Committee (file petition through dean's office).	
Change from regular grading to pass-fail.	Signature of the advisor/major professor required. File form with registrar.		For compelling reasons only, upon successful petition to the Academic Petitions Committee (file petition through dean's office).	
Change from audit to regular credit.	Signature of the instructor required. File form with registrar.		Signatures of instructor and advisor required for undergrad students. Signature of instructor required for grad, law, and non-degree students. File form with registrar.	For compelling reasons only, upon successful petition to the Academic Petitions Committee (file petition through dean's office).
Change from pass-fail to regular grading.	Signature of advisor/major professor required. File form with registrar.	For compelling reasons only, upon successful petition to the Academic Petitions Committee (file petition through dean's office).		
Register late.	Register on-line. Pay late-registration service charge.	File form with registrar. Pay late-registration service charge and fee.	For compelling reasons only, upon successful petition to Academic Petitions Committee (file petition through dean's office). Pay late-registration service charge and fee.	
Withdraw from university. (see	Obtain form from Dean of Students, academic deans, or Registrar's Office.		Obtain form from Dean of Students, academic deans, or	For compelling reasons only; complete medical withdrawal or

regulation G on page 47)	File form in academic dean's office or Registrar's Office. No grade recorded.	Registrar's Office. File form in academic dean's offices or Registrar's Office. Dean's signature required for law students. Grade recorded as WU (withdrawal from university) and credits do not count in 20-credit limit for withdrawal.****	petition the Academic Petitions Committee (file petition through dean's office). Grade recorded as WU (withdrawal from university) and credits do not count in 20-credit limit for withdrawal.****
Change undergraduate curriculum/major. (Grad students consult the College of Graduate Studies section in Part 4)	Anytime. File form with registrar. The request to change must be approved by the department in which the new curriculum is offered. If the new curriculum is in a different college, students must meet the admission requirements of that college. Students must also see the department they are transferring out of for counseling and information purposes (not for permission to transfer). A UI cumulative grade-point average of 2.00 or better is normally required to transfer from one UI college or another; however, any student may transfer to the General Studies Program by consulting the program director (signatures certify that the student's academic records have been forwarded). The change of curriculum is official when the student files the completed form with the registrar.		

* For accelerated or short courses, the deadline is when no more than 12.5% of the class-meeting hours have been completed.
** For accelerated or short courses, the deadline is after 12.5% but less than 60% of the class-meeting hours have been completed.
*** For accelerated or short courses, the deadline is after 60% of the class-meeting hours have been completed.
**** In the College of Law, consult the dean's office for information concerning grades assigned when students withdraw from law courses after the 2nd week of classes.

C-2. Adding a Course. As shown in the chart accompanying this regulation, a course may be added on-line during the first six days of classes. Beginning with the seventh day of classes, the student must file a form with the registrar that includes the signature of the instructor. After the fourth week of the semester an undergraduate student must have the advisor's signature as well as the instructor's to add a course. A course may be added with permission through the end of the second week following midterms..

C-3. Dropping a Course. As shown in the chart accompanying this regulation, a course may be dropped on-line without a grade of W (withdrawal) being recorded on the student's permanent record through the fourth week of the semester. Beginning with the fifth week of the semester and ending the second week of the semester following midterms, a student must file a form with the registrar to drop a course (undergraduate students are required to have the signature of their advisor). During this period a grade of W will be recorded on the student's record and will count against their 20-credit withdrawal limit (see regulation C-4).

C-4. Credit Withdrawal Limitation.

C-4-a. The number of credits that may be dropped and recorded on the student's permanent record is limited to 20 credits during a student's undergraduate career at UI. Petitions must be submitted to the Academic Petitions Committee to drop more than 20 credits during a student's undergraduate career at UI.

C-4-b. If a student attempts to drop a course that would bring the total credits he or she has dropped above 20, the student will not be allowed to do so. If a student attempts to drop two or more courses simultaneously and together they would bring his or her total credits dropped above 20, the student will be asked, through the dean's office, to submit a revised request to drop only one course or a combination of courses that would not cause the limitation to be exceeded. If the student cannot be reached or fails to submit a revised request, the registrar will record dropping the course or combination of courses that bear the highest course numbers and not cause the limitation to be exceeded; the dropping of the remainder will not be allowed.

D - Credit and Continuing Education Unit

D-1. Unit of Credit Defined. One unit of credit represents what a typical student might be expected to learn in one week of full-time study (40-45 hours including class time and preparation). Each course is evaluated by a system of credits related to time spent in class, lab, study-preparation, or field investigation. A semester credit is expected to require a total of three hours of scholarly activity each week. Ordinarily one 50-minute hour of class attendance is scheduled for each credit, but any combination of class attendance, lab, study-preparation, or field investigation may be arranged. Credit for workshops and similar short courses is granted on the basis of one semester credit for at least 45 hours of scholarly activity. Exceptions to this policy for undergraduate courses must be approved by the University Curriculum Committee. Exceptions for graduate courses must be approved by the Graduate Council and the University Curriculum Committee.

D-2. Credit-Load Limitations. (Also see J-5 on page 49.)

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 in Part 4 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 graduation 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" on page 22 in Part 2; also see E-4 on page 46 and J-5 on page 49.)

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 116 as a prerequisite (but who have not yet taken Biol 115 or 116), may take Biol 115 and 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 on page 46); 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, 101, and 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 on page 69 in Part 4.

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" at the beginning of Part 6 of this catalog 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 on page 69 in part 4 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 on page 7). 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 on page 46 and E-2 on page 46) 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 (Part 4). 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 on-line grade roster (see F-1 on page 46). 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" on page 29 in Part 2.)

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" on page 29 in Part 2).

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. Instructors must meet their classes during the exam period for which they are scheduled in the finals week, either for an exam or for a final class session.

H-1-c. 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-d. 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-e. 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-f. Students with more than two finals in one day are permitted, at their option, to have the excess final(s) rescheduled to the conflict period or at a time arranged with the instructor of the course.

H-1-g. Final grades for each course must be filed with the registrar within 72 hours after its scheduled exam period.

H-1-h. Athletic contests are not to be scheduled during finals week; further, if a change in the calendar causes a scheduled athletic contest to fall within finals week, every reasonable effort must be made to reschedule the athletic contest.

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 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 instructor and by the administrator of the department and the dean of the college in which the course is offered).

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 on page 49 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 on page 49 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 Part 2 for 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 Part 2 for 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 Part 2 for 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 on page 49.) 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 technology training and development. Grades of P for the successful completion of CTE 470 and CTE 490, 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 or CTE 490. Applications and instructions for technical competency credits are available at the Department of Curriculum and Instruction. See Part 2 for 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 Part 6. Applications to receive credit for vertically related courses are available on the Registrar's website, www.registrar.uidaho.edu. See Part 2 for 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.

I-4. With the exception of experiential learning credit, other credit opportunities (such as those listed in I-2 and I-2) granted by other accredited institutions will be honored on transfer to UI. Students with

similar credits from non-accredited educational sources may submit a petition to have the credit reviewed for transfer to UI.

J - General Requirements for Baccalaureate Degrees

Candidates for baccalaureate degrees must fulfill the following requirements. (See the College of Graduate Studies section on page 63 of Part 4 for the requirements for graduate degrees. See the College of Law section on page 69 in Part 4 for the requirements for the degree of Juris Doctor.)

J-1. Credit Requirements.

J-1-a. Students must have earned a minimum of 128 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 Part 5.

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 32 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 32 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 (Core 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 four categories described below. This requirement is to be satisfied by earning the minimum number of credits specified for each category. (Transfer students have two options for fulfilling this requirement; these are described under "General Education Requirements for Transfer Students" in the Undergraduate Admission section in Part 2 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 core requirement can be used to satisfy those requirements even if the course is completed prior to being approved as a core course.

Note: Remedial courses may not be used to satisfy any of this requirement. Degree-seeking students must be enrolled in Engl 090, 101, or 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 core requirement in mathematics, statistics, or computer science in their first year in residence and in each subsequent semester until the core 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 core 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 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 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 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 209 Inquiry-Based 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 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 core 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 Biology and Society (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 Physical Geography (4 cr)
Geol 101 Physical Geology (4 cr)
Geol 102 Historical Geology (4 cr)
MMBB 154, 155 Introductory Microbiology and Lab (4 cr)*
MMBB 250, 255 General Microbiology and Lab (5 cr)*
Phys 100 Fundamentals of Physics (4 cr)
Phys 103, 104 General Astronomy and Lab (4 cr)*
Phys 111 General Physics I (4 cr)
Phys 112 General Physics II (4 cr)
Phys 211 Engineering Physics I (4 cr)
Phys 212 Engineering Physics II (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)
Stat 150 Introduction to Statistics (3 cr)
Stat 251 Statistical Methods (3 cr)

J-3-d. General Core Studies (18 cr): Within the requirements below, students must complete at least one upper division course, and must complete courses from at least three different disciplines. Core Discovery courses may not be counted towards the three discipline requirement.

1. **Core Discovery (7 cr):** One course from CORE 103-149 (open to freshmen only) and one course from CORE 153-199 (open to freshmen and sophomores only).
2. **Humanities (3 cr):** One course chosen from the approved humanities courses listed below.
3. **Social Sciences (3 cr):** One course chosen from the approved social science courses listed below.
4. **International Course:** One course chosen from the approved international courses listed below. Students are required to complete one International course. If a student takes a Core Discovery, Humanities or Social Science course that also appears on the list of approved International courses then this requirement is considered to be completed. This requirement may be waived if a student successfully completes an approved Summer, Fall, or Spring term abroad through the International Programs Office.
5. **Additional Course(s) (2-5 cr):** Additional coursework to total 18 credits chosen from the approved capstone, humanities, social sciences, or international courses listed below.

Approved Humanities Courses:
AmSt 301 Studies in American Culture (3 cr)
Art 100 World Art and Culture (3 cr)
Art 202 Early Modern Art and Aesthetics (3 cr)
Art 205 Visual Culture (3 cr)
Art 213 History and Theory of Modern Design I (3 cr)
Art 302 Modern Art and Theory (3 cr)
Art 382 History of Photography (3 cr)
Art 407 New Media (3 cr)
Dan 100 Dance in Society (3 cr)
Engl 175 Introduction to Literary Genres (3 cr)
Engl 257 Literature of Western Civilization (3 cr)
Engl 258 Literature of Western Civilization (3 cr)
Engl 342 Survey of British Literature (3 cr)
Engl 344 Survey of American Literature (3 cr)
Engl 345 Shakespeare (3 cr)
Engl 375 The Bible as Literature (3 cr)
Engl 481 Women's Literature (3 cr)
Engl 484 American Indian Literature (3 cr)
FLEN 313 Modern French Literature in Translation (3 cr)
FLEN 324 German Literature in Translation (3 cr)
FLEN 394 Latin American Literature in Translation (3 cr)
IS 370 Africa's Calling: The Culture of Ghana (3 cr)
MusH 101 Survey of Music (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)
The 469 Theatre History II (3 cr)
WmSt 201 Introduction to Women's Studies (3 cr)

Approved Social Science Courses:
AmSt 201 Introduction to Ethnic Studies (3 cr)
Anth 100 Introduction to Anthropology (3 cr)
Anth 220 Peoples of the World (3 cr)
Anth 329 North American Indians (3 cr)
Comm 233 Interpersonal Communication (3 cr)
Comm 335 Intercultural Communication (3 cr)
Comm 410 Conflict Management (3 cr)
CSS 235 or For 235 Society and Natural Resources (3 cr)
Econ 201 Principles of Economics (3 cr)
Econ 202 Principles of Economics (3 cr)
Econ 272 Foundations of Economic Analysis (4 cr)
Geog 165 Human Geography (3 cr)
Geog 200 World Regional Geography (3 cr)
Geog 365 Political Geography (3 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)
JS 101 Introduction to the Justice System (3 cr)
PolS 101 Introduction to Political Science and American Government (3 cr)
PolS 205 Introduction to Comparative Politics (3 cr)
PolS 275 American State and Local Government (3 cr)
PolS 338 American Foreign Policy (3 cr)
Psyc 101 Introduction to Psychology (3 cr)
Soc 101 Introduction to Sociology (3 cr)
Soc 230 Social Problems (3 cr)
Soc 250 Social Conflict (3 cr)
The 386 Documentary Film (3 cr)

Approved International Courses:
AgEc 481 Agricultural Markets in a Global Economy (3 cr)
AgEd 406 Exploring International Agriculture (2 cr)
Art 100 World Art and Culture (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)
Art 202 Early Modern Art and Aesthetics (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)
Chin 201 Chinese Third Semester (4 cr)
Chin 202 Chinese Fourth Semester (4 cr)
Comm 335 Intercultural Communication (3 cr)
CORE 107 Cultural Encounters: The Latino Story (4 cr)
CORE 113 Globalization (4 cr)
CORE 116 The Sacred Journey: Religions of the World (4 cr)
CORE 117 The Movies, The World, and You (4 cr)
CORE 127 War and Our World (4 cr)
CORE 157 Cultural Encounters: The Latino Story (3 cr)
CORE 163 Globalization (3 cr)
CORE 166 The Sacred Journey: Religions of the World (3 cr)
CORE 167 The Movies, The World, and You (3 cr)
CORE 177 War and Our World (3 cr)
Econ 446 International Economics (3 cr)
Econ 447 Economics of Developing Countries (3 cr)
Engl 481 Women's Literature (3 cr)
FCS 411 Global Nutrition (2 cr)
FCS 419 Dress and Culture (3 cr)
FLEN 307 The European Union (3 cr)
FLEN 324 German Literature in Translation (3 cr)
FLEN 391 Hispanic Film (3 cr)
FLEN 394 Latin American Literature in Translation (3 cr)
Fren 201 Intermediate French I (4 cr)
Fren 202 Intermediate French II (4 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 201 Intermediate German I (4 cr)
Germ 202 Intermediate German II (4 cr)
IS 370 Africa's Calling: The Culture of Ghana (3 cr)
Ital 201 Intermediate Italian I (4 cr)
Ital 202 Intermediate Italian II (4 cr)
Japn 201 Intermediate Japanese I (4 cr)
Japn 202 Intermediate Japanese II (4 cr)
LArc 390 Italian Hill Towns and Urban Centers (3 cr)
PolS 205 Introduction to Comparative Politics (3 cr)
Russ 201 Third Semester Russian (4 cr)
Russ 202 Fourth Semester Russian (4 cr)
Span 201 Intermediate Spanish I (4 cr)
Span 202 Intermediate Spanish II (4 cr)
The 221 History of World Cinema I (3 cr)
The 222 History of World Cinema II (3 cr)
The 467 Asian Theatre History (3 cr)

Approved Capstone 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)
Bus 490 Strategic Management (3 cr)
CE 493 Senior Design Project (1-3 cr, max 4 cr)
CE 494 Senior Design Project (1-3 cr, max 4 cr)
ChE 452 Environmental Management and Design (3 cr, max arr)
ChE 454 or MSE 454 Process Analysis and Design II (3 cr)
ECE 481 EE Senior Design II (3 cr)
ECE 483 Computer Engineering Senior Design II (3 cr)
EnvS 497 Senior Research (3 cr)
ForP 495 Product and Process Development and Commercialization (3 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)

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 on page 46.

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 on page 43).

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 specified 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 re-admitted 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. (See B-9 on page 43.)

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 20 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 Part 5. 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 on page 120 of Part 5.

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 on page 35 in Part 2).

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.

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 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-3. Disqualification for Undergraduates.

L-3-a. 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-b. 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-c. 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-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 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. Reinstatement for Undergraduates.

L-4-a. After a first 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 for a semester lay-out period.

L-4-b. After a second 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 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 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. 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.

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 on page 44) 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 on page 51). Fresh Start Program participants are eligible for the dean's list (see K-2 on page 51) on a semester-by-semester basis.

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

L-8. Regulation L does not apply to graduate or law students. See the College of Graduate Studies section on page 63 of Part 4 for information on probation, disqualification, and reinstatement of graduate 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	4-5	
Fees and tuition only	Fewer than 6	Fewer than 4	

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 diploma 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 diploma, binding, and microfilming fees have been paid at the Student Accounts/Cashiers Office. (See "Fees and Expenses" on page 27 in Part 2.) 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 option 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 2.80 cumulative grade point average and applicable undergraduate seniors (see Regulation B-8 on page 43 and the College of Graduate Studies section on page 63 in Part 4 of this catalog).

The curricular requirements of the academic certificates can be found in the relevant department in Part 5 of 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 253	Parliamentary Procedure (1cr)
AgEd 450	Developing Leaders (2 cr)
Bus 311	Introduction to Management (3 cr)
Bus 413	Leadership and Organizational Behavior (3cr)
Bus 418	Organization Design and Changes (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 491	Wilderness Leadership for Personal Growth (3 cr)
HPRD 429	Leadership, Pedagogy and Programming in Physical Activity (3 cr)
MS 101/111	Introduction to Military Science/Leadership Lab (2 cr)
MS 102/112	Fundamentals of Leadership and Management/Leadership Lab (2 cr)
MS 201/211	Applied Leadership and Management/Leadership Lab (3 cr)
MS 202/212	Applied Leadership and Management/Leadership Lab (3 cr)
NR 310	Leadership for Natural Resource Management (1 cr)
Rec 254	Camp Leadership (3 cr)
Rec 320	Outdoor Recreation Leadership (2 cr)

Communication courses (minimum of 3 cr):

Art 121-122	Design Process I-II (2-3 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	Principles of 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 E. Hammel, Dean (53 Iddings Wing, Ag. Sc. Bldg.; 208/885-6681); Charlotte Eberlein, Associate Dean and Director of the University of Idaho Extension; Greg Bohach, Associate Dean and Director of the Idaho Agricultural Experiment Station; John Foltz, Associate Dean and Director of Academic Programs; Robert J. Haggerty, Director of International 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 and Extension Education; Animal and Veterinary Science; Biological and Agricultural Engineering; Family and Consumer Sciences; Food Science; Microbiology, Molecular Biology and Biochemistry; 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); Biochemistry; Family and Consumer Sciences (with majors in child, family, and consumer studies; clothing, textiles, and design; and food and nutrition); Food Science (with emphases in processing, business, science, and nutrition); Medical Technology; and Microbiology; Molecular Biology and Biotechnology. 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; Microbiology, Molecular Biology and Biochemistry; 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, Microbiology, Molecular Biology and Biochemistry; 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 on page 49 in Part 3 for requirements that all students in the university must meet.

College Requirements. See Part 5 for specific degree requirements within each department.

Major Curricula

The specific requirements for the undergraduate majors are listed in Part 5. 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 disciplines of art and design, architecture, landscape architecture, interior design, and virtual technology and design to orchestrate the creation of the visual and physical human environment. This combination not only increases the resources available to students, but also brings together a community of scholars with a common dedication to a sustainable, high quality physical environment. Additionally, such a relationship reinforces the integration of the disciplines, preparing students for the interdisciplinary nature of contemporary practice. The quality of these programs has earned the college an excellent and widespread reputation.

The objective of the College of Art and Architecture is to provide an educational experience for qualified students from diverse backgrounds

who are interested in the visual and environmental design disciplines and the fine arts. Upon completion of a program in one of these disciplines, graduates are equipped to become professionally competent individuals, capable of making valuable and distinguished contributions to their profession and society.

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.

Faculty

Faculty are the key to 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 that are 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.

Departments

There are three departments and an interdisciplinary program in the college: Architecture and Interior Design, Art and Design, with several areas of emphasis; Landscape Architecture, and Virtual Technology and Design. Although these departments and programs are separate entities, the teaching, research, and service missions of all the departments are integrated and coordinated at the college level.

Fees

Students in the College of Art and Architecture pay a professional fee or supplemental course fee to support the special needs of these curricula. See "Fees and Expenses" on page 27 in Part 2 of this catalog.

Preparation and Admission

A statement of undergraduate and graduate admission requirements is included in Part 2 of 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 freshman 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

Architecture and Interior Design. The Architecture and Interior Design program offers two professional degree programs: the seamless B.S.Arch. + M.Arch, a 6-year program fully accredited by the National Architectural Accreditation Board and the B.I.D. in Interior Design. The M.S. Architecture is also offered as a post-professional graduate degree.

Art and Design. The Art and Design program offers the following undergraduate degrees: B.S. in Art Education, B.A. in Art and Design, and B.F.A. in Art and Design with areas of emphasis in drawing, painting, sculpture, printmaking, graphic design and interaction design (web). Graduate degree includes the M.F.A. and M.A.T. The National Association of Schools of Art and Design accredits all programs.

Landscape Architecture. The Landscape Architecture program offers the 5-year professional M.L.A., a program fully accredited by the Landscape Architecture Accreditation Board.

Virtual Technology and Design. The Virtual Technology and Design (VTD) program offers a B.S. degree, which emphasizes an interdisciplinary education, through a curriculum that integrates computer technology with the art and science of design.

All program curricula require some courses in the visual literacy core sequence of Art 100, 110, 111, 112, 121, and 122. Other foundation courses unique to each discipline are also required. The curricular options in each program provide an opportunity for interdisciplinary learning and outreach.

Graduate Programs

Please refer to the specific departments in Part 5.

Scholarships and Awards

Scholarships and awards are available to students and prospective students. See "Financial Aid" on page 35 in part 2. Also, contact specific program administrators.

General Requirements for Graduation

University Requirements. See regulation J in Part 3 for the all-university requirements for graduation.

College Requirements. See Part 5 for specific degree requirements within each department.

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

College of Business and Economics

John S. Morris, Dean (301A J. A. Albertson Bldg.; 208/885-6478); Mario Reyes, Associate Dean; Dana Stover, Assistant Dean; Chandra Zenner Ford, Assistant 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 principal objective is to provide a sound background in the basic business principles that will help graduates as they advance into positions of responsibility. 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 B.S.Bus. degree: 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 B.S.Bus. degree, 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 production/operations management).

Specific requirements for each major are described in Part 5, "Departments of Instruction," under the appropriate department. 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 (MBA). 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 EMBA 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 on page 49 in Part 3 for requirements that all students in the university must meet.

College Requirements. Before proceeding to upper-division work, students registered in the College of Business and Economics must: (1) complete at least 58 semester credit hours with a minimum cumulative grade-point average of 2.00, and (2) pass each of the following predictor courses and earn at least a 2.35 grade-point average in Econ 272 Foundations of Economic Analysis or Econ 201-202 Principles of Economics; Acct 201-202 Introduction to Financial Accounting and Introduction to Managerial Accounting; BLaw 265 Legal Environment of Business; and Stat 251 Statistical Methods or Stat 301 Probability and Statistics.

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.

Before enrolling in upper division College of Business and Economics courses, a CBE student must apply and be accepted into the college's junior or senior level curriculum.

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 128 credit hours. The required program of study includes: (1) 34 credit hours in the business and economics core, and (2) the major-specific required credit hours in the selected CBE major field. Additional undesignated electives are included in the 128 required credit hours.

A. CBE General Core Requirements:

Communication:

Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 207	Persuasive Writing **or**
Engl 208	Personal and Exploratory Writing **or**
Engl 209	Inquiry-Based Writing **or**
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)

Mathematics:

Stat 251	Statistical Methods **or**
Stat 301	Probability and Statistics (3 cr)

At least two courses from the following list (6-8 cr)

Math 130	Finite Mathematics (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 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 176	Discrete Mathematics (3 cr)
Math 326	Linear Optimization (3 cr)
Math 330	Linear Algebra (3 cr)
Stat 401	Statistical Analysis (3 cr)
Stat 422	Sample Survey Methods (3 cr)
Stat 433 or Econ 453	Econometrics (3 cr)*
Stat 451 or Math 451	Probability Theory (3 cr)

**Note: If Stat 433 or Econ 453 Econometrics is used to fulfill this requirement, it cannot be used to satisfy the Upper-Division Economics requirement.*

Social Sciences:

Econ 272*	Foundations of Econ Analysis or
Econ 201, 202	Principles of Econ (4-6 cr)

Humanities:

Phil 103 Ethics (3 cr)
Literature elective (3 cr)

Other courses:

Acct 201 and Acct 202	Intro to Financial Acct and Managerial Accounting (6 cr)
Bus 100	The World of Business (1 cr)
BLaw 265	Legal Environment of Business (3 cr)
Bus 339	Spreadsheet Modeling (1 cr)

Select one Environmental Related Course from the following (3 cr):

CORS 207	Integrated Science: Sustainable Forestry (3 cr)
Econ 385	Environmental Economics (3 cr)***
EnvS 101	Introduction to Environmental Science (3 cr)
EnvS 225	(s) International Environmental Issues Seminar (3 cr)
EnvS 428	Pollution Prevention (3 cr)
EnvS 479	Introduction to Environmental Regulations (3 cr)
EnvS 482	Natural Resource Policy and Law (3 cr)
For 221	Ecology (3 cr)
For 235	Society and Natural Resources (3 cr)
For 383	Economics for Natural Resource Managers (3 cr)
For 462	Watershed Science and Management (3 cr)
Geol 361	Geology and the Environment (3 cr)
Hist 424	American Environmental History (3 cr)
Phil 552	Environmental Philosophy (3 cr)
PolS 364	Politics of the Environment (3 cr)

Nonbusiness electives (5-10 cr)

** Students selecting Econ 272 must take one additional UI core course*

in humanities or social science.

*** To be chosen from courses that will satisfy regulation J-3.*

****Note: Econ 385 Environmental Economics does not satisfy the Upper Division Economics requirement.*

B. CBE Common Program Requirements:

Acct 310	Accounting for Business Decisions I (2 cr)
Bus 340	Team Building and Group Dynamics (2 cr)
Bus 341	Business Systems (4 cr)
Bus 342	Product and Process Planning (3 cr)
Bus 343	Planning and Decision-Making in Organizations (2 cr)
Bus 344	Managing the Firm's Resources (3 cr)
Bus 345	Business Operating Decisions (3 cr)
Bus 415	New Venture Creation **or**
Bus 490	Strategic Management (3 cr)
Econ 340	Managerial Economics (2 cr)
Upper-division economics electives (3 cr)	

C. Requirements in Major (major-specific required credits).

D. Electives. Chosen in consultation with the student's advisor.

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 (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 Health, Physical Education, Recreation and Dance; 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, technology training and development, 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 Part 2 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 Part 5 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 of Part 4 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, sport pedagogy and character education, 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 Core 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 Health, Physical Education, Recreation, and Dance. 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 on page 49 in Part 3 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 Health, Physical Education, Recreation and Dance on page 159 in part 5 for the special requirements applicable to the major curricula in athletic training, dance, physical education, recreation; the Department of Curriculum and Instrution on page 120 for the major curricula in technology training and development, professional-technical and technology education, and the Department of Curriculum and Instruction on page 120 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 Part 5.

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 and Extension Education

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 Health, Physical Education, Recreation and Dance

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)

Special Education (B.S.Ed.) – Department of Curriculum and Instruction

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

Donald M. Blackketter, Dean (125 Janssen Engr. Bldg.; 208/885-6479); Larry A. Stauffer, Senior Associate Dean; Barry Willis, Associate Dean Outreach; Mary Lee Ryba, Assistant Dean Development.

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 Part 2. 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" on page 35in the student service section of Part 2.

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, and Computer Science.

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 and material science and engineering. 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 two 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" in Part 4.

General College Requirements for Graduation

University Requirements. See regulation J on page 49 in Part 3 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 (See individual curricula in Part 5).

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 Part 5 by department. 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

Nilsa Bosque-Perez, Interim Dean, Alton G. Campbell, 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 Graduate College encompasses all divisions 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 campus. 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 program, and to review and act on student appeals and petitions that involve exceptions to accepted regulations and procedures of the Graduate College.

The Graduate Council is constituted of one member elected by and from the constituent graduate faculty of each of the college-level divisions 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 vice president for research and graduate studies, who serves as chair, and the assistant or associate graduate dean, 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 Graduate College 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 nine credits, at an earlier date than would otherwise be possible. A "Course Level Adjustment Form" must be completed each semester that transcript separation is desired. Students who have courses placed on a graduate transcript and later wish to be admitted to the graduate college for work on a degree must apply for admission to the Graduate College following the usual procedures. The deadline for filing the "Course Level Adjustment Form" is the tenth day of class for that semester or session. 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. Departments may establish additional regulations, including additional residence requirements, above the minimums set by the College of Graduate Studies. Departmental requirements are described in Part 4.

Appointment of Major Professor and Committee for All Degree Seeking Graduate Students. All degree seeking graduate students should either select or be assigned a major professor as soon as possible following enrollment in the program. For nonthesis master's students or specialist students, it is suggested this be done no later than the end of the first semester. For thesis master's students and doctoral students, it is suggested this be done no later than the end of the second semester.

The major professor, a member of the UI Graduate Faculty, is appointed or chosen as early as possible. The committee, if required, is recommended by the major professor and the student and approved by the department/program/school 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 department/program/school member who has an adjunct appointment to another department cannot be considered an outside committee member for a student in the faculty member's primary department/program/school. Refer to the additional appointment requirements under each degree heading.

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 affiliate faculty member and, therefore, would then be considered a member of the department recommending affiliation and would serve as an inside member on that department's student's 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 department or the student. 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 discipline'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 their 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 affiliate faculty; or if there are intellectual property issues to be considered.

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: 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. Academic petitions request waiver or modification of regulations in Part 3. Graduate petitions request waiver or modification of regulations in this section. However, 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. 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 a non-thesis requirement; or taking a preliminary examination.

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 term). (For additional regulations see "Registration Requirements" in each degree section.)

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 graduate college website. The reenrollment decision is made at the department/program/school level with final approval through the College of Graduate Studies and should be requested well in advance of the requested term 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 department/program/school level and forwarded to the Graduate Admissions Office. The reenrollment decision is made at the department/program/school 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, department/program/school 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 Major. A student is admitted for work in a specified major or program and may not change without approval of the new department. 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 department 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 to be engaged in full-time study when registered for nine credits of course and/or thesis/dissertation work. (A student pays full-time fees when taking eight credits, but is nonetheless considered a part-time student.) See also specific credit guidelines under "Financial Aid."

Regular Semester or Summer Session. The credit limit for a graduate student is 16 credits a semester or summer session (excluding courses taken for audit and including the credits for courses taken for the zero credit option).

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 department(s) and/or college, 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. A graduate student is placed on probation after any semester or summer session in which a grade-point average of less than 3.00 is earned in courses placed on the graduate transcript, regardless of the student's cumulative GPA. The student will be disqualified if a GPA of less than 3.00 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. Students on academic probation who attain a semester grade point average of 3.00 or higher during the next or subsequent semester or summer session after being placed on probation, but whose cumulative grade point average is still below a 3.00, will remain on academic probation until the cumulative GPA is a 3.00 or higher. 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 not be allowed to register for current or future semesters or sessions. If the student has perchance 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. In all other cases, he or she may be reinstated as a graduate student under the following conditions: The student may not enroll as a graduate student for at least one regular semester (fall or spring), must get the positive recommendation of his or her departmental administrator, must get Graduate College permission, and must receive at least a 3.00 grade-point average the first semester back in the Graduate College. Reinstatement is granted for a specific semester only. If a student does not register for that semester, he or she must again seek Graduate College permission for reinstatement. A student will remain on probation as long as the cumulative GPA is below a 3.00.

Grade Requirements. A candidate for an advanced degree must have a cumulative GPA, based on his or her graduate record, of at least 3.00 (A = 4.00). The relevant GPA is calculated as stated in regulation E (Part 3) except that it is based only on grades received: in all courses taken at UI while the student was enrolled in the particular program (major) leading to the degree sought whether or not those courses are on the student's study plan; in courses that were taken at UI before the student enrolled in his or her current program and have been included in that program by the student's committee; and, in the case of candidates for the master's degree, in UI courses 500 and 599 for an aggregate of not more than 10 credits or the department's allowance of research credits, whichever is the lesser (grades received in these courses for credits in excess of this limitation are treated as if the courses were graded P or F). Though courses in which grades of D are received may not be counted toward the satisfaction of degree requirements, those grades are included in the GPA.

Deficiencies. Courses that are needed to provide background for the student's program may be taken for zero credit and/or under the pass/fail option, unless the programs advise otherwise. Letter grades attained in courses taken for zero credit will appear on the student's transcript but, not calculated into the grade point average. See rules for the pass/fail option under regulation B-11 in Part 3. When deficiency courses are taken for regular credit the resulting grade will be included in the computation of the grade-point average.

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.

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 affect on the use of this policy.

Departments are required to have a written policy distributed to all students that states the standards for satisfactory progress and performance. Examples of graduate college/departmental/program/

school 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 departmental/program/school qualifying, preliminary, or other examinations; attendance at seminars or other professional activities; or, using acceptable safety or security standards in performance of duties.

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 department/program/school administrator will conduct the review. When completed, the reviewer will recommend that the student continue in the program, receive a warning, or be dismissed form 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 discipline's college and the College of Graduate Studies are 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 department/program/school chair forwards the recommendation and documentation to the associate dean of the discipline's college and the 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 convene. The student, the major professor, and the department/program/school chair 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 and 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 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 (Research and Thesis) cannot be counted toward the minimum of 30 credits for a non-thesis master's degree. Although no limit is imposed on the number of credits that may be earned in course 500 (Master's Research and Thesis) for degrees with thesis, only a maximum of 10 credits in course 500 can be used to fulfill master's degree requirements (a lower limit may be set by the department). Up to five credits of course number 599 are allowed to count towards a non-thesis master's degree; however, if a thesis program exists for a department, no more credits of 599 are allowed toward the non-thesis master's degree than half the number of credits allowed for course number 500 toward the department'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, and approved credits more than eight years old at the time the degree is awarded shall not exceed 12 credits for master's programs requiring 36 or fewer credits, and shall not exceed one-third of the total credits in programs requiring more than 36 credits. The student's department 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.

Procedures for Over-aged Credits. To be acceptable toward a master's degree, over-aged credits beyond the limitation above must be approved by taking the final examination in the equivalent UI course (as determined by the departmental administrator of the area in which the course is offered) and receiving an A or B grade from the instructor of the course. The results of the examination are submitted to the Graduate College in writing by the departmental administrator of the department in which the course is offered.

Foreign Language. There is no Graduate College foreign language requirement for a master's degree; however, some departments require a language examination or special course work.

Subsequent Graduate Degrees. An applicant who has a master's degree or is working on a master's degree may obtain a second master's degree, 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. 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 in the graduate student's study plan. Courses with grades and credits earned in these approved law courses will be posted to the student's graduate academic record upon completion of the courses and receipt of the approved study plan in the UI Registrar's Office. Grades and credits earned in these approved courses will be calculated into the student's institutional graduate GPA for the appropriate level. See the Accounting and Environmental Science sections in Part 5 for additional information on concurrent degrees.

Specific Requirements for Master's Degrees

Master of Architecture. The M.Arch. degree requires a design project. Refer to the Art and Architecture section in Part 5 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 Graduate College 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 Education. To complete the M.Ed., a non-thesis degree program, the student must fulfill the program's non-thesis requirement (NTR). 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 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 course work 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 final defense is required.

Master of Natural Science. The M.Nat.Sc. is a non-thesis degree primarily for students who are currently engaged in, or planning to enter, secondary-school or junior-college teaching. Courses at the 300, 400, and 500 levels may be included. Of the minimum 30 credits required for the degree, 18 must be earned in one major field, or nine credits in each of two fields. The remaining credits are to be chosen so that the entire program is consistent and serviceable to the student. A major paper must be written in a major area of the program, and a written and/or oral non-thesis requirement is also part of the program. The student's committee consists of at least three members: the major professor and a representative from the major area or areas, and a representative from outside the major area(s).

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 in part 5 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 500s 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.

Professional Science Master. Consult the departmental section for specific descriptions. Of the minimum 30 credits required for the degree, at least 18 credits must be at the 500s 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.

Procedures for Master's Degrees

Appointment of Major Professor and Committee. Refer to the "Appointment of Major Professor and Committee for All Degree Seeking Graduate Studies" under the preceding General Graduate Regulations section. It is important to note that the interdisciplinary program, which requires at least four members, a committee for a thesis degree will consist of at least the major professor as chair, a second faculty member from the major department, and a faculty member representing a discipline outside the major department's discipline(s). Except for students enrolled in an interdisciplinary program, a committee for a non-thesis degree is optional or is often a departmental or college committee.

Qualifying Examination. If such an examination is required, it is conducted according to departmental procedures and is a prerequisite to the preparation of a study plan. A report of this examination is not submitted to the Graduate College.

Preparation of Study Plan. Early in the student's academic career, the student prepares in conference with the major professor (and committee, if applicable) a master's degree 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 the major department. The study plan is prepared on forms provided by the Graduate College and is approved by the student's major professor, the committee (if one is appointed), departmental administrator, and the dean of the College of Graduate Studies. Any subsequent changes in the study plan must be submitted for approval to the Graduate College on a standard form for study plan changes.

Application for Advanced Degree. The Application for Advanced Degree, obtained through the Registrar's Office website (www.registrar.uidaho.edu), 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.

Registration Requirements. A graduate student defending and/or submitting a thesis must be registered for thesis credit. A graduate student in a non-thesis program must be registered at the UI during the semester in which the non-thesis requirements are completed. Note that correspondence courses do not satisfy the residence requirements for final semester registration. See also "Registration and Enrollment Requirements" under general regulations. A student who was registered during a term and did not complete all 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.

Non-thesis Requirement (Non-thesis Degree). This examination, presentation, or project is completed after the completion of most or all of the degree requirements. The department establishes format and time frame, and reports the results of the non-thesis requirement to the Graduate College using the Non-Thesis Report form. The examination, presentation, or project, if failed, may with departmental 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 an examination and up to three credits for a presentation or project may be used toward the degree. If a student fails the examination, presentation, or project twice, or the department does not allow the student to repeat the examination, presentation, or project after the first failure, or the student does not retake the examination or redo the presentation or project within a year, the student is automatically moved to unclassified enrollment status, and is no longer in the degree program.

Final Defense (Thesis Degree). Before the defense, the Authorization to Proceed with Final Defense form, a page from the "Graduate Handbook for Theses and Dissertations," is submitted to the College of Graduate Studies. 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 major and supporting fields. A recommendation of a majority of the committee is necessary for a candidate to pass this defense. The defense, if failed, may with departmental 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 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 department 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.

Thesis. "Graduate Handbook for Theses and Dissertations," which describes the requirements of the document, the procedures to follow, and suggestions for the preparation of theses, should be obtained through the Graduate College website. Students must conform to current rules and regulations of the Graduate College when preparing theses.

Master of Fine Arts

The University of Idaho awards the degree of Master of Fine Arts in recognition of high achievement in art, creative writing, or theatre arts. The M.F.A. is the professionally recognized terminal degree in the fine arts.

The major professor and department offering a particular M.F.A. program specify the philosophy of the degree program, the objectives of the courses and seminars, the creative areas of concentration available, and requirements peculiar to the department. Admission to an M.F.A. program is granted only to those applicants who have demonstrated

abilities and achievements that are judged by the departmental faculty to exhibit the potential for completing the degree.

Requirements for M.F.A. Degree

Credit Requirements. See the specific program requirements in Part 5.

Transfer, Correspondence Study, Non-degree Credit, and Overaged Credit Limitation. The use of transfer, correspondence study, non-degree, and overaged credits is subject to the limitations of each program but cannot exceed Graduate College limitations. 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. 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. Courses listed on an undergraduate record or on a professional degree transcript are not available to be used toward a graduate degree.

Time Limit. At the time the master's degree is conferred, no courses used toward the degree can be older than eight years.

Subsequent Graduate Degrees. An applicant who has a master's degree or is working on a master's degree may obtain a second master's degree, 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. 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.

Awarding M.F.A. Degrees to Members of the Faculty. A University of Idaho faculty member with rank of senior instructor or above may not be awarded an M.F.A. degree through the department or corresponding unit in which he or she is employed, unless that faculty member had been admitted to that degree program before attaining such academic rank.

Procedures for M.F.A. Degree

Appointment of Major Professor. Generally the student will be advised initially by the departmental administrator or departmental graduate coordinator. As soon as feasible, with respect to the availability of faculty members in the student's area of concentration, but within three semesters of registration in an M.F.A. program, the student and departmental administrator or graduate coordinator nominate the major professor, who must be a member of the Graduate Faculty.

Graduate Reviews. Following departmental procedures, 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 in an M.F.A. program, and serves to assess the background of the student in both major and supporting fields and to provide in part the basis for preparation of the student's study plan.

Selection of Graduate Committee. The graduate committee consists at least of the major professor as chair, a second faculty member from the major field, and a member from a discipline outside the major department's discipline(s). A department faculty member who has an adjunct appointment to another department cannot be considered an outside committee member for a student in the faculty member's primary department. 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. The committee is approved by the associate dean of the College of Graduate Studies in accordance with nomination procedures of the department concerned. The committee assumes the responsibility for directing the student's program under the leadership of the committee chair.

Preparation of Study Plan. Within two semesters (or two summer sessions for those attending in the summer only) of registration in an M.F.A. program, the student and major professor or graduate coordinator prepare a study plan, on forms provided through the Graduate College, for approval by the student's committee, the departmental administrator, and the dean of the College of Graduate studies. Changes later deemed desirable may be made on a Change of Study Plan form and approved by the committee and the Graduate College. Awarding the degree is partially based on completion of all items required by the study plan.

Application for Advanced Degree. The Application for Advanced Degree, obtained through the Registrar's Office web site, www.registrar.uidaho.edu, is submitted to the College of Graduate Studies office according to the deadline printed 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 for which, graduation is intended.

Requirements Registration. A graduate student defending and/or submitting a thesis must be registered for thesis credit. A graduate student in a non-thesis program must be registered at UI during the semester in which the non-thesis requirements are completed. Note that correspondence courses do not satisfy the residence requirements for final-semester registration. See also "Registration and Enrollment Requirements" under general regulations. A student who was registered during a term and did not complete all 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.

Final Defense (Thesis) or Non-thesis Requirement (Examination, Project, or Presentation). Before the thesis defense or the non-thesis examination, project, or presentation, the appropriate form is obtained through the Graduate College. The thesis defense is usually oral but may be written. The actual time for the defense of the thesis is set by the department, and is scheduled on completion of the thesis work; the candidate is required to defend his or her work and show knowledge of the major and supporting fields. A recommendation of a majority of the committee is necessary for a candidate to pass the defense or non-thesis requirement. The defense or non-thesis requirement, if failed, may with departmental approval be repeated once. The interval before the second attempt may not be less than three months or longer than one year. If the student fails the final defense or non-thesis requirement twice, or the department does not allow the student to repeat the defense or non-thesis requirement after the first failure, or the student does not retake the defense or non-thesis requirement within a year, the student is automatically moved to unclassified enrollment status, and is no longer in the degree program. Following a successful defense of his or her thesis, the candidate must submit the final copies within six months; otherwise, the candidate must defend the thesis again and may be required to revise it or write an entirely new one.

Thesis. Two reproduced copies of approved quality and an additional copy of the title page must be deposited in the Graduate College by the date specified in the *Class Schedule*.

"Graduate Handbook for Theses and Dissertations," which describes the requirements of the document, the procedures to follow, and suggestions for the preparation of theses, should be obtained through the Graduate College website. Students must conform to current rules and regulations of the Graduate College when preparing theses.

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 Adul/Organizational Learning and Leadership, Education Specialist in Educational Leadership, Education Specialist in School Psychology, and Education Specialist in Professional Technical Education. 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 record, professional development courses, or courses on a professional degree transcript are not available to be used toward a graduate degree. No more than three credits of workshop or workshop-related courses may be used toward a graduate degree. Each student, following advising, will submit for approval to the appropriate department or division a study plan for

meeting degree requirements. The study plan then is submitted to 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.

Non-thesis Requirement. The candidate must pass a non-thesis requirement after completion of most of the degree requirements. A student is required to be registered the semester the non-thesis requirement is completed.

Procedures for Education Specialist Degree

Appointment of Major Professor. The major professor, a member of the UI Graduate Faculty, is appointed as early as possible during the student's first semester in residence.

Preparation of Study Plan. Early in the student's academic career, the student prepares, in conference with the major professor, a degree program outlining all work to be completed to fulfill the requirements for the degree. The study plan is prepared on forms provided on the Graduate College website and becomes effective on approval by the student's major professor, departmental administrator, and associate dean of the College of Graduate Studies. Any subsequent changes in the study plan must be submitted to the graduate college on a standard form.

Application for Advanced Degree. The Application for Advanced Degree, obtained through the Registrar's Office website (www.registrar.uidaho.edu), is submitted to the College of Graduate Studies office according to the deadline printed 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 the conclusion of the semester in which graduation is intended.

Final Semester Registration. A graduate student must be registered at UI during the semester in which the degree requirements are completed. (See also "Registration and Enrollment Requirements" under general regulations.) Enrollment in correspondence study courses does not fulfill this regulation. A student who was registered during a term and did not complete all 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.

Non-thesis Requirement. This written and/or oral examination, project, or presentation is taken after the completion of most or all of the degree requirements. The department establishes time, date, and place, and reports the results of the non-thesis requirement to the Graduate College. Up to one academic credit received for completing the non-thesis examination requirement or up to three credits for the presentation or project may be used toward the degree.

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.

The major professor and department 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. A minimum of 78 credits beyond the bachelor's degree is required; of these, at least 52 credits must be numbered 500 and above, and at least 33 of the 78 credits must be in courses other than 600 (Doctoral Research and Dissertation). 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 departments 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.

Transfer, Correspondence Study, and Non-degree Credit Limitation. A doctoral 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 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. 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. Correspondence study courses may be applied to the degree only with the prior written approval of the associate dean of the College of Graduate Studies. Courses used toward an undergraduate degree, professional development courses, and courses on a professional degree transcript are not available to be used toward a graduate degree.

Time Limits. Of the credits submitted to satisfy the requirements for a doctoral degree, a maximum of 30 may be more than eight years old when the degree is conferred, provided the student's committee and department 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. A University of Idaho faculty member with rank of senior instructor or above may not be awarded a doctoral degree earned through the department or corresponding unit in which he or she is employed, unless the faculty member had been advanced to candidacy for the degree before attaining such academic rank.

Foreign Language Requirement for the Ph.D. Degree. Whether there is a foreign language requirement and, if so, the number of languages required, the method of examination, and the level of competency, are departmental options. Refer to departmental descriptions in part 5 of this catalog.

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. The Ed.D. degree is awarded only through divisions in the College of Education; therefore, the student should consult the appropriate divisional office for additional requirements.

Procedures for Doctoral 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, a second UI faculty member from the major department, one faculty member from a minor or supporting area, and a faculty member from a discipline outside the major department's discipline(s).

Qualifying Examination. The qualifying examination, is a departmental 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 department may or may not require a master's degree as a prerequisite for the qualifying evaluation. As soon as departmental qualifications are met, a supervisory committee is appointed.

Preparation of Study Plan. Within two semesters (or two summer sessions for those attending summer sessions only) of registration in the doctoral program, the student, major professor, and committee prepare a study plan on forms provided through the Graduate College. The form is then approved by the major professor, a committee (if appointed), the

departmental administrator, and the dean of the College of Graduate Studies. Changes later deemed desirable may be made on a Change of Study Plan form and approved by the committee.

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 Exam is taken. The student's committee certifies to the Graduate College 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 department 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 examination. The student is required to be registered during the semester the General Examination is taken. This is both a written and an oral examination and is intended to assess progress toward degree objectives. The student's committee certifies to the Graduate College 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 department 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.

Application for Advanced Degree. The Application for Advanced Degree, obtained through the Registrar's Office website (www.registrar.uidaho.edu), is submitted to the College of Graduate Studies according to the deadline printed 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.

Registration Requirements. A graduate student defending and/or submitting a dissertation must be registered for dissertation credit. See also "Registration and Enrollment Requirements" under general regulations. A student who was registered during a term and did not complete all 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.

Final Defense. Before the defense, the Authorization to Proceed with Final Defense form, a page from the "Graduate Handbook for Thesis and Dissertations," is submitted to the College of Graduate Studies. The final defense for a doctoral degree normally is not taken earlier than five months after passing the preliminary or general examination. However, the actual time for the final defense is set by the student's committee. It is held upon completion of the dissertation and after authorization forms have been issued by the Graduate College, but not earlier than ten working days after approval by the Graduate College to schedule the defense. A recommendation of a majority of the committee is necessary for a candidate to pass this defense. The defense, if failed, may be repeated once. The interval before the second attempt may not be less than three months or longer than one year. If a student fails the final defense a second time, or the department does not allow the student to repeat the defense after the first failure, or the student does not retake the defense within one year, the student is automatically moved to unclassified enrollment status, and is no longer in the degree program. Following a successful defense of his or her dissertation, the candidate must submit the final copies within six months; otherwise, the candidate must defend the dissertation again and may be required to revise it or write an entirely new one.

Dissertation. A "Graduate Handbook for Theses and Dissertations," which describes requirements and make suggestions for the preparation of dissertations, should be obtained through the Graduate College website. Students must conform to current rules and regulations when preparing dissertations.

Assistantships and Research Fellowships

Assistantships are open to domestic and international students who hold a baccalaureate degree from any university or college of recognized standing and 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 department in which the applicant plans to enroll for graduate study. Appointments include a work requirement of up to 20 clock hours a week. Assistants are considered students and do not pay social security if registered for 9 or more credits. Assistants who provide classroom and/or laboratory instruction or assistance under the supervision of a full-time member of the faculty are teaching assistants. Assistants who provide research service, grade papers, and perform other non-teaching duties are research assistants. Those appointed to assistantships supported by the university are advised that the appointments are tenable only in the unit 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 department's and University's policies and procedures. UI policies are available on-line in the Faculty-Staff Handbook.

Assistants are required to sign a Patent and Copyright Agreement for University of Idaho Employees, attend assistantship training during the first year in attendance, and, as with all students, have personal health insurance coverage or enrollment in the Student Health Insurance Program.

Salaries for assistantships vary depending upon the department, length of graduate service, and whether they are for an academic year or for 12 months. Assistantships at the University of Idaho are competitive with those at like institutions and current salary levels will be provided by the college or department upon inquiry.

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 graduate tuition and the uniform student fee 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 graduate tuition and student fees based on the number of credit hours for which the person is registered.

A full-time assistant cannot use a staff of staff spouse fee waiver, senior scholar waiver or reciprocal 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 administrator of the department in which the applicant plans to enroll.

College of Law

Donald L. Burnett, Jr., Dean; Elizabeth B. Brandt, Associate Dean for Faculty Affairs; Helen Albertson-Ploucha, Associate Dean for Students and Administration (101 Law Bldg.; 208/885-4977).

The College of Law was organized in 1909 and is the only school devoted to the study of law 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 has been 155 in recent years. 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 $200 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 UI are permitted to register for a course offered by the College of Law if the permissions of the dean or associate dean of the College of Law and the instructor of the course are both granted. 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" on page 27 in Part 2.

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.

Concurrent Degrees (M.S./Ph.D. in Water Resources, M.S. in Environmental Science and M.Acct. in Accounting) and other Graduate-Level Courses

Graduate-level courses used toward an approved concurrent law degree must be approved by the College of Law. Grades and credits earned in these approved graduate courses will not be calculated in the student's institutional College of Law GPA or College of Law class ranking.

For information on the concurrent J.D./M.Acct. see the Accounting section in Part 5. For information on the concurrent J.D./M.S. and J.D./Ph.D. degrees, see the Environmental Science sections and Water Resources, respectively, in Part 5. UI graduate-level courses will be recorded on the law student's academic record as a comment only.

For the concurrent J.D./M.Acct., J.D./M.S., and J.D./Ph.D. degrees, a student will be required to complete both degrees for the College of Law to count twelve credits towards the J.D. degree. If a student fails to receive the M.Acct., M.S. or Ph.D. degree a maximum of six semester credits earned in the M.Acct., M.S., or Ph.D. program may count towards the J.D. degree with the approval of the College of Law associate dean. Information on the JD/MBA Concurrent degree program offered in cooperation with Washington State University, please contact the College of Law.

Additional Information

For detailed information about the College of Law, see the College of Law Catalog or visit their website, www.uidaho.edu/law.

College of Letters, Arts and Social Sciences

Katherine G. Aiken, Dean (113 Admin. Bldg.; 208/885-6426); Debbie Storrs, Associate Dean (dstorrs@uidaho.edu); Kristine A. Roby, College Advisor, (kroby@uidaho.edu).

The largest division of the university, the College of Letters, Arts, and Social Sciences (CLASS) has four goals: 1) to prepare individuals for an array of careers and professions; 2) to foster scholarly inquiry, creative activity, and the generation of knowledge; 3) to serve the public, and 4) to provide the cultural and contextual foundation on which other academic and professional colleges depend. The College through its 11 departments and several interdisciplinary programs prepares broadly educated individuals capable of open inquiry, critical thinking, and effective communication, who understand and are responsive to the needs of individuals and society. The College values the integration of learning and discovery in its efforts to develop and support distinctive programs that enhance the land grant mission of the university within the context of the arts, humanities, and social sciences. Students are prepared to become knowledgeable, contributing citizens in a world of diverse cultures and contexts. Beyond learning how to discover, analyze, and integrate knowledge across disciplines, graduates come to value lifelong learning as the basis for excellence in any endeavor.

Departments and Programs of Instruction

At both the undergraduate and graduate level, the curricula of CLASS emphasize the aesthetic, historical, ethical, and social dimensions and interpretations of human existence. Included within CLASS are the Departments of English, Foreign Languages and Literatures, History, Philosophy, Political Science and Public Affairs Research, Psychology and

Communication Studies, Theatre Arts and Film, and Sociology/Anthropology/Justice Studies. The School of Journalism and Mass Media, the Lionel Hampton School of Music, and the Martin School of International Studies also function as departments of the College. Other programs offering degrees through the CLASS include American Studies, Environmental Science, General Studies, Interdisciplinary Studies, and Latin American Studies. The departments and schools in CLASS provide dozens of curricula and curricular options leading to certificates, minors, and baccalaureate degrees as well as programs of graduate study leading to master's and doctoral degrees.

Undergraduate. See departmental sections in Part 5.

Graduate. The College of Graduate Studies offers work toward advanced degrees in many disciplines in CLASS. Work leading to a master's degree is currently available in the fields of anthropology, creative writing, English, environmental science, history, music, philosophy, political science, psychology, public administration, theatre arts. The degree of Doctor of Philosophy is available in history, philosophy, and political science. For specific degrees available, see the list of programs compiled in Part 1 (also see the online version of the catalog for the most recent degree and course information).

General Studies. The College also serves those students who have not decided upon a particular program of study by offering general education courses which support other curricular and providing a course of study and degree that allow students to explore a broad-based university curriculum without specialization. For details, see the program in general studies described in Part 5.

Non-degree. A non-degree program is offered in which each student's course of study is worked out to meet his or her special needs. The program is intended primarily for students who (1) do not plan to obtain degrees at the University of Idaho, (2) plan to transfer to other institutions, or (3) have objectives that are not provided for by any of the established curricula in the College.

Interdisciplinary Studies. Students who have broad educational goals that necessitate work in several disciplines or departments may present an interdisciplinary curriculum for the B.A. or B.S. degree. For details, see the program in interdisciplinary studies in Part 5.

Admission to the College

Students who expect to enter CLASS should plan their high school electives carefully, both to lay the foundation for their general education, which will be continued in the university, and to ensure that they are adequately prepared to begin their study at the college level. Students should select subjects in English, foreign language, social sciences, natural sciences, mathematics, and fine arts that will provide a well-rounded preparation for further study. For a statement of general undergraduate and graduate admission requirements, see Part 2.

Regular Enrollment in a Program of Studies

Students in CLASS must enroll in regular programs unless they are admitted as a non-degree seeking student. A regular program is one that leads to a degree that the College offers.

Teacher Education Program

Students in CLASS who are preparing for secondary-school teaching should consult the section on the College of Education on page 59 in this Part 4.

Laboratory of Anthropology

The Alfred W. Bowers Laboratory of Anthropology, established in 1968, serves as the research arm of the Department of Sociology and Anthropology in the College of Letters, Arts and Social Sciences for archaeological investigations. The Laboratory also serves as the Archaeological survey of Idaho, Northern Repository (ASINR). The ASINR houses archaeological materials and associated documents from the ten northern counties in the state. Additionally, the Laboratory holds the Asian American Comparative Collection, Don E. Crabtree Lithic Collection, Historic Artifact Collection, Faunal Comparative Collection, and the Pacific Northwest Antrhopological Archive.

General College Requirements for Graduation

The College requirements applicable to the B.A. and B.S. degrees are listed in Part 5. The requirements for the various professional degrees (i.e., B.F.A. and B.Mus.) are listed by academic unit in Part 5. The College B.A. and B.S. requirements do not apply to these professional degrees.

College Requirements for the B.A. and B.S. Degrees

Objectives. The College requirements for the B.A. and B.S. degrees are designed to ensure a broad, liberal education through the attainment of the following objectives: (1) proficiency in written and spoken English; (2) appreciation of great literature, music, and art; (3) knowledge of human development, the growth of social and economic institutions, and an understanding of the rights and responsibilities of the individual citizen; (4) perspective of American culture in the world at large; (5) sense of historical perspective; (6) acquaintance with moral, ethical, and aesthetic values; (7) familiarity with scientific thought and method; (8) ability to use and interpret basic mathematical concepts; (9) understanding of ecology; and (10) a continuing attitude of intellectual curiosity.

Requirements for the B.A. Degree:

Humanities. 6 credits (two courses) in addition to the minimum university-wide core requirement in humanities/social sciences.

Social Sciences. 3 credits (one course) in addition to the minimum university-wide core requirement in humanities/social sciences.

Foreign Language. 0-16 credits (zero-four courses), i.e., 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.

Requirements for the B.S. Degree:

Humanities. 3 credits (one course) in addition to the minimum university-wide core requirement in humanities/social sciences.

Social Sciences. 3 credits (one course) in addition to the minimum university-wide core requirement in humanities/social sciences.

Natural Sciences, Mathematics, and Statistics. 6 credits (two courses) in addition to the minimum university-wide core requirement in natural sciences/math.

For the B.S. degree, the student may substitute the successful completion of an academic minor or area of emphasis of at least 18 credits approved by the department in which the student is majoring.

Progress in Satisfying These Requirements. Students who wish to graduate by the end of four years of college work should take a program that results in substantial progress toward the fulfillment of the preceding requirements by the end of the sophomore year. In particular, students seeking the B.A. degree should take courses in fulfillment of the foreign-language requirement as early as possible. If they cannot do this during the first semester, they should immediately take a course that can be used in partial fulfillment of the science-mathematics requirement.

Major Curricula

Selection of a Major. Each student should select a major curriculum no later than the beginning of the junior year. Lower-division students who have not decided on a major may pursue the Bachelor of General Studies.

Major Requirements. The departmental requirements are stated under the respective curricula in Part 5.

College of Natural Resources

Kurt Pregitzer, Dean; Vacant, Associate Dean; James R. Gosz, Associate Dean of Research; Steven J Hollenhorst, Associate Dean for Outreach and Engagement (202 College of Natural Resources Bldg.; 208/885-6442).

Professional education leading to a degree in forestry began at the University of Idaho in 1909. To the initial curriculum in forest resources have been added those in forest products (1914), rangeland ecology and management (formerly range resources) (1917), wildlife resources (1942), fishery resources (1951), resource recreation and tourism (formerly wildland recreation management) (1974), and ecology and conservation biology (formerly natural resource ecology and conservation biology) (1999).

The academic objective of the college is to provide its students with opportunities to become better prepared for lives of responsibility and fulfillment and to acquire competence for entry into professional careers in natural resource science and management. Each of the curricula offered by the college acquaints the student with the physical, biological, and social sciences and with the humanities, thus establishing a basis of general education and preparing the student for the scientific-professional courses addressing the use of forest and range lands and related resources. In addition to the most modern technical and academic classroom instruction, the college prides itself in "hands-on" training taking advantage of its outstanding field facilities and its emphasis on communications and student activities to enhance leadership potential.

Advantages of Location

The university is ideally located for preparing students for the renewable natural resources professions. Forest and range lands comprise 90 percent of the state's area. Forested areas include many types from the ponderosa pine in southern Idaho to the mixed coniferous and famous white pine of northern Idaho. Range lands vary from spring-fall and winter ranges in the sagebrush-grass and bunchgrass zones to summer ranges in several of the forested zones. Within the forest and range lands are hundreds of lakes and streams and extensive wilderness areas that provide habitat for fish and wildlife and opportunities for wildland recreation.

The values derived from these resources include wood products of all types; cattle and sheep in great numbers; abundant wildlife of many species; world renowned game fish; water for domestic use, power, and irrigation; and recreational activities. These natural study areas and resources enhance students' professional preparation.

Facilities

A modern three-story, 90,000-square-foot building, the Natural Resources Building incorporates classrooms, laboratories, scientific equipment, plant and animal collections, computer access, and other support functions into an ideal environment for natural resources education and research.

A university experimental forest includes over 8,000 acres of forest land located about 25 miles from the campus and is managed by the college as a working forest for demonstration, research, and education. The forest properties include a 200-acre recreation area, two smaller tracts closer to Moscow that serve as outdoor classrooms, and approximately 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 Ranch Field 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 forest products is accredited by the Society of American Foresters and the Society of Wood Science and Technology.

Departments

The college has five departments: Fish and Wildlife Resources, Forest Products, Forest Resources, Rangeland Ecology and Management, and Conservation Social 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 Fire Ecology and Management; Bachelor of Science in Fishery Resources (B.S.Fish.Res.) with emphases in management and aquaculture; Bachelor of Science in Forest Products (B.S.For.Prod.) with options in forest products business management, forest operations, and wood construction and design; Bachelor of Science in Forest Resources (B.S.For.Res.); 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 Rangeland Ecology and Management (B.S.Rangeland Ecol.-Mgt.); Bachelor of Science in Resource Recreation and Tourism (B.S.Res.Rc.); and Bachelor of Science in Wildlife Resources (B.S.Wildl.Res.); Master of Science (thesis and non-thesis options); Master of Natural Resources; and Doctor of Philosophy in natural resources, with dissertation topics in any of the five departments. Academic minors offered include forest operations, forest products, 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; and sustainable tourism and leisure enterprises.

Admission Requirements

General. For a statement of undergraduate and graduate admission requirements, see Part 2.

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 Part 5. 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 two options in forest products, have incorporated a common 9-credit set of core courses as follows: Ecology, Society and Natural Resources, and Interdisciplinary Natural Resources Planning.

The curricula and options in each department offer as many courses in common with those in other departments 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 also be obtained in each department. 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, the Wilderness Research Center, 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 on page 49in Part 3 for general university requirements for degrees.

College Requirements. Credits for the baccalaureate degree vary from 128 to 132 semester hours, depending on the option selected. A minimum cumulative grade-point average of 2.00 in all courses taken in this college is required for graduation. 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, Resource Recreation & Tourism, and Wildlife Resources complete a senior thesis, internship, or relevant summer employment as part of their degree requirements. Specific information is contained in the respective departmental sections in Part 5.

College of Science

Scott A. Wood, Dean; Mark J. Nielsen, Associate Dean (321 Mines Bldg,; 208/885-6195, www.sci.uidaho.edu; email 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 (see Part 1).

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 Bi-State Department of Statistical Science, there is a statistics option to the mathematics bachelor's degree. See departmental sections in Part 5 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 on page 17 in Part 1 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); Six Sigma Innovation & Design, and Statistics (both through the Bi-State 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 on page 101 in Part 5 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 on page 59 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 Part 2.

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" on page 35 in Part 2. 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 on page 49 in Part 3), and the departmental requirements for the degree sought. The departmental requirements applicable to the B.A. and B.S. degrees are listed in Part 5.

Major Curricula

Major Requirements. The departmental requirements are stated under the respective curricula in Part 5.

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 (PO Box 441014, Moscow ID 83844-1014; phone (208) 885-6373; www.outreach.uidaho.edu/eo; outreach@uidaho.edu).

The College of Engineering's Engineering Outreach (EO) Program was founded in 1973. Established with the help of a Kellogg Foundation grant, EO's first courses were delivered on videotape to regional corporations and libraries. Today, courses offered by various UI departments are delivered online to hundreds of students worldwide each semester. Students can earn graduate degrees, academic certificates, or transfer credits completely at a distance. Students taking courses delivered by EO follow the same admission procedures as on-campus students, and receive advising and administrative support from the academic departments.

Master's Degree Programs. Engineering Outreach delivers coursework required for the master's degrees listed below. All required coursework may be completed at a distance, and most students visit the UI campus near the end of their program to take a comprehensive exam or defend a thesis.

- Biological and Agricultural Engineering — emphasis in water management (M.S., M.Engr.)
- Civil Engineering (M.Engr.)
- Computer Engineering (M.S., M.Engr.)
- Computer Science (M.S.)
- Electrical Engineering (M.S., M.Engr.)
- Geological Engineering (M.S.)
- Mechanical Engineering (M.Engr.)
- Teaching Mathematics (M.A.T.)

Academic Certificates. Engineering Outreach delivers courses that allow students to earn a graduate certificate in a specific area of study at a distance. Academic certificates provide opportunities for professional advancement, and build a strong foundation for future graduate study. Certificate courses in the following areas are available through EO:

- Analog Integrated Circuit Design
- Applied Geotechnics
- Communication Systems
- Electric Machines and Drives
- Heating, Ventilation, and Air Conditioning (HVAC) Systems
- Power System Protection and Relaying
- Secure and Dependable Computing Systems
- Semiconductor Theory and Devices
- Six Sigma Innovation & Design
- Statistics
- Structural Engineering
- Water Resources Engineering

Focus Areas. Selected UI departments offer courses through Engineering Outreach, which may be applied toward degrees at UI or used for transfer credit. Engineering Outreach delivers courses in the following focus areas:

- Business
- Engineering Management
- Psychology – emphasis in human factors
- Statistics
- Water Resources

Course Delivery and Services

Engineering Outreach courses are recorded in University of Idaho studio classrooms and produced for online delivery by EO. Courses are semester-based, and closely follow the on-campus schedule. Visit www.uidaho.edu/eo/calendar for specific dates.

Course lectures are delivered in three media formats: online, DVD, and USB flash drives. All courses are provided online, and may be viewed in a web browser or saved to a computer as an MPEG-4 video file and viewed at a later time. The online lectures may also be received via an RSS feed. The secondary delivery method (DVD or USB flash drives) varies by course. Visit www.uidaho.edu/eo/coursedelivery for more information.

Supplementary course materials may be posted online, or provided on CD or in print. All course materials, including lectures, are provided for students' personal reference. They may not be sold or re-distributed, and reproduction is prohibited under copyright law.

Academic Support. Engineering Outreach Student Services Coordinators (800-824-2889 or eoreg@uidaho.edu and eoship@uidaho.edu) assist with admission, registration, fee payments, course material/exam delivery, and related policies and procedures.

Instructor Contact. Instructors are available to grade student work and answer questions throughout the semester. Students can reach instructors by e-mail, fax, or by toll-free telephone; and contact information is provided on the EO website.

Exams. Students are responsible for finding their own exam proctors, who supervise the exam process and return completed exams to Engineering Outreach. Exam proctor selection is subject to approval by both EO and the course instructor, and is monitored throughout the semester. Proctors cannot be students' personal friends, family members, work subordinates, or other EO students. Examples of acceptable proctors are: a) faculty or staff members at local educational institutions; b) students' work supervisors or training coordinators; c) U.S. military education officers; or d) public librarians.

Textbooks. Textbooks are not included in the course materials supplied by Engineering Outreach. They are usually listed on the University of Idaho Bookstore's website at www.uidahobookstore.com, and may be ordered online.

Internet Applications. Internet access is required for all EO students to view and/or download lectures and other course materials, manage and process e-mail, and to facilitate UI services and processes. Visit www.registrar.uidaho.edu/forms/VandalSetup_flyer.pdf for instructions on establishing the three main user accounts: VandalWeb, Blackboard, and VandalMail Live.

UI Directory Information. E-mail addresses are considered "directory information," and will be kept confidential ONLY if the student submits the Request to Prevent Disclosure of Directory Information form to the Registrar's Office. Visit www.registrar.uidaho.edu/forms/forms.html to download this form

Library Services. University of Idaho Library services are available to Engineering Outreach students at www.lib.uidaho.edu, and online video tutorials are available for off-campus students. Select *Off-Campus Access* for information about services and how to obtain a library ID number.

Disability Support Services. UI's Disability Support Services Office (DSS) provides academic support services to students with temporary or permanent disabilities. Students requesting disability-related accommodations should contact DSS directly, either by e-mail or by phone, and must provide appropriate disability documentation every semester. Visit www.students.uidaho.edu/taap for more information about Disability Support Services.

Admission

Engineering Outreach students must be admitted to the University of Idaho as undergraduate, non-degree or graduate students; visit www.uidaho.edu/admissions.aspx to apply online. Non-U.S. citizens residing in the United States and other international students have additional admission requirements, which may include TOEFL scores or equivalent, and verification of current visa status.

Registration and Fees

Engineering Outreach provides a secure website, www.uidaho.edu/eo/onlineforms, that includes forms required to register for EO courses. Courses offered through EO are not available for registration on VandalWeb, and may have earlier registration deadlines than other UI courses. Visit www.uidaho.edu/eo/calendar to view a current EO calendar.

Fees. Engineering Outreach students pay a "per-credit" fee with no distinction between resident/nonresident fees. Payment in full is expected at the time of registration, and must be received by the first day of on-campus classes to avoid late fees. Course fees are subject to change at any time by the Board of Regents of the University of Idaho; visit www.uidaho.edu/eo/fees for current fees.

Military Benefits. 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 Engineering Outreach course fees. Visit the UI Office of Veterans Affairs' at www.students.uidaho.edu/dos for more information.

Financial Aid. Non-degree students are not eligible for federal or state financial aid, but other EO students may qualify. Visit the UI Student Financial Aid Services Office's website at www.uidaho.edu/financialaid for information. Students planning to use financial aid to pay fees must have a completed file in the UI Student Financial Aid Services Office before they can register for an EO course.

Course Status Changes. Visit www.uidaho.edu/eo/calendar for deadlines for requesting changes of course status (audit, credit, pass/fail, or withdraw), and use the EO online forms system at www.uidaho.edu/eo/onlineforms to request status changes.

Incompletes. A grade of "I" (Incomplete) can only be assigned if students have performed passing work, but extenuating circumstances prevent completion of the course on time. Both the instructor and the student must agree upon the "I" grade, and the final deadline for submitting work (see Part III, Regulation F on page 46 for more information).

Final Grade Reports and Transcripts. Final grades and unofficial transcripts are accessible through the University of Idaho's secure information system at www.vandalweb.uidaho.edu. A student ID number and PIN are required for access; visit www.registrar.uidaho.edu for more information. Official transcripts can be ordered through the Registrar's Office.

Independent Study in Idaho

Barry Willis, ISI Program Administrator: (phone 208/885-6373); ISI office: (PO Box 443225, Moscow ID 83844-3225; phone 208/885-6641 or 877/464-3246; fax 208/885-5738; indepst@uidaho.edu; www.uiweb.uidaho.edu/isi).

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 cooperative members include Boise State University (BSU), Idaho State University (ISU), and Lewis-Clark State College (LCSC). The ISI office is located at the UI North Campus Center in Moscow, Idaho. 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 delivers over 100 college-level distance education courses in over 25 subject areas to more than 1,600 students each year. Courses are delivered online and parallel their on-campus counterparts in content and completion standards. People from all walks of life, worldwide, take ISI courses to begin college programs early, resolve on-campus scheduling conflicts, satisfy prerequisites, pursue professional development, and for personal enrichment. Courses are self-paced and available anytime, anywhere; students have one full year to complete ISI courses. Idaho residency is not required. Independent Study in Idaho courses carry semester-hour credit from one of the four cooperative institutions. These credits can be applied toward a degree with the approval of the degree-granting institution; they can also be used as transfer credits or for professional development. View courses and syllabi on our Web site.

Focus Areas

Library Science. The University of Idaho, through ISI, sponsors library science courses that are required for the Education Media Generalist Endorsement (K-12). The library science courses are not offered on campus, they are available only through ISI. Certified teachers (with a standard or advanced teaching certificate) interested in school library or media positions may earn an Education Media Generalist Endorsement (K-12) by taking library science courses through ISI. These courses are accepted for the Idaho Education Media Generalist Endorsement (K-12) and may be approved for endorsements in other states. The Idaho endorsement requires 20 semester-hour credits in the general field of educational media (or library science). Library Science courses are also offered that are applicable to the UI Library Science Teaching minor. The teaching minor in library science requires 24 credits. A list of courses that fulfill these credit requirements is available on the ISI Web site at www.uiweb.uidaho.edu/isi/, *select* Focus Areas.

Education. Independent Study in Idaho courses may be used toward renewing teaching credentials or for recertification. Contact your state department of education to determine if ISI courses are approved for this purpose.

Real Estate. The ISI program offers courses that can be used toward requirements for real estate licensure in the state of Idaho.

Course Delivery and Services

Each course must be completed within one calendar year from the registration date. Independent Study in Idaho courses are delivered online and in print and some are supplemented by CDs or other media. After registering, students must purchase the textbook(s), if required. Course guides, which include course procedures, lessons, and policies are accessible online and may also be purchased from the UI Bookstore. The per-credit workload is equivalent to that of on-campus courses.

Transcripts can be purchased by sending a transcript request form to the registrar's office of the credit-granting institution.

Instructor Contact. Instructors are available to answer questions concerning course content and can be contacted as specified in the *Registration Confirmation Letter* sent to ISI students upon registration.

Lessons. Detailed instructions for submitting completed lessons are outlined in the *Registration Confirmation Letter*. The number of lessons that will be accepted at one time varies by course; students may not submit all the lessons at once. Typically, students send completed lessons directly to the instructor by e-mail or mail, and receive graded lessons within three weeks after the date of receipt.

Exams. All exams require a proctor unless the course guide indicates that an exam is to be self-administered. Independent Study in Idaho sends exams directly to proctors. Students are responsible for finding a qualified proctor who will supervise the exam process and return completed exams to ISI. Exam proctors must be approved by ISI; the course instructor and ISI reserve the right to ask the student to select a new proctor. Allegations of academic dishonesty may result if a student submits false proctor information or if either the student or proctor disregards UI policy. Most proctors are: a) faculty or staff at an educational institution or testing center; b) business or military education department personnel; or c) librarians.

Computer Requirements. All ISI course guides are available online and most are also available in print. Internet access is required or recommended for the majority of ISI courses. Many courses also require access to a computer with a DVD/CD drive. E-mail is required for most students for submitting lessons and communicating with ISI staff and instructors.

Disability Support Services. Each of the four ISI cooperative institutions offers academic support services to students with temporary or permanent disabilities. Students requesting disability-related accommodations are advised to contact the sponsoring institution's office of disability services. To view contact information for each of these offices, access the ISI Web site at www.uiweb.uidaho.edu/isi, select *Services*.

Registration and Fees

Students can begin ISI courses anytime during the calendar year. Each course offered through the ISI program is sponsored by one of the cooperating member institutions. Idaho residency is not required. Students can register for ISI courses without applying for admission to any of the cooperating schools; admission to any of the ISI cooperating institutions is not automatically granted upon registering for an ISI course. Visit www.uiweb.uidaho.edu/isi, select *Forms* to access the ISI secure online registration system. Registration is also accepted by mail, by telephone, or at the ISI office.

Fees. Independent Study in Idaho students pay a per-credit fee rather than resident/nonresident fees. There is also an administrative fee for each course. Students residing outside the United States pay an additional processing fee. U.S. military and U.S. territory addresses are not subject to additional charges. Payment is required at the time of registration and is accepted by check, money order, Visa, MasterCard, or Discover Card. Tuition vouchers from U.S. military or corporate employers are also accepted. Independent Study in Idaho course fees are subject to change; check the ISI Web site for current fee information at www.uiweb.uidaho.edu/isi, select *Fees*.

Other Course-Related Costs. In addition to registration fees, ISI students may incur expenses including, but not limited to, the following: textbooks, course guides, supplemental materials, postage to mail lessons and projects to instructors, and international handling and shipping.

Purchasing Course Materials. Textbooks and supplemental materials are available for purchase through the UI Bookstore. If textbooks are purchased from another outlet, carefully note the ISBN number and the required edition. An ISI course guide is required for most courses. Upon registration, a print copy can be purchased from the UI Bookstore or an electronic copy can be accessed online for no additional fee. If ordering course materials, do so promptly after registration to ensure availability.

Financial Aid. Independent Study in Idaho does not offer financial aid. However, federal and state agencies and businesses may offer financial assistance to fund ISI course fees. Financial aid may also be available through student financial aid services and veterans' organizations. College students receiving financial aid are advised to check with their financial aid office to determine the extent of coverage 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- or part-time student status to determine eligibility for financial aid or loan deferment.

Veterans' Benefits. The Office of Veterans' Affairs can help students apply for and receive VA education benefits whether a student is an active duty serviceperson, guardsman or reservist, veteran, or a dependent of a veteran. Veterans' Affairs benefits may be used to pay ISI course fees. Upon approval of benefits, ISI will invoice the appropriate agency. For more information, visit the UI Office of Veterans' Affairs Web site at www.students.uidaho.edu/dos, select *Veterans' Affairs*.

Drops and Refunds. To drop a course, submit the *Drop Course Form* online at www.uiweb.uidaho.edu/isi, select *Forms*, or mail or fax a letter to ISI. The letter must include the date, course name and number, student's name, and signature. Courses dropped within 21 days of registration qualify for a full course refund, minus the administrative fee and $15 for any lesson/exam already submitted. Courses dropped within 22–45 days of registration qualify for a 50 percent course refund, minus the administrative fee and $15 for any lesson/exam already submitted. Refunds will be processed by credit card or check, depending on the original payment method. The course will not appear on an academic transcript, and there will be no permanent academic record at any of the cooperating institutions.

Exchanging Courses. Students can exchange one course for another within 45 days of registration for a nonrefundable $25 fee plus $15 for any lesson/exam already submitted. Course exchange requests may be made online, or by mail, telephone, or fax. One exchange per registration is allowed; however, the initial course completion date does not change.

Course Extensions. If a student is unable to complete an ISI course within one calendar year from the registration date, one six-month extension for a fee of $75 per course may be requested prior to the course completion date. Extension fees are nonrefundable. Submit extension requests online at www.uiweb.uidaho.edu/isi, select *Forms*, or by mail, telephone, or fax.

Grades and Transcripts

Students who have a personal deadline (e.g., graduation, certification, program admission), must submit all lessons and exams at least one month prior to their deadline to allow for timely processing When a final course grade is issued, a *Course Completion Letter* will be mailed to the student. Transcripts may be purchased upon written request from the credit-granting institution (UI, BSU, LCSC, or ISU). It is the student's responsibility to contact the credit-granting institution to request an official transcript.

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)

Andrew L. Turner, 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: Douglas Cole, , Linda Fearn, Lee Fortunato, Kevin Kelliher, Mike B. Laskowski, Scott A. Minnich, , Jeff Seegmiller, Barbara McNeil, Gustavo Arrizabalaga, Onesmo Balemba, Francisco Saavedra, William Cone

Affiliate Faculty of Medical Education : Ron Brosemer, Ph.D., Lane Brown, Ph.D., David Conley, Ph.D., Christine Davitt, Ph.D., Jon Mallatt, Ph.D., Philip Mixter, Ph.D., Daniel Topping, M.D.

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 UI 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, 20 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 affiliate 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.

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 of Idaho Centers

University of Idaho, Boise

Trudy Anderson, Associate Vice President/CEO (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 vast intellectual resources and services of the state's land-grant institution. We distinguish ourselves through:

- Quality graduate programs that accommodate working professionals and full-time students
- Outreach to southern Idaho's communities; their sustainability, growth and educational access
- Proactive research for domestic and global solutions
- Professional and workforce development for economic vitality
- Collaborative and interdisciplinary work with the public and private sectors and other institutions of higher education
- Enduring relationships with alumni and friends to carry forward the proud history and traditions of the University of Idaho

At the University of Idaho Boise, we are accessible and responsive to the public. We are committed to strength through diversity and serve the region, state, nation and world.

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 and design, and
- the professions of law, medicine, architecture, engineering and education.

Through water research of international prominence and a commitment to environmental and social stewardship, we advance a prosperous Idaho. The University of Idaho Boise is the place where opportunity and mission converge.

The University of Idaho Boise also provides local access to alumni and university relations, development, marketing, legislative affairs, athletics promotion and student recruitment. Over 3,500 students are served annually through degree programs and continuing education for professionals. Instruction is enhanced by state-of-the art technology, world-class laboratories, and distance delivery.

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 downtown at the intersection of Front Street and Broadway Avenue in the Idaho Water Center building. The University of Idaho Boise also maintains operations near the Capitol and at the Integrated Design Lab on Sixth Street. The Ada County Extension offices are located on Glenwood Street.

The University of Idaho Boise also has leadership and administrative responsibility for University of Idaho activity in south central Idaho - the Magic Valley and Sun Valley areas.

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 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. Students participate in programs, internship and externship experiences in the following disciplines:

Agricultural & Life Sciences

- Agricultural Education: M.S.

Architecture

- Moscow-based Architecture students have the option of completing their master's degree (i.e the fifth and sixth year) in Boise.
- Architecture: M. Arch., M.S.

Education

- Adult Basic Education: Certificate
- Adult & Organizational Learning and Leadership: M.S., Ed.S.
- Business & Marketing Education: Secondary Teaching Certification, M.Ed.
- Education*: Ed.D., Ph.D
- Educational Leadership: M.Ed., Ed. Specialist
- Human Resource Development: Certificate
- Professional-Technical & Technology Education: Professional-Technical Education Certification, M.S., M.Ed., Ed. Specialist.
- Technical Workforce Training: Certificate

**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.

Environmental Science

- Environmental Science: M.S. (Emphasis in Water Science)

Law

- Third-year Law students have the option of externship experiences in Boise which combine actual client representation, simulation and classroom instruction.

Medicine

- In partnership with the University of Washington School of Medicine, the Idaho WWAMI program offers required and elective clinical clerkships for 3rd and 4th year medical students throughout the State of Idaho.

Natural Resources

- Natural Resources: M.N.R.
- Fire Ecology: Certificate
- Restoration Ecology: Certificate

Research. The University of Idaho Boise is an ideal setting for collaborative research in focused thematic areas: *Water, Natural Resources and the Environment, Organizational Development and Leadership, and Community Sustainability and Design*. Research units include the Idaho Water Resources Research Institute, the Center for Ecohydraulics Research, the Idaho Urban Research Design Center, the Integrated Design Lab, the Center on Disabilities and Human Development, and the Idaho Geological Survey. World-class laboratories, such as the Ecohydraulics River Simulation Laboratory, and collaborative research opportunities among multiple state and federal agencies, private entities and several higher education institutions create enhanced educational experiences for students.

Community and Statewide Services. The University of Idaho Boise increases access to continuing education for the local population and extends outreach programs statewide. Following are examples of services and community engagement:

- Technical assistance for manufacturing firms through TechHelp
- Urban design, sustainability, and high performance building development through the Idaho Urban Research Design Center and the Integrated Design Lab
- Resources for the educational needs of the deaf and blind through the Center on Disabilities and Human Development
- Resources and legal advice through the Small Business Legal Clinic
- Expertise from county extension personnel and communities across the state

University of Idaho, Coeur d'Alene

Richard Reardon, 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. Erik Anderson, Interim Director of Academic Programs.

The University of Idaho Coeur d'Alene was established to bring UI programs to the people of northern Idaho and eastern Washington. Cooperative relationships with other state of Idaho institutions, as well as those in eastern Washington, allow our students to finish various degrees without leaving the area. Over 150 University of Idaho courses are offered through the University of Idaho Coeur d'Alene each semester. All undergraduate degrees are articulated with North Idaho College allowing students to complete their degrees in Coeur d'Alene. Courses are taught on-site by resident and affiliate faculty or offered via interactive video, DVD, and the Internet. Many of our degree programs are designed for working professionals seeking a college education.

Undergraduate degrees offered at University of Idaho Coeur d'Alene are:

- Child, Family and Consumer Studies: Child Development and Family Relations
- Early Childhood Development and Education
- Elementary Education with K-8 credential
- Environmental Science
- Food & Nutrition: Nutrition Option
- General Studies
- Professional Technical & Technology Education
- Psychology
- Organizational Sciences
- Certification only in Elementary Education or Professional-Technical Education is available for those students who hold a bachelor's degree and seek a teaching certificate. .

Four academic minors are available for students to complete:

- Addiction Studies
- Business (on-line program)
- Psychology
- Sociology

Graduate programs include:

- Adult and Organizational Learning and Leadership
- Counseling and School Psychology
- Curriculum and Instruction
- Educational Leadership
- Environmental Science – Water Science Emphasis
- Executive MBA
- Family and Consumer Sciences
- Professional Technical and Technology Education
- Special Education

Certificate programs offered at the University of Idaho Coeur d'Alene are:

- Diversity and Stratification
- Environmental Contamination Assessment
- Environmental Water Science
- Geographical Information Systems (GIS)
- Organizational Dynamics

Engagement with local citizens, businesses and agencies in northern Idaho is a primary goal of the university. . The University of Idaho Extension Northern District Office is located at UI 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. Public School engagement is another important goal of the UI in northern Idaho. The College of Education and UI 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. UI Coeur d'Alene faculty have established world class research programs in nutrition, child development, environmental science, science education, nanotechnology, and education. In addition the University of Idaho Research Park (UIRP) in Post Falls is home to research centers of the University as well as private companies. The UIRP research centers and companies focus on high technology areas such as computer software and hardware, microelectronics and molecular biology. TechHelp is also located at UIRP and provides technical assistance for manufacturing firms throughout the

area. All the UIRP entities are active participants in the university's academic enterprise in northern Idaho and provide significant economic development for Idaho and the region.

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.if.uidaho.edu).

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 affiliate 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
- 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 (127 J. A. Albertson Bldg. 83844-3161; phone 208/885-7116). Faculty: Joseph Bradley, Karin Hathaway-Dial, Teresa P. Gordon,Marla A. Kraut, Jason Porter, Robert R. Stone, Glen G. Utzman, Jerry L. Wegman, 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 in Part 4 for additional information on graduate/law concurrent degrees.

Courses

See Part 6 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 on page 49) the general requirements for graduation from the College of Business and Economics (see Part 4), 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 430	Accounting for Public Sector Entities (3 cr)
Acct 440	Fraud Examination (3 cr)
Acct 484	Federal Taxation of Entities (3 cr)
Acct 485	Estate Planning (3 cr)
Acct 486	Contemporary Management Accounting Issues (3 cr)
BLaw 420	Commercial Law (3 cr)

Additional courses in communication or writing beyond the UI core (upper div preferred) (6 cr)

Electives to total 128 credits for the 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 20 cr:

Acct 305	Accounting Information Systems (3 cr)
Acct 310	Accounting for Business Decisions I (2 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 430	Accounting for Public Sector Entities (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 485	Estate Planning (3 cr)
Acct 486	Accounting for Management Decision Making and Control (3 cr)
Acct 492	Auditing and Controls (3 cr)
BLaw 420	Commercial Law (3 cr)

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 requirement 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 on page 63 of Part 4 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 written examination.

If a student has earned a BS in Accounting (or equivalent), the required courses include Acct 561, 570, 590, and 592, plus one course chosen from Acct 515, 530, 584, 585, 586, 598, 599. In addtion students must have taken at least one US tax class, at least one cost/managerial accounting 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 written exam).

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

Major Ted Unzicker, Dept. Head (Washington State University Kruegel Hall, phone 509/335-5598; http://www.det905.com). Faculty: Matthew J. Dorschel, Theodore O. Unzicker, George A. Mendoza, Paul J. Brewer.

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 ($250-$450 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 ($350-$450 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 twice 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 selected Air Force bases throughout the U.S. 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 twice a week in an organized, early morning fitness program with other cadets.

Courses

See Part 6 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 101-102	Foundations of the U.S. Air Force (2 cr)
Aero 103	Leadership Laboratory I (2 cr, max 4)
Aero 201-202	Evolution of U.S. Air Force Air and Space Power (2 cr)
Aero 205	Leadership Laboratory II (2 cr, max 4)
Aero 291	Four-Week Field Training Course (2 cr)
Aero 311-312	Air Force Leadership and Management (6 cr)
Aero 313	Leadership Laboratory III (2 cr, max 4)
Aero 411-412	National Security Affairs/Preparation for Active Duty (6 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 101-102	Foundations of the U.S. Air Force (1 cr)
Aero 201-202	Evolution of U.S. Air Force Air and Space Power (1 cr)
Aero 311-312	Air Force Leadership and Management (3 cr)
Aero 313	Leadership Laboratory III (2 cr, max 4)
Aero 411-412	National Security Affairs/Preparation for Active Duty (3 cr)
Aero 413	Leadership Laboratory IV (2 cr, max 4)

Program in Aging Studies

Stephen P. Banks, Coordinator (219 Student Health Center, 83844-3043; phone 208/885-7796 ; sbanks@uidaho.edu). Faculty: Ginna M. Babcock, Stephen B. Banks, 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 Health, Physical Education, Recreation and Dance, and the Departments of Architecture, Psychology and Communication Studies, and Sociology/Anthropology/Criminal Justice Studies.

Aging Studies Academic Minor Requirements

Aging Studies Minor

Psyc 419	Adult Development and Aging (3 cr)
Rec 365	Leisure and the Aging Process **or**
FCS 428	Housing America's Families (3 cr)
Soc 431	Personal and Social Issues in Aging (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 201	Fitness Activities and Concepts (2 cr)
PEP 498	Internship in Exercise Science & Health (3-6 cr)
Rec 365	Leisure and the Aging Process (3 cr)
Rec 498	Internship in Recreation (3-6 cr)
Soc 431	Personal and Social Issues in Aging (3 cr)
Soc 498	Internship (3-6 cr)

Department of Agricultural and Extension Education

James J. Connors, Dept. Chair (Agricultural and Extension Education Bldg., P.O. Box 442040, 1134 West 6th, 83844-2040; phone 208/885-6358; lriesenb@uidaho.edu; aee.ag.uidaho.edu/). Faculty: James J. Connors, Lou E. Riesenberg, Benjamin Swan, Allison J.L. Touchstone, Kattlyn J. Wolf. Adjunct Faculty: Rebecca Brown, Robert J. Haggerty. Affiliate Faculty: Michael G. Rush.

The mission of the Department of Agricultural and Extension Education 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 Part 6 for courses in Agricultural Education (AgEd) and Agricultural Science and Technology (Ag).

Agricultural and Extension Education Undergraduate Curricular Requirements

Agricultural Education (B.S.Ag.Ed.)

Required course work includes the university requirements (see regulation J-3 on page 49) 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 and Extension Education (2 cr)
AgEd 351	Principles and Philosophy of Professional-Technical Education (3 cr)
AgEd 358	Supervising FFA and SAE Programs (2 cr)
AgEd 451	Communicating in Agriculture (2 cr)
AgEd 452	Methods of Teaching Agriculture (3 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 (2 cr)
ASM 107	Beginning Welding (2 cr)
ASM 202	Agricultural Shop Practices (2 cr)
ASM 210	Small Engines (2 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
CTE 461	Using Internet-Based Career Information in the Classroom (2 cr)
Econ 202	Principles of Economics (3 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)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)
Psyc 101	Introduction Psychology (3 cr)

One course from the following (3-4 cr):

Math 130	Finite Math (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)

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 (40 cr)
Natural and applied science electives, which include Chem 101 and Biol 115 (16 cr)
Electives to total 132 cr for the degree

Agricultural Science, Communication and Leadership (B.S.Ag.L.S.)

Required course work includes the university requirements (see regulation J-3 on page 49) and:

Agricultural and Life Science Core

ASM 305	GPS and Precision Agriculture (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)
Soil 205	The Soil Ecosystem (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3-4cr):

Math 130	Finite Mathematics (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)

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 and Extension Education (2 cr)
AgEd 406	Exploring International Agriculture (2 cr)
AgEd 450	Developing Leaders (2 cr)
AgEd 451	Communicating in Agriculture (2 cr)
AgEd 498	Internship (5-10 cr)
Econ 202	Principles of Economics (3 cr)

Additional Natural and Applied Sciences (8 cr)
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	Principles of Public Relations (3 cr)

Leadership Electives (12 cr):

AgEd 253	Parliamentary Procedure (1 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	Leadership and Organizational Behavior (3 cr)
Bus 418	Organization Design and Changes (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 491	Wilderness Leadership for Personal Growth (3 cr)
MS 101	Introduction to Military Science (1 cr) **and**
MS 111	Leadership Lab (1 cr)
MS 102	Fundamentals of Leadership and Management (1 cr) **and**
MS 112	Leadership Lab (1 cr)
MS 201	Applied Leadership and Management (2 cr) **and**
MS 211	Leadership Lab (1 cr)
MS 202	Applied Leadership and Management (2 cr) **and**
MS 212	Leadership Lab (1 cr)
NR 310	Leadership for Natural Resources Management (1 cr)
Rec 254	Camp Leadership (3 cr)
Rec 320	Outdoor Recreation Leadership (2 cr)

Electives to total 128 cr for the degree

Agricultural and Extension Education Academic Minor Requirements

Agricultural Extension Education Minor

AgEd 180	Introduction to Agricultural and Extension Education (2 cr)
AgEd 359	Developing 4-H Youth Programs (2 cr)
AgEd 446	Youth Education in Agriculture (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 (2 cr)
AgEd 498	Internship (6 cr)

Agricultural and Extension Education Undergraduate Academic Certificates Requirements

Sustainable Small Acreage Farming and Ranching Academic Certificate

Ag 298	Internship (3 cr)
Ag 417	NxLevel's Agricultural Entrepreneurship – Tilling the Soil of Opportunity (3 cr)
Soil 416	Sustainable Small Acreage Farming and Ranching (3 cr)

Sustainable Production Electives (3 cr):

Ag 101	Organic Gardening and Farming (3 cr)
Ag 404	Special Topics (cr arr)
AVS 404	Special Topics (3 cr)

Sustainable Food Systems Electives (3 cr):

PlSc 360	World Agricultural Systems (3 cr)

Credits to total 15 for this Academic Certificate

Agricultural and Extension Education Graduate Degree Program

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Agricultural and Extension Education. See the College of Graduate Studies section on page 63 of Part 4 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.

Department of Agricultural Economics and Rural Sociology

Larry W. Van Tassell, Dept. Head (39A Iddings Wing, Ag. Sc. Bldg. 83844-2334; phone 208/885-6264; larryv@uidaho.edu). Faculty: Ahmed A. Araji, Stephen C. Cooke, Stephen Devadoss, Levan G. Elbakidze, John C. Foltz, C. Wilson Gray, Joseph F. Guenthner, Lorie L. Higgins, Aaron J. Johnson, Larry D. Makus, Christopher S. McIntosh, Paul E. Patterson, Neil R. Rimbey, Abelardo Rodriguez, Priscilla Salant, R. Garth Taylor, Larry W. Van Tassell, 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 agricultural economics program 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 degree of Bachelor of Science 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 agricultural economics major prepares students for graduate work while the agribusiness major does not.

Graduate training in applied economics encompasses agribusiness, natural resources, and rural development economics. Agricultural development and international trade are also emphasized.

Agribusiness includes the economics of production and distribution, agribusiness management, and agricultural policy. Natural resource economics involves the evaluation of alternative uses of such resources as land (including resources obtained from land), air, and water. Rural development is reflected in the applied economics of agribusiness and resource bases. All areas incorporate developing technology and systems in agribusiness and the global market.

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.ag.uidaho.edu/aers/.

Courses

See Part 6 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	Agricultural Economics I (3 cr)
AgEc 302	Agricultural Economics II (3 cr)
AgEc 356	Agricultural and Rural Policy (3 cr)
Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 201	Principles of Economics (3 cr)
Econ 202	Principles of Economics (3 cr)
Engl 317	Technical Writing (agribusiness majors may substitute Engl 313) (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (4-5 cr):

Biol 102	Biology and Society (4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
MMBB 250, 255	General Microbiology and Lab (5 cr)

Agricultural Economics (B.S.Ag.Econ.)

Required course work includes the university requirements (see regulation J-3 on page 49), the agricultural economics core, and:

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)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)

Select from the following (3 cr):

AgEc 383	Economics for Natural Resource Managers (3 cr)
AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
Econ 385	Environmental Economics (3 cr)

Agricultural economics electives (3 cr)
Economics electives (6 cr)
Technical agriculture electives (12 cr)
Electives to total 128 cr for the degree

Agribusiness (B.S.Ag.Econ.)

Required course work includes the university requirements (see regulation J-3 on page 49), 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):

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)
Electives to total 128 cr for the 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	Agricultural Economics I (3 cr)
AgEc 302	Agricultural Economics II (3 cr)

Seven credits of upper division Agricultural Economics electives (7 cr)

Natural Resource Economics Minor

AgEc 301	Agricultural Economics I **or**
AgEc 302	Agricultural Economics II (3 cr)
AgEc 356	Agricultural and Rural Policy (3 cr)
AgEc 361	Farm and Natural Resource Appraisal (3 cr)
AgEc 410	Experiencing the Idaho Public Policy Making Process (1 cr)
AgEc 418	Developing Negotiation Skills in Agribusiness (1 cr)
AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
AgEc 477	Law, Ethics, and the Environment (3 cr)
Geog 385	GIS Primer (3 cr)

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 on page 63 of Part 4 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 531 (3 cr), 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 531 (3 cr) & AgEc 532 (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.

Program in American Indian Studies

Rodney P. Frey, (116 Phinney Hall 83844-1110; phone 208/885-6268; rfrey@uidaho.edu; www.webpages.uidaho.edu/~rfrey/aist.htm). Faculty: Yolanda J. Bisbee, Ian Chambers, Harold Crook, Angelique EagleWoman, Rodney Frey, Marcos Ed Galindo, Karen Guilfoyle, Georgia Johnson, Janis Johnson, John Lawrence, Steve Martin, R. Lee Sappington, Rebecca Tallent, Arthur Taylor, Aaron Thomas, J.D. Wulfhorst. Affiliate Faculty - Tribal Teacher: 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; and **(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 Part 6 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)
AIST 498	Internship (2 cr)
Engl 484	American Indian Literature (3 cr)
Hist 431	Stolen Continents, The Indian Story: Indian History to 1840 **or**
Hist 426	Red Earth White Lies: American Indian History 1840-Present (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 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)
Hist 426	Red Earth White Lies: American Indian History 1840-Present (3 cr) (If not used above)
Hist 431	Stolen Continents, The Indian Story: Indian History to 1840 (3 cr) (If not used above)
NezP 101	Elementary Nez Perce I (4 cr)
NezP 102	Elementary Nez Perce II (4 cr)
Phil 381	American Indian Environmental Philosophy (3 cr)
Soc 427 or Anth 427	Racial and Ethnic Relations (3 cr)

Program in American Studies

Patricia S. Hart, Coordinator (337 Administration Bldg 83844-3178; phone 208/885-6013); Co-Coordinators: Walter A. Hesford, Sheila O'Brien. Faculty: Katherine G. Aiken, Anna Banks, Kenton Bird, Stacey Camp, Ian Chambers, Donald W. Crowley, Mary H. DuPree, Kenneth Faunce, Rodney P. Frey, Dale T. Graden, Patricia S. Hart, Walter A. Hesford, Eric L. Jensen, Georgia Johnson, Janis Johnson, William R. Lund, John A. Mihelich, Sheila O'Brien, Adam Sowards, Debbie A. Storrs, Margrit von Braun, Mark S. Warner, Dennis D. West, Gary Williams, Pingchao Zhu.

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 three emphases (see below), 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 Part 6 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 on page 49), general CLASS requirements for the B.A. or B.S. degree, and:

1. AmSt 201, 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 380 Introduction to U.S. Ethnic Literatures (3 cr)
Engl 427 Modern Fiction, 1900-1945 (3 cr)
Engl 429 Contemporary Fiction (3 cr)
Engl 441 Introduction to the Study of Language (3 cr)
Engl 471 Studies in American Literature before 1900 (3 cr)
Engl 473 American Regional Literature (3 cr)
Engl 480 Ethnic and Minority Literature (3 cr)
Engl 483 African American Literature (3 cr)
Engl 484 American Indian Literature (3 cr)
The 386 Documentary Film (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)

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, 1877-1900 (3 cr)
Hist 417 United States, 1900-1945 (3 cr)
Hist 418 Recent America, 1945-Present (3 cr)
Hist 419 Twentieth-Century 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 435 Latin America: The Colonial Era (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 Comparative Slavery and Emancipation in the Atlantic World (3 cr)
MusH 440 Studies in American Music (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)

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 (3-4 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, 202 Principles of Economics **or**
Econ 272 Foundations of Economic Analysis (4-6 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 Culture and Mass Media (3 cr)
JAMM 445 History of Mass Media (3 cr)
MusH 440 Studies in American Music (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 Sociology of the Family (3 cr)
Soc 423 Social Class & Stratification (3 cr)
Soc 424 Sociology of Gender (3 cr)
The 386 Documentary Film/Television (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)

American Studies Academic Minor Requirements

American Studies Minor

AmSt 301 Studies in American Culture (3 cr)
Six courses numbered 300 or above, chosen from the emphasis lists under the American Studies major (18 cr)

Note: No course used toward an American Studies minor may also be used toward any major.

Department of Animal and Veterinary Science

Carl W. Hunt, Dept. Head (213 Ag. Sc. Bldg. 83844-2330; phone 208/885-6345;. Faculty: Amin Ahmadzadeh, M. Wayne Ayres, Richard A. Battaglia, Marie S. Bulgin, Mireille Chahine, Joseph C. Dalton, Matthew E. Doumit, James J. England, Benton J. Glaze, John B. Hall, Ronald W. Hardy, Rodney A. Hill, Alexander Hristov, Carl W. Hunt, Mark A. McGuire, John C. Miller, Gordon K. Murdock, Richard J. Norell, Roxanne Pillars, Madison 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 instructional 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/preveterinary option (B.S.A.V.S.) is offered for students interesting 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 Part 6 for courses in Animal and Veterinary Science (AVS) and Veterinary Science (VS).

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 on page 49) and:

AVS 109	The Science of Animals that Serve Humanity (4 cr)
AVS 209	Science of Animal Husbandry (4 cr)
AVS 271	Anatomy and Physiology (4 cr)
AVS 305	Animal Nutrition (4 cr)
AVS 452	Physiology of Reproduction (4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)
Stat 251	Statistical Methods (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)
AgEc 301	Agricultural Economics I **or**
AgEc 302	Agricultural Economics II (3 cr)
AVS 222	Animal Reproduction and Breeding (3 cr)
AVS 306	Feeds and Ration Formulation (4 cr)
AVS 363	Animal Products for Human Consumption (3 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 Economics (3 cr)
Econ 202	Principles of Economics (3 cr)

Business electives (6 cr)
6 crs of Upper Division Ag Econ

Species Production Courses (6 cr from a., or 3 cr from a. and b.):
a. AVS 472 Dairy Cattle Management, AVS 474 Beef Cattle Science, or AVS 476 Sheep Science (3 cr)
b. AVS 466 Horse Science and Management, or AVS 468 Companion Animal Biology & Management (3 cr)

Electives to total 132 for the 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 222	Animal Reproduction and Breeding (3 cr)
AVS 306	Feeds and Ration Formulation (4 cr)
AVS 330	Genetics of Livestock Improvement (3 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 Economics (3 cr)
MMBB 154	Introductory Microbiology **or**
MMBB 250	General Microbiology (3 cr)
MMBB 155	Introductory Microbiology Laboratory **or**
MMBB 255	General Microbiology Lab (1-2 cr)

Electives to total 132 for the 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 (3 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 Economics (3 cr)
MMBB 154	Introductory Microbiology **or**
MMBB 250	General Microbiology (3 cr)
MMBB 155	Introductory Microbiology Laboratory **or**
MMBB 255	General Microbiology Lab (1-2 cr)
REM 221	Ecology (3 cr)
REM 251	Rangeland Principles (2 cr)

300 or 400 level Life science elective (chosen from Biol, Ent, Fish, MMBB, PlSc, REM, Soil, or WLF) (3 cr)

Species Production Courses (6 cr from a., or 3 cr from a. and b.):

a. AVS 472 Dairy Cattle Management, AVS 474 Beef Cattle Science, or AVS 476 Sheep Science (3 cr)

b. AVS 466 Horse Science and Management, or AVS 468 Companion Animal Biology & Management (3 cr)

Electives to total 132 for the degree

D. Science/Preveterinary Option

Biol 116	Organisms and Environments (4 cr)
Biol 210	Genetics **or**
Gene 314	General Genetics (3-4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 277, 278	Organic Chemistry I and Lab (4 cr)
MMBB 154	Introductory Microbiology **or**
MMBB 250	General Microbiology (3 cr)
MMBB 155	Introductory Microbiology Laboratory **or**
MMBB 255	General Microbiology Lab (1-2 cr)
MMBB 300	Survey of Biochemistry **or**
MMBB 380	Introductory Biochemistry (3-4 cr)
Phys 111	General Physics I (4 cr)
Phys 112	General Physics II (4 cr)

Select 3 cr from a., or 3 cr from a. and b.):

a. AVS 472 Dairy Cattle Management, AVS 474 Beef Cattle Science, or AVS 476 Sheep Science (3 cr)

b. AVS 466 Horse Science and Management, or AVS 468 Companion Animal Biology & Management (3 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)
AVS 472	Dairy Cattle Management **or**
AVS 474	Beef Cattle Science (3 cr)
Chem 372	Organic Chemistry II (3 cr)

Biol or MMBB elective, 300-level or above (3 cr)

Select either 3 additional credits from a. or an initial 3 credits from b.:

a. AVS 472 Dairy Cattle Management, AVS 474 Beef Cattle Science, or AVS 476 Sheep Science (3 cr)

b. AVS 466 Horse Science and Management, or AVS 468 Companion Animal Biology & Management (3 cr)

Electives to total 132 for the degree

Animal and Veterinary Science Academic Minor Requirements

Animal Science Minor

AVS 109	The Science of Animals that Serve Humanity (4 cr)
AVS 222	Animal Reproduction and Breeding (3 cr)
AVS 305	Animal Nutrition (4 cr)
AVS 306	Feeds and Ration Formulation (4 cr)
AVS 363	Animal Products for Human Consumption (3 cr)

One of the following (3 cr):

AVS 466	Horse Science and Management (3 cr)
AVS 472	Dairy Cattle Management (3 cr)
AVS 474	Beef Cattle Science (3 cr)
AVS 476	Sheep Science (3 cr)

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 of Part 4 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 (Program Coordinator), Matthew T. Brehm, Bruce T. Haglund, Frank R. Jacobus, Anne L. Marshall, Sherry McKibben (Boise), Wendy R. McClure, Phillip G. Mead (Architecture Program Coordinator), Román Montoto, Brian F. Sumption. Interior Design Faculty: Miranda S. Anderson, Rula Z. Awwad-Rafferty, Shauna J. Corry (Interior Design Program Coordinator). Adjunct Faculty: Gary Austin,, C. Brian Cleveley, Stephen R. Drown, Tom Gorman. Affiliate Faculty: John R. Smith. Visiting Faculty: Ken Carper. Lecturers: Robert Thornton.

Art and Design Faculty: Delphine Keim Campbell, Frank A. Cronk, Jill Dacey, David F. Giese, Lynne Haagensen, Sally G. Machlis, Gregory Turner-Rahman, William P. Woolston (Program Coordinator), Joseph R. Zeller. Adjunct Faculty: Roger H. Rowley. Affiliate Faculty: John A. Larkin, Marilyn Lysohir, Jon Ochs, Miles Pepper, Melissa Rockwood.

Landscape Faculty: Gary Austin, Rula Awwad-Rafferty, Stephen R. Drown (Program Coordinator), Elizabeth Graff, Toru Otawa. Affiliate Faculty: Donald H. Brigham II.

Virtual Technology and Design Faculty: Professor Brian F. Sumption (Program Coordinator). Assistant Professor: John Anderson. Lecturers: Kevin Allen; Kelly Anderson. Senior Instructor: C. Brian Cleveley.

The combined B.S.Arch & M.Arch degrees constitute a five-plus professional degree program accredited by the national Architectural

Accrediting Board (NAAB) and is designed to prepare students for a professional career in architecture. The professional program includes courses in architectural design, history and theory of architecture, environmental control, structures, materials and methods of construction, urban theory, and professional practice. The B.S.Arch. can be completed after fulfilling the requirements of the fourth year. Qualified students may work toward completion of both the B.S.Arch. & M.Arch. requirements during their fourth, fifth, and sixth years, receiving both degrees upon completion of the curriculum. They may apply for graduate status while taking fourth-year studio (Arch 454) (application deadline is February 1). Graduate students must be classified as such at least in their fifth and sixth years.

Transfer students with prior four-year non-professional bachelor's degrees in architecture may be accepted into the M.Arch. program based on their transcripts.

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 US professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Science in Architecture and the Master of Architecture. A program may be granted a six-year, three-year, or two-year terms of accreditation, depending on its degree of conformance with established educational standards.

Masters 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 four-year, B.S.Arch pre-professional degree, where offered, is not accredited by NAAB. The pre-professional degree is useful for those wishing a foundation in the field of architecture, as preparation for either continued education in a professional degree program, or for employment options in fields related to architecture.

Computer Technology. Students in the professional programs of architecture and interior 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.

Fees & Expenses. Architecture and Interior Design are both professional programs, a designation enjoyed by programs whose graduates require a license or a comprehensive professional qualifying exam to practice. The architecture and interior design professional programs have special needs for which the State Board of Education has granted approval to charge a professional fee to 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 and guest lecturers.

Idaho Urban Research and Design Center (IURDC). The University of Idaho's Idaho Urban Research and Design Center is located in Boise. The program offers 4th year and graduate Architecture and Landscape Architecture students an opportunity to live, work, and study in an urban environment. The students' work centers on urban architecture, urban design, and community planning, often with neighborhoods and cities in the Treasure Valley. The IURDC offers outreach, education, and research projects with local design professionals, agency staffs and non-profit organizations.

Graduate students can apply to complete their fifth and sixth years of study in Boise, Idaho, where the College of Art and Architecture maintains a design studio and offers support courses. This option allows students to complete their graduate project in an urban setting, work on funded research and community service projects, and simultaneously pursue internship opportunities with local architectural firms.

The art curriculum at UI leads to a B.A., B.S.Art Ed., or B.F.A. with a major in studio art degrees. 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 bases of art and design, while developing general competency in various media.

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 monitored 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.

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.

The Art and Design program offers two graduate degree programs: M.F.A. and M.A.T.

Graduate students are assigned studio space in the programs'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 for the graduate programs are required to present a comprehensive portfolio of work, a written statement of goals or intent, and three letters of recommendation. 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 is a design profession dedicated to the stewardship of the natural and cultural environment. Professional practice is diverse with career opportunities in the traditional landscape architecture firm, the design/build industry, interdisciplinary planning, engineering or architecture firms, urban, regional and national public agencies as well non-governmental organizations such as land and watershed trusts.

Landscape architects practice design and land planning at several landscape scales including the larger, regional context, the community and neighborhood scale and the site scale. Project types may include: stormwater design and green infrastructure planning, national and international scale landscape planning, landscape preservation, golf course design, botanic and public garden design, community design and the residential landscape, eco-resort design, national and international land planning, habitat preservation and restoration, urban design and public space, landscape interpretation and cultural preservation, campus design, zoo design, landscape art and computer assisted landscape modeling and visualization. Landscape architects preserve, restore and heal, working to regenerate and foster positive landscape change, restoring older established communities, urban riparian corridors and historic landscapes. Some also work with caregivers in the design of therapeutic landscapes for health and education facilities. In all of these circumstances and opportunities, the landscape architect considers the significance of the larger bioregional context and the use of sustainable processes and materials that contribute to the regeneration of the landscape and regional culture. Wherever people and landscape connect, landscape architects engage in interdisciplinary, cross-cultural efforts to create "place" and preserve the integrity of the landscape.

Landscape architectural education at the University of Idaho is enhanced by the ecology of the Inland Northwest landscape and the academic diversity of a land grant institution. Set within the scenic Palouse Hills ecoregion of the Columbia Plateau and the Palouse watershed, the University of Idaho provides a rich context for studying landscape

architecture from a bioregional and watershed perspective. The College of Art and Architecture, the home of the Landscape Architecture program, provides many opportunities for collaboration with students and faculty in architecture, arts and humanities and the social sciences. Landscape architecture students also take courses in the College of Natural Resources and the College of Engineering. Students in the program learn that any design intervention must consider the influence and the critical character of the larger landscape and that transdisciplinary collaboration is important to successful professional practice.

As of Summer 2010, the Landscape Architecture program will offer two new degrees: the pre-professional Bachelor of Science in Landscape Architecture (B.S.L.A.) and the Master of Landscape Architecture (M.L.A.) - the terminal professional degree. The program's current professional Bachelor of Landscape Architecture (B.L.Arch.) and the academic Master of Science (M.S.) degree will be offered until the end of Fall Semester 2011 at which time they will be discontinued. To achieve the accredited professional degree a freshmen student must complete a program that is a total of 5+ years in duration which includes both the B.S.L.A. and the MLA. Students applying to the undergraduate landscape architecture program for Summer 2010 and beyond will apply for the B.S.L.A. program. Once an undergraduate B.S.L.A. obtains senior standing, the student may apply for and be admitted into the graduate level M.LA. professional program while in the process of completing the undergraduate program. In accordance with College of Graduate Studies requirements, these students must have a 3.0 GPA in order to be considered for admission to the M.L.A. Transfer students admitted to this seamless program are placed in accordance with their academic qualifications. Depending on the transfer student's background this may require up to five years of study.

The landscape architecture professional program, in accordance with the standards for accreditation by the national Landscape Architecture Accrediting Board (LAAB), includes courses addressing the various scales of the landscape architectural design from site to community and regional scale, the history and theory of landscape architecture and related disciplines, landscape representation and media, landscape construction methods and materials, sustainable planting design, water conservation, grading and drainage and stormwater design, landscape theory, geographic information systems (GIS) and professional practice. The B.S.L.A. degree can be completed after fulfilling the requirements of the fourth year. Landscape architectural education at the University of Idaho is enhanced by the ecology of the Inland Northwest landscape and the academic diversity of a land grant institution. Set within the scenic Palouse Hills ecoregion of the Columbia Plateau and the Palouse watershed, the University of Idaho provides a rich context for studying landscape architecture from a bioregional and watershed perspective.

Once admitted to the M.L.A program, qualified students may work toward completion of both the B.S.L.A.. & M.L.A. requirements during their fourth and fifth years, and final semester, receiving both degrees upon completion of the curriculum. Students apply for graduate status while taking fourth-year studio (LArc 453) (application deadline is February 1). Landscape Architecture students must be classified as graduate status to participate in the fifth and sixth years of the program.

Transfer students with baccalaureate degrees in a program other than landscape architecture may be admitted, based on their transcripts, into the M.L.A. program, normally for a three-year period with a minimum of 45 graduate level credits and 85 credits overall. The Landscape Architecture program encourages students with undergraduate degrees in Landscape Architecture and in other disciplines to apply to the M.L.A. program and values their contribution.

Most state registration boards in the United States require a degree from an accredited professional degree program as a prerequisite for licensure. (The landscape architecture program at the University of Idaho has been accredited for over 36 years.) The national Landscape Architecture Architectural Accrediting Board (LAAB), accredits first professional degree programs at the undergraduate and graduate levels. The University of Idaho B.L. Arch. will continue until the end of fall semester 2011 as an accredited first professional degree. The M.L.A. will become the accredited professional terminal degree program in the interim period.

The four-year, B.S.L.A. pre-professional degree, while required of all students entering the M.L.A. degree program at the University of Idaho without an undergraduate degree, will not be accredited by LAAB. Should a student choose to complete only the B.S.L.A. degree they will find it useful as a foundation for the field of landscape architecture, as preparation for continued education in a professional degree program elsewhere, or for employment as a non-licensed landscape designer.

Computer Technology Requirements. Students entering landscape architecture at the University of Idaho are required to have their own laptop computer and appropriate software for use in their studies. Specific technology requirements as well as guidelines and recommendations can be linked at the program's web site.

Fees & Expenses. Landscape Architecture is a professional program, a designation enjoyed by programs whose graduates require a license or a comprehensive professional qualifying exam to practice. Landscape Architecture has been granted approval by the State Board of Education, along with other professional programs in the College of Art and Architecture, to charge a professional fee to 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 and guest lecturers.

International Study. All students in the program are normally required to participate in a semester-long, landscape architecture, international study program (Students are encouraged to work closely with their faculty advisor in planning for these programs as there are several options.) International study abroad program is subject to national and international conditions that may impact the college's ability to offer or facilitate a program.

Program options and opportunities. The University of Idaho's Idaho Urban Research and Design Center is located in Boise. The program offers graduate Architecture and Landscape Architecture students an opportunity to live, work, and study in an urban environment. The students' work centers on urban design, and community planning, often with neighborhoods and cities in the Treasure Valley. The IURDC offers outreach, education, and research projects with local design professionals, agency staffs and non-profit organizations. Graduate students can apply to complete a year of study in Boise, Idaho after being admitted to the M.L.A program. Other options include a Moscow campus based comprehensive, interdisciplinary studio with graduate students in Art and Design, Architecture and Interior Design and Bioregional Planning and Community Design as well as faculty-directed off-campus community engagement.

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. These 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 two field trips in the third or fourth 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 substituted by 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 majority of studio projects serve as the core of the college's outreach mission with students collaborating with professionals or University of Idaho design students on service learning projects for communities in the state and region.

Faculty work with students to assist them in finding summer internships with public agencies and private firms.

All M.L.A. students engage in research with a faculty advisor as a component of their graduate thesis or final project.

The Virtual Technology and Design (VTD) program offers a B.S. degree, which emphasizes an interdisciplinary education, through a curriculum that integrates computer technology with the art and science of design.

The program recognizes the demand for design professionals who have the 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 communities of tomorrow hinge in part on the kinds of solutions imagined and environments planned by these "virtual" architects. The virtual designer serves both defined and yet to be defined industries. They bring a unique combination of visual, spatial 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 entertainment, educational or commercial applications.

The VTD student is a person excited by the possibilities of combining design with technology. Like other design students, inquiry, discovery and building creative solutions that responds to human needs intrigues them. However, they are more intrigued by the possibility of designing in a digital realm rather than with bricks and mortar or more traditional media. They want to build, but build and use virtually.

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 electronic media 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 every day life.

Computer Technology

All Virtual Technology and Design majors are required to have 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 Part 6 for courses in Architecture (Arch), Art (Art) Interior Design (ID), Landscape Architecture (LArc), and Virtual Technology and Design (VTD). See the section on "Fees and Expenses" in Part 2 for the architecture dedicated fee.

Professional Architecture Program: B.S.Arch. & M.Arch.

The Professional Program is a six-year seamless program that involves fulfilling the requirements of both the B.S. Arch. and the M.Arch. concurrently.

Architecture and Interior Design Undergraduate Curricular Requirements

Architecture (B.S.Arch.)

The four-year pre-professional curriculum leading to a B.S.Arch. degree is not an accredited professional architectural degree. 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 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. The 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 and Interior Design studio courses (ARCH 253, 254, 353, 354, 453, 454 and ID 152, 254, 351, 352, 451, 452) 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 professional program of the 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 on page 49) 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 366	Building Technology I (3 cr)
Arch 385	History of Architecture I: Pre-Modern (3 cr)
Arch 386	History of Architecture II: Modern (3 cr)
Arch 450	Architectural Programming (2 cr)
Arch 453	Architectural Design V (6 cr)
Arch 454	Architectural Design VI (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)
Arch 465	Building Technology II (2 cr)
Arch 466	Building Technology III (2 cr)
Arch 483	Urban Theory and Issues (3 cr)
Art 110	Visual Communication (2 cr)
Art 121	Design Process I (2 cr)
ForP 365	Wood Building Technology (3 cr)
LArc 251	Introduction to Principles of Site Design (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 160	Survey of Calculus **or**
Phil 202	Intro to Symbolic Logic **or**
Stat 251	Statistical Methods **or**
CS 112	Intro to Problem Solving and Programming (3-4 cr)
Phys 111	General Physics I (4 cr)

Electives to total 128 cr for the B.S.Arch. degree (including at least 6 cr of 200-level or above courses taken outside the disciplines of architecture, landscape architecture, art, and interior design and 6 cr of 200-level or above courses taken within the disciplines; 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 with a grade of "C" or better in all required Interior Design, Art and Architecture courses. 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, 254, 353, 354, 453, 454 and ID 152, 254, 351, 352, 451, 452) and students must achieve a minimum grade of C in the previous studio course to enroll in the next sequential studio course.

Required course work includes the university requirements (see regulation J-3 on page 49) 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: Pre-Modern (3 cr)
Arch 386	History of Architecture II: Modern (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)
Art 110	Visual Communication (2 cr)
Art 121	Design Process I (2 cr)
FCS 123	Textiles (3 cr)
ID 151	Introduction to Interior Design (3 cr)

ID 152	Interior Design I (2 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 (5 cr)
ID 352	Interior Design IV (5 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 (5 cr)
ID 452	Interior Design VI (5 cr)
Arch 475	Professional Practice (3 cr)

Electives to total 128 cr for the degree (including 4-6 cr from a list of advisor-directed electives)

Wood Construction and Design

For information on an undergraduate major in forest products with an option in wood construction and design, see the Department of Conservation Social Sciences section.

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 (3 cr)
Art 121	Design Process I (2 cr)
Art 122	Design Process II (3 cr)

Studio Art (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.

Required course work includes the university requirements (see regulation J-3 on page 49), 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 205	Visual Culture (3 cr)
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 202	Early Modern Art and Aesthetics (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 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 271-272	Interaction Design I-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	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)

Electives to total 128 cr for the 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, 488, 497, 498, and 499.

Art (B.A.)

Required course work includes the university requirements (see regulation J-3 on page 49), 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 205	Visual Culture (3 cr)
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 202	Early Modern Art and Aesthetics (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 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 271-272	Interaction Design I-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	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)

Electives to total 128 cr for the degree

Art Education (B.S.Art Ed.)

Required course work includes the university requirements (see regulation J-3 on page 49), 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.

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 Part 4 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 436	Secondary Art Methods (3 cr)
EDCI 446	Secondary Art Practicum (1 cr)
EDCI 463	Literacy Methods for Content Learning (3 cr)
EDCI 485	Secondary Internship (1-15 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) (18 cr):

Art 211	Drawing III (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 271-272	Interaction Design I-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	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 (12 cr)

Electives to total 128 cr for the 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 second year of the program, all landscape architecture students are required to have their own laptop computer and appropriate software for use in their studios.

Required course work includes the university requirements (see regulation J-3 on page 49) and:

Arch 483	Urban Theory and Issues (3 cr)
Art 100	World Art and Culture (3 cr)
Art 110	Visual Communication (2 cr)
Art 121	Design Process I (2 cr)
Biol 102	Biology and Society and Lab (4 cr)
For 429	Landscape Ecology (3 cr)
Geol 101	Physical Geology (4 cr)
LArc 151	Introduction to the Built Environment (2 cr)
LArc 154	Landscape Architecture Representation and Media 1 (2 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	Plant Materials and Design 1 (3 cr)
LArc 289	Plant Materials and Design 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)

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)

Electives to total 128 cr for the 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)
For 429	Landscape Ecology (3 cr)
Geog 180	Geospatial Graphics (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 on page 49) and:

Art 110	Visual Communication (2 cr)
Art 121-122	Design Process I-II (5 cr)
Art 111	Drawing I (2 cr)
CS 112	Introduction to Problem Solving and Programming (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
Phys 111	General Physics (4 cr)
Psyc 101	Introduction to Psychology (3 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 (2 cr)
VTD 457	Capstone Design Studio I (9 cr)
VTD 458	Capstone Design Studio II (9 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).

Electives to total 128 cr for the degree.

Art and Architecture Academic Minor Requirements

Architecture Minor

Arch 151	Introduction to the Built Environment (2 cr)
Arch 385	History of Architecture I: Pre-Modern (3 cr)
Arch 386	History of Architecture II: Modern (3 cr)

Courses selected from the following (11 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)

Art Minor

Art 100	World Art and Culture (3 cr)
Art 110	Visual Communication (2 cr)
Art 111-112	Drawing I-II (5 cr)
Art 121-122	Design Process I-II(5 cr)

200- and 300-level art studio classes and/or art history (9 cr)

Note: Art courses used to meet the Art Minor cannot be taken under the pass/fail option.

Interior Design Minor

Arch 151	Introduction to the Built Environment (2 cr)
FCS 123	Textiles (3 cr)
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 (5 cr)

Landscape Architecture Minor

LArc 151	Introduction to the Built Environment (2 cr)
LArc 288	Plant Materials and Design 1 (3 cr)
LArc 389	History of Landscape Architecture (3 cr)
LArc 480	The Emerging Landscape (3 cr)

Courses chosen from the following (13 cr):

LArc 154	Landscape Architecture Representation and Media 1 (2 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	Plant Materials and Design 1 (3 cr)
LArc 289	Plant Materials and Design 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(s)	Directed Study (3-6 cr)

Architecture and Interior Design 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 Vital Signs (2 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 Morphology (2-3 cr)

Equivalents must be approved by the chair of the Architecture and Interior Design program. Transfer students are placed in the program according to their academic qualifications. 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

and Interior Design program. Master of Architecture degree requirements are listed above.

Master of Science in Architecture. The Master of Science in Architecture offers a research program open to candidates who hold a professional degree in architecture, B.S.Arch., M.Arch., or other degree holders who desire to embark on a career in architectural research and scholarship. The program is designed for independent study within one or more of the following areas of specialization: Computing and Visualization, Environment and Behavior, Urban Design, Community Design and Planning, and Sustainable Architecture and Planning. Graduate students work closely with their graduate committee to develop a detailed program of study. 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, and an official TOEFL score. 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 requires the completion of 30 credits of course work including a research thesis: Arch 520 Architectural Research Methods (3 cr), Arch 510 Graduate Seminar (3 cr), Arch 504 Emerging Trends in Architectural Research (1 cr), 16 credits of electives, and 8 credits for the research thesis.

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 six years. Details are available from the Architecture and Interior Design 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 of Part 4 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, including Art 511 Readings in Art 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 of Part 4 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 "five-year plus" first professional degree program. See the College of Graduate Studies section of Part 4 for the general requirements applicable to the degree.

Eighteen of the 38 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)

Reseach 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

Christopher J. Williams, Program Director (414 Brink 83844- 1104; phone 208/885- 2802; bcb@uidaho.edu; www.bcb.uidaho.edu). Faculty: Zaid Abdo, Celeste Brown, Gary Daughdrill, Brian Dennis, Larry Forney, James Foster, Frank Gao, Robert Heckendorn, Paul Joyce, Alexander Karasev, Stephen Krone, Mike Laskowski, Stephen Lee, Scott Nuissmer, Ron Robberecht, Barrie Robison Terence Soule, Deborah Stenkamp, Jack Sullivan, Eva Top, Lisette Waits, Holly Wichman, 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, andmathematical 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.bcb.uidaho.edu for the latest information. The M.S. will require at least 6 credits of depth courses in one disciplinary area (computer science, biology, or mathematics) and at least 3 credits in each of the other two. The Ph.D. will require at least 9 credits of depth courses in one discipline and at least 3 credits in each of the other two disciplines.

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	12 credits: 6 in one area, 3 in each of the other two
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: 9 in one area, 3 in each of the other two
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

Jon Van Gerpen, 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, Brian He, Thomas F. Hess, Thomas J. Karsky, Jack M. McHargue, W. Howard Neibling, Russell J. Qualls, Ronald E. Sheffield, Dev S. Shrestha, Robert W. Smith, Blair L. Stringam, Barbara C. Williams.

The **departmental mission** is teaching, research, and extension for solving engineering and technological management problems in agriculture, environment, biotechnology, and natural resources through an understanding of the biological 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. Graduates can apply their technical expertise to solve engineering problems.
2. Graduates can apply their skills to design components, systems, and processes.
3. Graduates can communicate effectively.
4. Graduates can work effectively in teams.
5. Graduates will have adequate knowledge of appropriate biological, chemical, natural resources and agricultural topics.
6. Graduates can apply their educational skills in a broad context related to an ever-changing world.

The Biological and Agricultural Engineering curriculum has been reviewed for accreditation by the Engineering Accreditation Commission of ABET 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, ph. 410-347-7700and the prospects of accreditation by September of 2008 are encouraging. 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.

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.

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.

Food and Bioprocess 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.

Food and Bioprocess engineering involves the development of equipment and methods for efficient and environmentally sound manufacturing of food and biological commodities. Engineers in this option receive extensive training in microbiology, biochemical engineering, heat and mass transfer, storage of biological products, materials handling, and unit processes.

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 cooperate 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.

Soil and Water Engineering is an undergraduate engineering program designed to prepare students to solve technological problems related to soil and water, water use, water conservation, water quality, soil conservation, irrigation and drainage, water management, and soil-plant-water relationships of practical importance to the western United States.

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.

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 Part 6 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 on page 49) and:

Agricultural and Life Science Core

ASM 305	GPS and Precision Agriculture (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)
Soil 205	The Soil Ecosystem (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3-4cr):

Math 130	Finite Mathematics (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)

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)
AgEd 406	Exploring International Agriculture (2 cr)
ASM 112	Introduction to Agricultural Systems Management (3 cr)
ASM 200	Seminar (1 cr)
ASM 202	Agricultural Shop Practices (2 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 Management (3 cr)
ASM 433	Agricultural Processing Systems (3 cr)
BAE 478	Engineering Design I (3 cr)
BAE 479	Engineering Design II (3 cr)
BAE 491	Senior Seminar (1 cr)
BLaw 265	Legal Environment of Business (3 cr)
Econ 201	Principles of Economics (3 cr)
Econ 202	Principles of Economics (3 cr)
Engr 105	Engineering Graphics **or**
CTE 267	Computer Aided Drafting/Design (2-3 cr)
PlSc 102	The Science of Plants in Agriculture (3 cr)
Soil 206	The Soil Ecosystem Lab (1 cr)

Agricultural and Technical Electives (19 cr)
Business Elective (3 cr)
Life Science Elective (3 cr)
Upper-Division Agricultural Economics or Business elective (3 cr)

One of the following (4 cr):

Phys 100	Fundamentals of Physics (4 cr)
Phys 111	General Physics I (4 cr)
Phys 211	Engineering Physics I (4 cr)

Electives to total 128 cr for the degree

Biological and Agricultural Engineering (B.S.B.A.E.)

Required course work includes the university requirements (see regulation J-3 on page 49) and:

BAE 142	Engineering for Living Systems (2 cr)
BAE 355	Fundamentals of Hydrologic Engineering (3 cr)
BAE 441	Instrumentation and Measurements (3 cr)
BAE 462	Electric Power and Controls (3 cr)
BAE 478	Engineering Design I (3 cr)
BAE 479	Engineering Design II (3 cr)
BAE 491	Senior Seminar (1 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
CS 130	Programming with Visual Basic **or**

CS 112	Introduction to Problem Solving and Programming (3 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 (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)
Phys 211	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (3 cr)
Soil 205	The Soil Ecosystem (3 cr)
Stat 301	Probability and Statistics (3 cr)

And one of the following options:

A. Agricultural Engineering Option

BAE 242	Agricultural Engineering Analysis and Design (2 cr)
CE 322	Hydraulics (3 cr)
BAE 372	Agricultural Power and Machines (3 cr)
BAE 459	Irrigation System Design (3 cr)
BAE 461	Bioprocess Engineering (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
CE 211	Engineering Surveying (3 cr)
CE 342	Theory of Structures (3 cr)
Engr 220	Engineering Dynamics (3 cr)

Technical Electives (8 cr)

Electives to total 128 cr for the degree

B. Biological Systems Engineering Option

BAE 242	Agricultural Engineering Analysis and Design (2 cr)
BAE 461	Bioprocess Engineering (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
MMBB 250, 255	General Microbiology and Lab (5 cr)
MMBB 380	Introductory Biochemistry (4 cr)

Biological Science Electives (3 cr)

Technical Electives (9 cr)

Electives to total 128 cr for the degree

C. Environmental Engineering Option

BAE 242	Agricultural Engineering Analysis and Design (2 cr)
BAE 461	Bioprocess Engineering (3 cr)
Biol 115	Cells and the Evolution of Life (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)
MMBB 250, 255	General Microbiology and Lab (5 cr)
MMBB 380	Introductory Biochemistry (4 cr)

Two electives chosen from the following: (6 cr)

BAE 432	Bioreactor Theory and Design for Waste Treatment (3 cr)
BAE 433	Bioremediation (3 cr)
BAE 452	Environmental Water Quality (3 cr)

Electives to total 128 cr for the degree

D. Food and Bioprocess Engineering Option

BAE 242	Agricultural Engineering Analysis and Design (2 cr)
BAE 461	Bioprocess Engineering (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
FS 303	Food Processing (3 cr)
MMBB 250, 255	General Microbiology and Lab (5 cr)
MMBB 380	Introductory Biochemistry (4 cr)

Technical Electives (3 cr)

Food Engineering Electives (3 cr)

Food Science Electives (3 cr)

Electives to total 128 cr for the degree

E. Eco-Hydrological Engineering Option

BAE 242	Agricultural Engineering Analysis and Design (2 cr)
BAE 450	Environmental Hydrology (3 cr)
BAE 451	Engineering Hydrology (3 cr)
BAE 452	Environmental Water Quality (3 cr)
BAE 458	Open Channel Hydraulics (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
CE 211	Engineering Surveying (3 cr)
CE 322	Hydraulics (3 cr)
Engr 220	Engineering Dynamics (3 cr)

Technical Electives (8 cr)

Electives to total 128 cr for the 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)

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)

At least twelve credits from the following application courses:

ASM 304	Agricultural Fluid Power Systems (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 (3 cr)
ASM 412	Agricultural Safety and Health (2 cr)
ASM 430	Water and Wastewater Management (3 cr)

The minimum number of credits in agricultural systems management courses for the minor 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 of Part 4 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

Joseph G. Cloud, Dept. Chair (252 Life Sc. Bldg. 83844-3051; phone 208/885-6280; www.sci.uidaho.edu/biosci). Faculty: Matthew Anway, Onesmo Balemba, John A. Byers, Joseph G. Cloud, Larry J. Forney, James A. Foster, Luke Harmon, Kevin R. Kelliher Rolf L. Ingermann, James J. Nagler, Scott L. Nuismer, Nils O. Pellmyr, Barrie D. Robison, Deborah L. Stenkamp, John M. Sullivan, Eva M. Top, Holly A. Wichman. Lecturers: Candi Heimgartner, Denim Jochimsen, Bruce K. Mobarry, Kristin Simokat. Affiliate Faculty: James R. Blackman, Henry A. Charlier, Jennifer R. Chase, Michael W. Doebeli, Sara J. Heggland, Patricia Heglund, Cheryl L. Jorcyk, Kathy R. Magnusson, R. Francis Rosenzweig, Irvin R. Schultz, Ronald W. Strohmeyer, William P. Young. Adjunct Faculty: Celeste Brown, Timothy J. Teyler.

The biological sciences deal with the basic biological principles of all living things. Courses in the Department of Biological Sciences reflect the increased awareness that subdisciplines within biology are merging into a broad principles-based discipline that recognizes the similarities among living organisms. Students will be presented with approaches that are based on unifying biological principles. This will provide them with information that can then be applied to a vast array of novel situations. The B.A. and B.S. degrees in biology offered by the department reflect this integrated view of biology. The Biology Core curriculum involves exposure to concepts fundamental to all living things at several levels of organization. Upper division electives allow students to emphasize natural history, anatomy/physiology, molecular/cellular/developmental biology, or quantitative/integrative biology. Courses are available to students majoring in other disciplines, who wish to increase their knowledge of science, or who wish to obtain a minor in biology. The department offers both Ph.D. and M.S. degrees in biology.

Graduates from the department may enter a variety of fields and many continue their education. Recent graduates have entered allied and public health professions, primary and secondary teaching, agribusiness, medical school, veterinary school, graduate school, law school, state and national agencies that deal with biology (e.g., forestry and fish and game departments, EPA), as well as a variety of environmental consulting agencies and biotechnology companies.

Graduate and undergraduate research concentrations are available in ecology and evolution (animal behavior, genetics, microbial ecology, systematics), medical biosciences (aging, development, neurobiology, physiology) and reproductive biology (development, endocrinology, fertility). Possibilities for multidisciplinary research are further enhanced by interdepartmental graduate programs offered in the neurosciences and bioinformatics.

A wide variety of ongoing projects have produced a stimulating environment for graduate and undergraduate research. These projects include areas such as: the study of germ cell development in salmonids and the establishment of a germplasm repository for threatened and endangered fish; determination of the effects of estrogenic compounds and environmental contaminants on embryo development, reproduction and adult behavior; investigation of the reproductive physiology of vertebrates at the biochemical, cellular and organismal levels; examination of metabolic regulation within gametes of salmonids and sturgeon; hormonal actions at the molecular level; the development of behavior, play, and sexual selection in animals; the ecology and adaptive evolution of prokaryotic organisms; phylogeography, phylogenetics and their use in conservation biology; coevolution of plants and animals; experimental evolution of bacterial viruses; evolution of transposable elements; the biology of aging in mammals, and birds; the structure and function of neuronal tissue during normal development, aging, and regeneration after nerve damage; photoreceptor differentiation during retinal development and regeneration; and the comparative physiology of cardiovascular systems.

For more complete information on research concentrations, please see faculty profiles on the departmental web site at www.sci.uidaho.edu/biosci/.

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, call (208-885-6329) or email the department (biosci@uidaho.edu).

Courses

See Part 6 for courses in Biology (Biol).

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 116 and must have a minimum gpa of 2.40 in Biol 115, 116, 210, 212, and 213.

Required course work includes the university requirements (see regulation J-3 on page 49), 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 210	Genetics (4 cr)
Biol 212	Molecular and Cellular Biology (4 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Biol 314	Ecology and Population Biology (4 cr)
Biol 411	Senior Capstone (2 cr)
Biol 421	Advanced Evolutionary Biology (3 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 275, 276	Carbon Compounds and Lab **or**
Chem 277, 278	Organic Chemistry and Lab (4 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)
MMBB 380	Introductory Biochemistry **or**
MMBB 300	Survey of Biochemistry (3-4 cr)
Phys 111	General Physics I (4 cr)
Phys 112	General Physics II (4 cr)
Stat 251	Statistical Methods (3 cr)

NOTE: Students considering graduate school in biology are strongly encouraged to take Math 170, Chem 277/278, and MMBB 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)
Ent 440	Insect Identification (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 (4 cr)
Biol 450	Comparative Vertebrate Reproduction (3 cr)
Ent 484	Insect Anatomy and Physiology (3 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)
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 354	Experimental Approaches in the Biological Sciences (3 cr)
Biol 444	Genomics (3 cr)
Biol 461	Neurobiology (3 cr)
Biol 474	Principles of Developmental Biology (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 core requirement of 14 credits in the humanities/social sciences*

3 credits (one course)in the social sciences in addition to the minimum university-wide core 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 core requirement of 14 credits in the humanities/social sciences*

3 credits (one course) in the social sciences in addition to the minimum university-wide core 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.

Pre-Medical and Pre-Dental Studies

Admission to schools of medicine or dentistry involves satisfactorily fulfilling prerequisite course work, obtaining a sufficiently high score on the Medical College Admission Test (MCAT) or Dental Admission Test (DAT), submitting completed applications, and having a successful interview. The allied health advisor in the Department of Biological Sciences advises students in all areas of the application process and maintains MCAT and DAT study materials through the Reserve Desk in the University Library. A committee of three faculty members interviews pre-medical students (and pre-dental students on request), writes a letter of evaluation, and provides guidance to students in the interview process. A video recording of the interview is reviewed by the student with the allied health advisor to better prepare the student for formal interviews elsewhere.

Students with interests in either the M.D., D.D.S., or D.M.D. degree are urged to contact Professor Ingermann, Gibb 237, as early as possible.

NOTE: Pre-medical and pre-dental students are strongly encouraged to take Chem 277/278.

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 101	Introduction to Chem I **or**
Chem 111	Principles of Chem I (4 cr)
Chem 275, 276	Carbon Compounds and Lab (4 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
MMBB 250	General Microbiology **or**
MMBB 154	Intro Biology of Bacteria and Viruses (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)

NOTE: Pre-nursing students are strongly encouraged to take Math 143.

Pre-Physical Therapy Studies

UI does not have a professional program in physical therapy and does not offer a degree program in pre-physical therapy. Students can, however, take courses that are prerequisites for admission into master's, or doctoral degree programs in physical therapy at other institutions. Since a B.S. or B.A. degree is also required for admission into these programs, we strongly urge students to pursue a B.S. or B.A. degree in a related area (such as biology or psychology) while completing the prerequisites for admission to a physical therapy degree program. UI students designating pre-physical therapy as a major will be temporarily placed in the biology major. The pre-physical therapy advisor in the Department of Biological Sciences advises students interested in preparing to enter into a professional program at another institution.

Recommended Preparation

The doctoral program in physical therapy at Idaho State University, Idaho's only physical therapy program, is required by law to fill most of its program with Idaho residents. Consequently, Idaho residents have a competitive advantage in applying to this program. In addition to completing an undergraduate degree, the successful applicant must have completed the following list of prerequisite courses for the Idaho State University program. Students interested in the prerequisite courses for other programs should contact Professor Rolf Ingermann.

Prerequisite Courses (with a GPA of 3.0 in each category):

Biology (3 courses)

Courses 1 & 2:	Biol 120 Human Anatomy and Biol 121 Human Physiology
Course 3:	Upper-division course, 3 cr minimum (Lab-only course will NOT be accepted. Courses in plant biology or evolution will NOT be accepted)

Chemistry (2 courses)

Chem 111	and Chem 112 Introductory Chemistry with laboratory

Physics (2 courses)

Phys 111	and Phys 112 Introductory Physics with laboratory

Math/Statistics (1 course)

Stat 251	Statistical Methods

Psychology and Sociology or Anthropology or Health Science (2 courses)

Course 1:	Psyc 101 Introductory Psychology
Course 2:	Sociology or Anthropology or Health Science or Psychology. (This course must be relevant to health care, rural societies, cultural diversity, aging, health care administration, abnormal psychology or epidemiology. Marriage/family, religion or history courses will not meet this requirement.)

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 210	Genetics (4 cr)
Biol 212	Molecular and Cellular Biology (4 cr)
Biol 213	Principles of Biological Structure and Functions (4 cr)
Biol 314	Ecology and Population Biology (4 cr)

Biological Sciences Graduate Academic Certificates Requirements

Reproductive Biology 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.

Biol 551	Seminar on Reproductive Biology (1 cr)

One of the following required courses (3-4 cr):

AVS 452	Physiology of Reproduction (4 cr)

AVS 526	Advanced Reproduction (4 cr)
Biol 559	Molecular and Cellular Reproduction (3 cr)

Electives (7-8 cr):

AVS 218	Artificial Insemination and Pregnancy Detection (2 cr)
AVS 222	Animal Reproduction and Breeding (3 cr)
AVS 451	Endocrine Physiology (3 cr)
AVS 452	Physiology of Reproduction (4 cr)
AVS 526	Advanced Reproduction (4 cr)
Biol 450	Comparative Vertebrate Reproduction (3 cr)
Biol 474	Principles of Developmental Biology (3 cr)
Biol 558	Reproductive Biology of Fishes (2 cr)
Biol 559	Molecular and Cellular Reproduction (3 cr)
CORS 206	Human Reproduction: Science, Ethics and the Law (3 cr)

Credits to total 12 for this Academic 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 of Part 4 for the general requirements applicable to each degree.

Master of Science. Major in biology. The M.S. program emphasizes research including, but not limited to the departmental and multidisciplinary area described above. In addition to the requirements listed 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.

Doctor of Philosophy. Major in biology. The Ph.D. program emphasizes research including, but not limited to the departmental and multidisciplinary area described above. In addition to the requirements listed 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.

Program in Bioregional Planning and Community Design

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). Faculty: Gary Austin, Rula Z. Awaad-Rafferty, Kathy Browder, Donald Crowley, Raymond Dezzani, Michael Dixon, Stephen R. Drown, Dale Goble, Bruce T. Haglund, Lorie Higgins, MarkHoversten, Karen Humes, Harley E. Johansen, Michael Kyte, Tammi Laninga, Karen Launchbaugh, Jerrold Long, Wendy McClure, William McLaughlin, David Paul, Sandra Pinel, Paul McCawley, Sherry McKibben, Priscilla Salant, Nick Sanyal, Chris Schnepf, Phillip Watson, Patrick Wilson, Larry Young.

The Master of Science in Bioregional Planning and Community Design (BioP) is an interdisciplinary, professional degree designed to prepare future leadersfor 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 of several areas of specialization: land use planning; environmental planning; economic development planning; transportation planning; public lands planning; and housing, social and community development planning. 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 bioregional 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 Part 6 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 of part 4 for the general requirements applicable to each degree.

The BioP M.S. degree requires the completion of 45-48 units of coursework. Specific requirements are: core requirement (20 cr); additional competency via restricted elective requirements (10 cr); area of specialization (12 cr); and final project or thesis. The final project can take the form of a professional report or a client report. See the BioP website for actual 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

BioP 501	Seminar (2 cr)
BioP 520	Introduction to Bioregional Planning (3 cr)
BioP 521	Local and Regional Comprehensive Planning (3 cr)

Studio I – one of the following (4-5 cr):

LArc 559	The Northern Rocky Regional Landscapes (4 cr)
Arch 553	Architectural Design VII (6 cr)

One additional course (2-3 cr) in a substantive planning specialization such as land use planning; environmental planning; community and economic development planning; health planning; transportation planning; housing, social and community development planning. Written approval by the Bioregional Planning and Community Design faculty advisor is required.

Credits to total 15 for this Academic Certificate

Department of Business

Douglas C. Haines, Dept. Chair (301F J. A. Albertson Bldg. 83844-3161; phone 208/885-7146; mreyes@uidaho.edu). Faculty: Michael Ahlstrom, Jeffrey J. Bailey, Jacob Breland, Yun Chung, Richard B. Coffman, Raymond Dacey, Daniel M. Eveleth, Lori Baker Eveleth, Terrance Grieb, Douglas C. Haines, Doyoung Kim, John J. Lawrence, Thomas J. Liesz, Kathi Lovelace, Clark Maxam, Michael A. McCollough, Scott K. Metlen, Jon R. Miller, John S. Morris, Andrew Nutting, Kathy L. O'Malley, Michele O'Neill, Norman Pendegraft, Jan M. Rauk, Mario G. Reyes, Mark S. Rounds, Steven R. Shook, Sanjay Sisodiya, Robert W. Stone, Eric Stuen, Dana L. Stover, Shenghan Xu.

The six major fields (business economics, finance, information systems, management and human resources, marketing, and production/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 forcasters, 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 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, estate planning, 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, and customer service operations. The professional golf management option 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 production/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 Part 6 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 on page 49), the college requirements, and:

Econ 351	Intermediate Macroeconomic Analysis (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)
Econ 353	Quantitative Economics and Forecasting **or**
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)

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 408	Security Analysis (3 cr)
Bus 463	Portfolio Management (3 cr)
Bus 481	International Finance (3 cr)

Additional upper-division credits in economics (6 cr)

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 on page 49), the general College of LASS requirements for the B.A. or B.S. degree, and:

Econ 201, 202	Principles of Economics; **or**
Econ 272	Foundations of Economics and either

Econ 201 or Econ 202 **or**
two more credits of an upper-division economics course* (6-7 cr)

Econ 351	Intermediate Macroeconomic Analysis (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)
Econ 353	Quantitative Economics and Forecasting **or**
Econ 453	Econometrics (3 cr)
Econ 490	Economic Theory and Policy (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geom (3 cr) or higher
Math 160	Survey of Calculus,
Math 170	Analytic Geometry and Calculus I **or**
Math 175	Analytic Geometry and Calculus II (4 cr)
Stat 251	Statistical Methods (3 cr) **and**
Stat 262	Decision Analysis (1 cr); **or**
Stat 271	Statistical Inference and Decision Analysis (4 cr); or higher.

Additional upper-division credits in economics (12-14 cr)
Upper-division credits in related fields, selected with approval of economics faculty. (15 cr)

** A total of six credits in this area is required. Students who have completed Econ 272 with a final grade of B or better may either complete at least two additional upper-division credits in economics or take Econ 201 or Econ 202 for two credits. Students who have completed Econ 272 with a final grade lower than B must take either Econ 201 or Econ 202 for two credits.*

Finance (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3 on page 49), 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)
Bus 409	Problems in Financial Management (3 cr)

Upper-Division economics courses (3 cr)

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 Financial Engineering (3 cr)
Bus 481	International Finance (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 430	Accounting for Public Sector Entities (3 cr)
Acct 483	Fundamentals of Federal Taxation (3 cr)
Bus 362	Real Property Appraisal **or**
Bus 364	Insurance (3 cr)
Bus 378	Project Management (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 353	Quantitative Economics and Forecasting (3 cr)
Econ 407	Public Finance (3 cr)
Econ 453	Econometrics (3 cr)
Stat 401	Statistical Analysis (3 cr)

Two of the following may be used if not used to satisfy the above Finance elective:

Bus 408 Security Analysis (3 cr)
Bus 463 Portfolio Management (3 cr)
Bus 464 Derivatives and Financial Engineering (3 cr)
Bus 481 International Finance (3 cr)

Electives to total 128 cr for the degree

**Note: These courses may be taken as supporting electives if they are not being used to satisfy the upper-division economics course required above.*

Information Systems (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3 on page 49), the college requirements, and:

Bus 353 Data and Information Management (3 cr)
Bus 355 Systems Analysis and Design (3 cr)
Bus 452 Business Telecommunications Management (3 cr)
Bus 453 Database Design (3 cr)
CS 120 Computer Science I **or**
CS 127 Programming Language (3-4 cr)

IS electives: at least one course selected from the following (3 cr):
Bus 378 Project Management (3 cr)
Bus 454 Current Issues in Information Systems (3 cr)

Restricted IS electives: at least two courses from the following (6 cr):
Bus 351 Introduction to Electronic Commerce (3 cr)
Bus 352 Modern Information Technology (3 cr)
Geog 385 GIS Primer (3 cr)
Geog 390 Geographic Visualization (4 cr)
400-Level course offered by the College of Business and Economics
300-Level or higher computer science course

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 on page 49), the college requirements, and:

Bus 412 Human Resource Management (3 cr)
Bus 413 Leadership and Organizational Behavior (3cr)
Bus 418 Organization Design and Changes (3 cr)

And one of the following emphases:

A. Management Emphasis

P/OM Elective: select one of the following courses (3 cr):
Bus 378 Project Management (3 cr)
Bus 456 Quality Management (3 cr)
Bus 470 Purchasing and Materials Management (3 cr)
Bus 472 Operations Planning and Scheduling (3 cr)

Marketing Elective: select one of the following courses (3 cr):
Bus 324 Buyer Behavior (3 cr)
Bus 420 Promotional Strategy (3 cr)
Bus 422 Personal Selling and Sales Force Management (3 cr)
Bus 425 Retail Distribution Management (3 cr)
Bus 426 Marketing Channels Management (3 cr)
Bus 427 Services Marketing (3 cr)

Finance/Information Systems Elective: select one of the following courses (3 cr):
Bus 302 Intermediate Financial Management (3 cr)
Bus 351 Introduction to Electronic Commerce (3 cr)
Bus 353 Data and Information Management (3 cr)
Bus 355 Systems Analysis and Design (3 cr)
Bus 362 Real Property Appraisal (3 cr)
Bus 364 Insurance (3 cr)
Bus 407 Financial Institutions (3 cr)
Bus 481 International Finance (3 cr)
One additional course selected from those not taken in the three groups above (3 cr)

Entrepreneurship Elective: select one of the following courses (3 cr):
Bus 414 Entrepreneurship (3 cr)
Bus 415 New Venture Creation (3 cr)*
Bus 495 Product and Process Development and Commercialization (3 cr)

Supporting Elective: select one of the following courses (3 cr):
Anth 462 Human Issues in International Development (3 cr)
Comm 233 Interpersonal Communication (3 cr)
Comm 235 Organizational Communication (3 cr)
Comm 335 Intercultural Communication (3 cr)
Comm 410 Conflict Management (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)
Psyc 320 Introduction to Social Psychology (3 cr)
Soc 301 Introduction to Diversity and Stratification (3cr)
Soc 427 Race and Ethnic Relations (3 cr)

Quantitative Elective: select a total of three credits from the following courses (3 cr):
Math 330 Linear Algebra (3 cr)
Math 451 Probability Theory (3 cr)
Stat 401 Statistical Analysis (3 cr)
Stat 422 Sample Survey Methods (3 cr)
Stat 423 Beginning SAS Programming (1 cr)
Stat 424 Intermediate SAS Programming (1 cr)
Stat 425 Topics in SAS Programming (1 cr)
Stat 433 Econometrics (3 cr)**
Stat 514 Nonparametric Statistics (3 cr)

Electives to total 128 cr for the degree

**Note: Bus 415 may not be used to satisfy the Entrepreneurship Elective if it is used to satisfy the college requirement of Bus 415 or Bus 490*

***Note: Stat 433/Econ 453 Econometrics does not satisfy the Upper Division Economics requirement.*

B. Human Resources Management Emphasis

Bus 416 Staffing and Compensation (3 cr)
Bus 441 Labor Relations (3 cr)

Specialized Elective: select one of the following courses (3 cr):
Psyc 416 Industrial/Organizational Psychology (3 cr)
Psyc 430 Tests and Measurements (3 cr)
Psyc 435 Personnel Psychology (3 cr)
Psyc 450 Training and Performance Support (3 cr)
Bus 461 Retirement Planning and Employee Benefits (3 cr)

Supporting Electives: select two of the following courses (at least one selection must be an upper-division course) (6 cr):
Anth 462 Human Issues in Human Development (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)
Comm 432 Gender and Communication (3 cr)
Comm 491 Communication and Aging (3 cr)
Soc 301 Introduction to Diversity and Stratification (3 cr)
Soc 427 Racial and Ethnic Relations (3 cr)

Quantitative Elective: select a total of three credits from the following courses (3 cr):
Math 330 Linear Algebra (3 cr)
Math 451 Probability Theory (3 cr)
Stat 401 Statistical Analysis (3 cr)
Stat 422 Sample Survey Methods (3 cr)
Stat 423 Beginning SAS Programming (1 cr)
Stat 424 Intermediate SAS Programming (1 cr)
Stat 425 Topics in SAS Programming (1 cr)
Stat 433 Econometrics (3 cr)*
Stat 514 Nonparametric Statistics (3 cr)

Electives to total 128 cr for the degree

**Note: Stat 433/Econ 453 Econometrics does not satisfy the Upper Division Economics requirement.*

Marketing (B.S.Bus.)

Required course work includes the university requirements (see regulation J-3 on page 49), the college requirements, and:

Bus 324 Buyer Behavior (3 cr)
Bus 421 Marketing Research and Analysis (3 cr)
Bus 428 Marketing Management (3 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 410 Conflict Management (3 cr)

Tier 1 Marketing Electives: nine credits of the following courses (9 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 and Process Development and Commercialization (3 cr)

Tier 2 Business Elective : one upper division (300-400 level) CBE, statistics, or mathematics courses, (excluding Bus 301, 311, 321, 350, 370.) (3 cr)

Research Elective: select a total of three credits from the following courses (3 cr)*:

Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 330	Linear Algebra (3 cr)
Math 451	Probability Theory (3 cr)
Stat 401	Statistical Analysis (3 cr)
Stat 422	Sample Survey Methods (3 cr)
Stat 423	Beginning SAS Programming (1 cr)
Stat 424	Intermediate SAS Programming (1 cr)
Stat 425	Topics in SAS Programming (1 cr)
Stat 433	Econometrics (3 cr)**
Stat 514	Nonparametric Statistics (3 cr)

Other research methods class as approved by your advisor and the marketing area

Electives to total 128 cr for the degree

**Note: Courses that are used to satisfy the CBE General Core Mathematics requirement may not be used to fulfill the Research Elective.*

***Note: Stat 433/Econ 453 Econometrics does not satisfy the Upper Division Economics requirement if used to satisfy the Research Elective.*

Professional Golf Management Option in Marketing

Required course work includes the university requirements (see regulation J-3), the college requirements, and:

Bus 103	Introduction to Professional Golf Management (2 cr)
Bus 150	Professional Golf Management I (2 cr)
Bus 251	Professional Gold Management II (2 cr)
Bus 298	Internship (2 cr)
Bus 324	Buyer Behavior (3 cr)
Bus 385	Professional Golf Management III (2 cr)
Bus 386	Food & Beverage Hospitality with Lab (4 cr)
Bus 398	Internship (6 cr)
Bus 421	Marketing Research and Analysis (3 cr)
Bus 424	Pricing Strategy and Tactics (3 cr)
Bus 425	Retail Distribution Management (3 cr)
Bus 428	Marketing Management (3 cr)
LArc 301	Survey of Landscape Architecture & Golf Course Design (3 cr)
PlSc 302	Golf and Sports Turf Management (3 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 410	Conflict Management (3 cr)

Tier 1 Marketing Electives: One of the following courses:

Bus 420	Promotional Strategy (3 cr)
Bus 422	Personal Selling and Sales Force Management (3 cr)
Bus 426	Marketing Channels Management (3 cr)
Bus 427	Services Marketing (3 cr)
Bus 482	International Marketing (3 cr)

**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.*

Production/Operations Management (B.S.BUS.)

Required course work includes the university requirements (see regulation J-3 on page 49), the college requirements, and:

Bus 378	Project Management (3 cr)
Bus 439	Systems and Simulation (3 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):

Acct 305	Accounting Information Systems (3 cr)
Acct 315	Corporate Accounting and Reporting I (3 cr)
Acct 385	Cost and Management Accounting (3 cr)
Acct 492	Auditing and Controls (3 cr)
Bus 302	Intermediate Financial Management (3 cr)
Bus 353	Data and Information Management (3 cr)
Bus 355	Systems Analysis and Design (3 cr)
Bus 398	Internship (must be taken for 3 cr to satisfy this requirement)
Bus 409	Problems in Financial Management (3 cr)
Bus 412	Human Resource Management (3 cr)
Bus 413	Leadership and Organizational Behavior (3 cr)
Bus 418	Organization Design and Changes (3 cr)
Bus 425	Retail Distribution Management (3 cr)
Bus 426	Marketing Channels Management (3 cr)
Bus 427	Services Marketing (3 cr)
Bus 428	Marketing Management (3 cr)
Bus 441	Labor Relations (3 cr)
Bus 453	Database Design (3 cr)
Bus 463	Portfolio Management (3 cr)
Bus 495	Product and Process Development and Commercialization (3 cr)
Econ 385	Environmental Economics (3 cr)
Econ 441	Labor Economics (3 cr)
Econ 447	International Development Economics (3 cr)
EnvS 428	Pollution Prevention (3 cr)
Stat 401	Statistical Analysis (3 cr)
Stat 446	Six Sigma Innovation (3 cr)

Any one business, culture, economics or language class that includes a significant international experience component (3 cr)

Electives to total 128 cr for the 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, forest products/business option) or to students pursuing a major in the College of Business and Economics.

Students in the business minor must achieve at least a 2.35 GPA in statistics, economics, and accounting courses before enrolling in upper-division CBE courses.

Acct 201	Introduction to Financial Accounting and
Acct 202	Introduction to Managerial Accounting (6 cr)
Econ 202	Prin of Economics **or**
Econ 272	Foundations of Econ Analysis (3-4 cr)
Stat 251	Prin of Statistics **or**
Stat 271	Statistical Inference and Decision Analysis **or**
Stat 301	Probability and Statistics (3-4 cr)

Five of the following courses (or Bus 340-345) (15 cr)

Bus 101	Introduction to Business Enterprises (3 cr)
Bus 301	Financial Management (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)
Bus 350	Management Information Systems **or**
Bus 351	Introduction to Electronic Commerce (3 cr)
Bus 370	Introduction to Operations Management (3 cr)

Economics Minor

This academic minor (with its five different areas) is offered through the College of Letters, Arts, and Social Sciences.

Econ 201, 202	Prin of Econ **or**
Econ 272	Foundations of Econ Analysis (4-6 cr)
Econ 351	Intermediate Macroeconomic Analysis (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)

And one of the following areas (with the permission of the student's advisor, the student may petition to have one substitute course for one of the following specific courses in the first four areas):

Forecasting

Econ 343	Money and Banking (3 cr)
Econ 353	Quantitative Economics and Forecasting (3 cr)
Econ 453	Econometrics (3 cr)

Public Policy

Econ 407	Public Finance (3 cr)
Econ 415	Market Structure and Governmental Policy (3 cr)

Development

Econ 446	International Economics (3 cr)
Econ 447	International Development Economics (3 cr)

Economic Resources

Econ 385	Environmental Economics (3 cr)
Econ 441	Labor Economics (3 cr)
Course approved by student's advisor (3 cr)	

General Economics

Upper-division economics courses approved by student's advisor and dept chair (9 cr)

International Business Minor

Note: This minor is limited to students majoring in the College of Business and Economics.

Bus 345	Business Operating Decisions (3 cr)
Bus 481	International Finance (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 415	Marketing Structure and Governmental Policy (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.

International Political Economy Minor

For information on an academic minor in international political economy, see the Department of Political Science & Public Affairs Research section (Part 5).

Business Undergraduate Academic Certificates Requirements

Entrepreneurship 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):

Ag 417	NxLevel's Agricultural Entrepreneurship – Tilling the Soil of Opportunity (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	Senior Capstone Design (4 cr)
CSS 583	Nature-Based Tourism (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)
EM 584	Writing Winning Proposals (3 cr)
FCS 496	Internship: Fashion Business (2-8 cr)
FS 489	Food Product Development (3 cr)
Geog 340/540	Business Location Decisions (3 cr)
Geog 360/560	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)

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, Louis L. Edwards, Jr., Jin Y. Park, Supathorn Phongikaroon, Aaron M. Thomas, Vivek Utgikar, Margarit Von Braun. Materials Science and Engineering Faculty : Indrajit Charit, Daniel Choi, Batric Pesic. Emeritus Faculty: Jay Scheldorf, Roger Korus, T. Alan Pace, Keith A. Prisbrey.

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. 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 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 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, 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 types of evaporators, a two-stage chemical reactor, 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. 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 the 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 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, electrochemistry, computer chip and biochip design, micro-electromechanical systems (MEMS), nanomaterials, nanodevices 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, bioactive, 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. Materials/metallurgical operations in the Northwest are plentiful and modern.

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 nanotechnology, electronic materials, alternative energy materials (nuvlear, solar, etc.), and advanced materials processing techniques, as well as pther 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 Part 6 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 on page 49) and:

ChE 110	Introduction to Chemical Engineering (1 cr)
ChE 123	Computations in Chemical Engineering (2 cr)
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, 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, 278	Organic Chemistry I and Lab (4 cr)
Chem 305, 307	Physical Chemistry and Lab (4 cr)
Chem 372, 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 greater than 390 level technical electives (3 cr)
Chemical/bioscience electives (4 cr)
Computer science elective in a programming language (2 cr)
Economics elective (3 cr)
Humanities and social sciences electives (12 cr)
Communication electives (2 cr)
Mathematics electives (3 cr)
Technical electives (6 cr)

The minimum number of credits for the degree is 128, not counting Engl 101, Math 143, 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 112; ChE 223; Engr 210, 320, and 335; and Math 275 and 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 (D or higher) is required in each of the following courses before registration is permitted in upper-division chemical engineering courses: ChE 123, computer science elective, Math 170 and 175, and Phys 211 and 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 on page 49) 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)
Econ 201 or Econ 202	Principles of Economics **or**
Econ 272	Foundations of Economic Analysis (3-4 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
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
MSE 412	Mechanical Behavior of Materials (3 cr)
MSE 413	Phase Equilibria in Materials (3 cr)
MSE 417	Instrumental Analysis (3 cr)
MSE 423	Environmental Degredation of Materials (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	Engineering Physics II (4 cr)
Stat 301	Probability and Statistics (3 cr)

Computer Science elective in a programming language (3 cr)
MSE or ChE greater than 300-level technical elective
Technical electives greater than 300-level (3 cr)

The minimum number of credits for the degree is 129, exclusive of Engl 101 and mathematics courses numbered lower than Math 170.

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 (D or higher) is required in each of the following courses before registration is permitted in upper-division materials science engineering courses: computer science elective, 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 15 cr from the following courses:

Engr 350	Engineering Mechanics of Materials (3 cr)
MSE 313	Physical Metallurgy I (4 cr)
MSE 341	Particulate Materials Processing (4 cr)
MSE 412	Mechanical Behavior of Materials (3 cr)
MSE 423	Environmental Degredation of Materials (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)

To complete this minor, students must earn a minimum of 20 credits

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	Environmental Degredation of Materials (3 cr)
MSE 438 or NE 438	Fundamentals of Nuclear Materials (3 cr)
Phys 212	Engineering Physics II (3 cr)

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 of Part 4 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, 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 Part 6 for courses in Chemistry (Chem).

Chemistry Undergraduate Curricular Requirements

Chemistry (B.S.)

Required course work includes the university requirements (see regulation J-3 on page 49) 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	Quantitative Analysis (5 cr)
Chem 277, 278	Organic Chemistry I and Lab (4 cr)
Chem 305, 307	Physical Chemistry I and Lab (4 cr)
Chem 306, 308	Physical Chemistry II and Lab (4 cr)
Chem 372, 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	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II **or**
Phys 213	Engineering Physics III (4 cr)

Electives to total 128 credits for the 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.

Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 277, 278	Organic Chemistry I and Lab (4 cr)
Chem 305, 307	Physical Chemistry I and Lab (4 cr)
Chem 306, 308	Physical Chemistry II and Lab (4 cr)
Chem 372, 374	Organic Chemistry II and Lab (4 cr)
Chem 409	Proseminar (1 cr)
Chem 454	Instrumental Analysis (4 cr)
Chem 463-464, 465	Inorganic Chemistry and Lab (7 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)
MMBB 380	Intro Biochemistry (4 cr)
Phys 211	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II **or**
Phys 213	Engineering Physics III (4 cr)

Foreign language courses (8 cr)

Two additional chemistry courses having Chem 306 as a prerequisite, or two advanced chemistry courses approved by the Chemistry Department in accordance with American Chemical Society stipulations.

Electives to total 128 credits for the 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)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 277, 278	Organic Chemistry I and Lab (4 cr)
Chem 305, 307	Physical Chemistry I and Lab (4 cr)
Chem 306, 308	Physical Chemistry II and Lab (4 cr)
Chem 372, 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)
MMBB 380	Introductory Biochemistry (4 cr)
MMBB 382	Introductory Biochemistry Lab (2 cr)
Phys 211	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (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)
MMBB 476	Biophysical Chemistry (3 cr)

Electives to total 128 credits for the degree

D. Forensics Option

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 210	Genetics (4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 277, 278	Organic Chemistry I and Lab (4 cr)
Chem 305, 307	Physical Chemistry and Lab (4 cr)
Chem 306, 308	Physical Chemistry and Lab (4 cr)
Chem 372, 374	Organic Chemistry II and Lab (4 cr)
Chem 409	Proseminar (1 cr)
Chem 454	Instrumental Analysis (4 cr)
CS 101	Introduction to Computer Science (3 cr)
Geol 299	Directed Study (3 cr)
JS 101	Introduction to the Justice System (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)
MMBB 250	General Microbiology (3 cr)
MMBB 255	General Microbiology Lab (2 cr)

MMBB 380	Introductory Biochemistry (4 cr)
MMBB 382	Introductory Biochemistry Laboratory (2 cr)
Phys 211	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (4 cr)
Stat 251	Statistical Methods (3 cr)

Electives to total 128 credits for the 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	Quantitative Analysis (5 cr)
Chem 277, 278	Organic Chemistry I and Lab (4 cr)
Chem 302, 303	Principles of Physical Chemistry and Lab (4 cr)
Chem 372	Organic Chemistry II (3 cr)

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 of Part 4 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 Microbiology, Molecular Biology and Biochemistry. 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, Erik R. Coats, Michael P. Dixon, Fritz R. Fiedler, Peter Goodwin, S.J. Jung, Michael D. Kyte, Chyr Pyng Liou, Stanley M. Miller, Richard J. Nielsen, Howard S. Peavy, P. Steven Porter, Edwin R. Schmeckpeper, Sunil Sharma, Thomas J. Weaver, 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 are: (1) Capable of planning, designing, and managing civil engineering systems and processes, (2) Capable of taking up leadership positions in the profession, (3) Responsible, ethical, and aware of the social and

economic issues of engineered projects, and (4) 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 Part 6 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 on page 49) and:

AmSt 301	Studies in American Culture **or**
Phil 103	Ethics (3 cr)
CE 115	Introduction to Civil Engineering (2 cr)
CE 211	Engineering Surveying (3 cr)
CE 215	Civil Engineering Analysis and Design (2 cr)
CE 315	Introduction to Numerical Methods for Civil Engineering (2 cr)
CE 322	Hydraulics (3 cr)
CE 325	Fundamentals of Hydrologic Engineering (3 cr)
CE 330	Fundamentals of Environmental Engineering (4 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 493-494	Senior Design Project (4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Econ 201	Principles of Economics **or**
Econ 202	Principles of Economics **or**
Econ 272	Foundations of Economic Analysis (3-4 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 240	Introduction to Electrical Circuits **or**
Engr 320	Engineering Thermodynamics and Heat Transfer (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)

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 **or**
Phys 212	Engineering Physics II and Lab (4-5 cr)
Geol 111	Physical Geology for Science Majors (4 cr)
MMBB 154, 155	Introductory Microbiology and Lab (4 cr)

Technical electives. To ensure sufficient breadth, technical electives must include at least 15 credits from at least three of the following five groups (18 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 473	Highway Design (3 cr)
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 18 cr of tech electives.

The minimum number of credits for the degree is 128, excluding 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	Physical Geology for Science Majors (4 cr)
Geol 345	Structural Geology (3-4 cr)
Geol 422	Principles of Geophysics (3 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)

Civil Engineering Graduate Academic Certificates Requirements

Applied Geotechnics 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 528	Advanced Topics in Geological Engineering (3 cr)
GeoE 535	Seepage and Earth Dams (3 cr)

Credits to total 12 for this Academic Certificate

Structural Engineering 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 543	Dynamics of Structures (3 cr)
CE 545	Matrix Structural Analysis (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	Earthquake Engineering (3 cr)
CE 575	Advanced Pavement Design and Analysis (3 cr)

Credits to total 12 for this Academic Certificate

Water Resources Engineering 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 529	Natural Channel Flow (3 cr)
CE 533	Water Quality Management (3 cr
CE 546	Finite Element Analysis (3 cr)
Engr 428	Numerical Methods (3 cr)

Credits to total 12 for this Academic 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 Part 4 of 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, 502, 503, 597, 598, and 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. 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. In addition, one of the following requirements must be satisfied: (1) satisfactory completion of a foreign language examination conducted by the Department of Foreign Languages and Literatures, or (2) completion of a humanistic-social study program approved by the Department of Civil Engineering.

Department of Computer Science

Gregory W. Donohoe, Acting 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. Affiliate 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 Part 6 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 on page 49) and:

General Education and Broadening Electives (9 cr):

Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 317	Technical Writing (3 cr)
Broadening Electives (4 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 I (3 cr)
CS 384	Software Engineering II (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	Senior Capstone Design (4 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	Cells and the Evolution of Life and
Biol 116	Organisms and Environments (8 cr)
Chem 111	Principles of Chemistry I and
Chem 112	Principles of Chemistry II (9 cr)
Phys 211	Engineering Physics I and
Phys 212	Engineering Physics II (8 cr)
Phys 211	Engineering Physics I and
Phys 213	Engineering Physics III (8 cr)

Science electives (4 cr)

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, 404, 499, and 513-519.

The minimum number of credits for the degree is 128, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies.

Students majoring in computer science must earn a grade of C or better in CS 120, 121, and 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, 240, 270, and Math 170 and 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)

Computer Science Graduate Academic Certificates Requirements

Secure and Dependable Computing systems 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 441	Advanced Operating Systems (3 cr)
CS 448	Survivable Systems and Networks (3 cr)
CS 449	Fault-Tolerant Systems (3 cr)
CS 484	Software Quality Assurance (3 cr)
CS 504	Special Topics (3 cr)
CS 541	Advanced Operating Systems (3 cr)
CS 548	Survivable Systems and Networks (3 cr)
CS 549	Fault-Tolerant Systems (3 cr)
CS 584	Software Quality Assurance (3 cr)

Credits to total 12 for this Academic 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 of Part 4 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 http://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 M.S. graduate candidate must successfully complete one class from at least three of the following categories: software architecture, hardware architecture, development processes, research foundations, and computer science theory. Check with the department for further details.

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 (9 cr); at least one semester of CS Graduate Seminar, CS 501 (1 cr); focused plan of study (at least 14 cr); and research and thesis (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 36 credit hours of study. Specific requirements are: graduate breadth requirement (9 cr); at least one semester of CS Graduate Seminar, CS 501 (1 cr); and a focused plan of study (at least 26 cr), up to 6 credits of which can be CS 580. 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 one class from at least four of the following categories: software architecture, hardware architecture, development processes, research foundations, and computer science theory. 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

Lawrence A. Young, Dept. Head (19 CNR Bldg. 83844-1139; phone 208/885-7911; e-mail css@uidaho.edu; www.cnrhome.uidaho.edu/css/). Faculty: James R. Fazio, Troy E. Hall, Sam H. Ham, Charles C. Harris, Steven J. Hollenhorst, Edwin E. Krumpe, Tamara J. Laninga, William J. McLaughlin, Sandra L. Pinel, Nick Sanyal, Patrick Wilson. Adjunct Faculty: Yen Hai Le, Gary E. Machlis, Michael R. Whiteman,. Affiliate Faculty: , Carlos M. Chacon, Claudia Charpentier, David N. Cole, Jose A. Courrau, LuVerne D. Grussing, John Haskin, Christine Jakobsen, Bjorn P. Kaltenborn, , Richard A. Meganck, David Ostergren Dietmar Stoian. Forest Products Faculty: Alton G. Campbell, Thomas M. Gorman, Armando G. McDonald, Francis G. Wagner. Adjunct Faculty: Louis L. Edwards, John S. Morris, Jay O'Laughlin. Steven R. Shook. Affiliate Faculty: Donald A. Bender, Keith A. Blatner, Darek J. Nalle, Michael P. Wolcott.

Programs in the Department of Conservation Social Sciences involve the study of land and its natural resources and the private, non-profit and governmental institutions that determine how land will be allocated and managed. The educational objective of the Department is to prepare professionals and help build the capacity of organizations that protect and conserve the environment. The program prepares conservation professionals for the 21st century who: 1) Possess core skills relating to organizational management and leadership; 2) Are aware of new conservation 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, political science, economics, and communication.

The B.S.Res.Rc. degree prepares qualified students for graduate programs focusing on 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.

It is department philosophy that graduates should be prepared for a wide spectrum of career opportunities related to the human dimensions of conservation. Careers, however, usually begin in one of four general areas: environmental communication/education, parks, protected areas, and wilderness conservation, resource-based recreation and sustainable tourism, or outdoor recreation leadership.

The department also offers thesis and non-thesis graduate programs (M.S. with a major in Natural Resources) that 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, wildlife management, anthropology, education, communication, 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.cnrhome.uidaho.edu/css/.

For questions regarding the program in Forest Products please contact the department.

Courses

See Part 6 for courses in Conservation Social Sciences (CSS) and Forest Products (ForP).

Conservation Social Sciences Undergraduate Curricular Requirements

Resource Recreation & Tourism (B.S.Res.Rc.)

Students must select any academic minor (including those in the Department of Conservation Social Sciences) and 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 of 2.30 or higher in all CSS courses.

Required Course work includes the university requirements (see regulation J-3 on page 49) and:

Biol 102	Biology and Society **or**
Biol 115	Cells and the Evolution of Life (4 cr)
Comm 101	Fundamentals of Public Speaking or one semester of a foreign language (2-4 cr)
Econ 202 or 201	Principles of Economics (3 cr)
For 221	Ecology **or**
REM 221	Ecology (3 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management **or**
LArc 395	GIS Applications in Land Planning 1 (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry **or**
Math 160	Survey of Calculus **or**
Math 170	Survey of Calculus II (3-4 cr)
NR 101	Exploring Natural Resources (taken simultaneously with CSS 287) (1 cr)
PolS 101	Intro to Political Science and American Government **or**
PolS 275	American State and Local Government (3 cr)
CSS 235	Society and Natural Resources (3 cr)
CSS 287	Foundations of Conservation Leadership and Management (taken simultaneously with NR 101) (3 cr)
CSS 304	Conservation Social Sciences Field Studies (3 cr)
CSS 310	Social Research Methods in Conservation (4 cr)
CSS 385	Conservation Management and Planning I (4 cr)
CSS 386	Conservation Management and Planning II (4 cr)
CSS 387	Environmental Communication Skills (3 cr)
CSS 481	Conservation Leadership (3 cr)
CSS 489	Personalities and Philosophies in Conservation (3 cr)
Stat 251	Statistical Methods (3 cr)

One writing course, such as Engl 207, 208, 209, 313, 316, 317 (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	Physical Geology (4 cr)

One of the following (2-3 cr):

CSS 364	Politics of the Environment (3 cr)
CSS 462	Natural Resource Policy (3 cr)
For 484	Forest Policy and Administration (2 cr)

One of the following (3 cr):

Econ 385	Environmental Economics (3 cr)
Econ 447	International Development Economics (3 cr)

One of the following (3 cr):

For 426	Fire Ecology and Management (3 cr)
For 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr) and
REM 460	Rangeland Ecology Current Topics and Field Studies (1 cr)
WLF 314	Wildlife Ecology I (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)

14-15 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 329	North American Indians (3 cr)
Anth 410	Research Methods in Anthropology (3 cr)
Anth 428	Social and Political Organization (3 cr)
Anth 462	Human Issues in International Development (3 cr)
Comm 335	Intercultural Communication (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 433	Organizational Communication Theory, Research, and Application (3 cr)
CSS 364	Politics of the Environment (3 cr)
CSS 462	Natural Resource Policy (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 487	Environmental Education (3 cr)
CSS 490	Wilderness and Protected Area Management (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
CSS 498	Internship (3-6 cr)
Econ 385	Environmental Economics (3 cr)
Econ 407	Public Finance (3 cr)
Econ 441	Labor Economics (3 cr)
Econ 447	Economics of Developing Countries (3 cr)
EnvS 479	Introduction to Environmental Regulations (3 cr)
EnvS 482	Natural Resource Policy and Law (3 cr)
For 408	Community/Urban Forestry (2 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 330	Urban Geography (3-4 cr)
Geog 350	Geography of Development (3-4 cr)
Geog 360	Population Dynamics and Distribution (3-4 cr)
Geog 420	Land, Resources, and Environment (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)
JAMM 452	Public Relations Campaign Design (3 cr)
JAMM 458	Public Relations Case Studies and Issues Mgmt (3 cr)
Phil 452	Environmental Philosophy (3 cr)
Phil 472	Social and Political Philosophy (3 cr)
PolS 275	American State and Local Government (3 cr)
PolS 333	American Political Culture (3 cr)
PolS 428	American Political Thought (3 cr)
PolS 440	International Organizations and Law (3 cr)
PolS 451	Public Administration (3 cr)
PolS 454	Public Organization Theory (3 cr)
PolS 480	Politics of Development (3 cr)
Psyc 305	Developmental Psychology (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)
Psyc 325	Cognitive Psychology (3 cr)
Soc 311	Development of Social Theory (3 cr)
Soc 313	Collective Behavior (3 cr)
Soc 340	Social Change & Globalization (3 cr)
Soc 343	Political Sociology (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 450	Dynamics of Social Protest (3 cr)

Electives to total 128 cr for the degree

Forest Products (B.S.For.Prod.)

Required course work includes the university requirements (see regulation J-3 on page 49) and one of the following options:

No more than 25 percent of the course work used for the forest products degree may be taken in business courses (excluding Econ 201 and 202). Of the 128 credits required, at most 32 credits taken in business courses may be counted toward the degree.

A. Wood Construction and Design Option

This option is designed for students interested in residential and light commercial construction or design management positions that emphasize effective use of wood as a structural material. Students may focus in one of two emphasis areas. In the architectural technology emphasis area, the student will develop design skills in addition to a background in business and wood technology for positions in non-licensed design, specification writing, design-build construction, and architectural and construction liaison. Students selecting the wood construction business emphasis area will be prepared for careers that include both supervisory and managerial positions in residential and light commercial building and building materials, sales and marketing of wood products, estimating, banking, insurance, and government agencies that deal with housing. The wood construction and design option can also provide an educational foundation for those wishing to become entrepreneurs in the area of wood construction.

Acct 202	Introduction to Managerial Accounting (3 cr)
Arch 154	Introduction to Architectural Graphics (3 cr)
Arch 266	Materials and Methods (3 cr)
Arch 353	Architectural Design III and
Arch 354	Architectural Design IV; **or**
Acct 310	Accounting for Business Decisions I **and**
Bus 311	Introduction to Management (6-10 cr)
Arch 366	Building Technology I (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 575	Professional Practice (3 cr)
BLaw 265	Legal Environmental of Business (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Economics (3 cr)
Engl 102	College Writing and Rhetoric (3 cr)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)
For 235	Society and Natural Resources (3 cr)
ForP 100	Forest Products Issues and Technology (2 cr)
ForP 277	Wood Anatomy and Identification (3 cr)
ForP 337	Physical and Mechanical Properties of Wood (3 cr)
ForP 365	Wood Building Technology (3 cr)
ForP 436	Biocomposites (3 cr)
ForP 444	Primary Wood Products Manufacturing
ForP 450	Wood Deterioration and Preservation (2 cr)
ForP 491	Biomaterial Product and Process Development Lab (2 cr)
ForP 495	Product and Process Development and Commercialization (3 cr)
LArc 251	Introduction to Principles of Site Design (3 cr)
Math 160	Survey of Calculus (4 cr)
NR 101	Exploring Natural Resources (1 cr)
Phys 111	General Physics I (4 cr)
Stat 251	Statistical Methods (3 cr)
VTD 344	Computer-Aided Design (2 cr)

Electives to total 128 credits for the degree

B. Forest Products Business Management Option

This program is designed for students who plan careers in the staff or line management of firms in the forest products industry. Graduates are prepared for positions in production management, marketing and distribution of wood products, and in the technical service and support areas of the forest products industry. Students focus on the production, distribution, and marketing of wood products from a combined technical and managerial perspective. The degree also provides a foundation for pursuing a graduate degree in business, for example, the M.B.A. or M.S.

Acct 201	Introduction to Financial Accounting (3 cr)
Acct 202	Introduction to Managerial Accounting (3 cr)
Biol 102	Biology and Society (4 cr)
BLaw 265	Legal Environment of Business (3 cr)
Bus 301	Financial Management (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)
Bus 370	Introduction to Operations Management (3 cr)
Bus 424	Pricing Strategy and Tactics (3 cr)
Bus/Stat 456	Quality Management (3 cr)
Chem 101	Introduction to Chemistry I (4 cr)
Chem 275	Carbon Compounds **or**
Chem 277	Organic Chemistry I (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Economics (3 cr)
Engl 102	College Writing and Rhetoric (3 cr)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)
For 221	Ecology **or**
REM 221	Ecology (3 cr)
For/CSS 235	Society and Natural Resources (3 cr)
For 383	Economics for Natural Resource Managers (3 cr)
ForP 100	Forest Products Issues and Technology (2 cr)
ForP 277	Wood Anatomy and Identification (3 cr)
ForP 337	Physical and Mechanical Properties of Wood (3 cr)
ForP 425	Forest Products Marketing (3 cr)
ForP 430	Forest Engineering and Harvesting (3 cr)
ForP 436	Biocomposites (3 cr)
ForP 438	Lignocellulosic Biomass Chemistry (3 cr)
ForP 444	Primary Wood Products Manufacturing (3 cr)
ForP 450	Wood Deterioration and Preservation (2 cr)
ForP 491	Biomaterial Product and Process Development Lab (2 cr)
ForP 495	Product and Process Development and Commercialization (3 cr)
ForP 498	Renewable Natural Resources Internship (1 cr)
Math 160	Survey of Calculus (4 cr)
NR 101	Exploring Natural Resources (1 cr)
Phys 111	General Physics I (3 cr)
Stat 251	Statistical Methods (3 cr)

Electives to total 128 cr for the 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):

Core 106	Core Discovery: The New Wild West (3-4 cr)
Core 125	Core Discovery: The Earth and our place on it (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 (9-11 cr)

CSS 385	Conservation Management and Planning I (4 cr)
CSS 386	Conservation Management and Planning II (4 cr)
CSS 387	Environmental Communication Skills (3 cr)
CSS 481	Conservation Leadership (3 cr)
CSS 489	Personalities and Philosophies in Conservation (3 cr)

To complete this minor, students must earn a minimum of 20 credits

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	Principles of 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)

Forest Operations Minor

Acct 202	Introduction to Managerial Accounting (3 cr)
ForP 100	Forest Products Issues and Technology (2 cr)
ForP 277	Wood Anatomy and Identification (3 cr)
ForP 430	Forest Engineering and Harvesting (3 cr)
ForP 432	Designing Forest Access (3 cr)
ForP 434	Forest Tractor and Cable Systems (4 cr)
ForP 444	Primary Wood Products Manufacturing (3 cr)

Forest Products Minor

For students in business, engineering, forestry, or vocational education who wish to gain specific background and knowledge related to the forest products industry.

ForP 277	Wood Anatomy and Identification (3 cr)
ForP 430	Forest Engineering and Harvesting (3 cr)

ForP 444 Primary Wood Products Manufacturing (3 cr)
Electives in forest products (11 cr)

Outdoor Recreation Leadership Minor

Rec 320 Outdoor Recreation Leadership (2 cr)

Courses selected from the following (13-14 cr):

- CSS 287 Foundations of Conservation Leadership and Management (taken simultaneously with NR 101) (3 cr)
- CSS 387 Environmental Communication Skills (3 cr)
- CSS 401 Practicum in Tutoring (1 cr)
- CSS 481 Conservation Leadership (3 cr)
- CSS 487 Environmental Education (3 cr)
- CSS 490 Wilderness and Protected Area Management (3 cr)
- H&S 288 First Aid: Emergency Response **or**
- Rec 290 Wilderness First Responder (2-3 cr)
- NR 101 Exploring Natural Resources (taken simultaneously with CSS 287) (1 cr)
- Rec 125 Outdoor Leisure Pursuits (2 cr)
- Rec 215 River Reading and Whitewater Safety (1 cr)
- Rec 243 Recreation Activities (2 cr)
- Rec 254 Camp Leadership (3 cr)
- Rec 256 Camp Counseling Practicum (2-3 cr)
- Rec 280 Recreation Practicum (1 cr)
- Rec 321 Wilderness Medicine and Evacuation (1 cr)
- Rec 420 Experiential Education (2 cr)
- Rec 495 Practicum in Tutoring (1 cr)

Courses selected from the following (5 cr):

- CSS 204 Special Topics (course approved by advisor)
- PEB 106 Individual and Dual Sports: Wall Climbing(1 cr)
- PEB 108 Water-Based Sports and Fitness Activities: Scuba (1 cr)
- Rec 106 Introductory Arboricultural Tree Climbing Techniques (1 cr)
- Rec 204 Special Topics (course approved by advisor)
- Rec 220 Rock Climbing (1 cr)
- Rec 221 Mountaineering (2 cr)
- 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 226 Whitewater Canoeing (1 cr)
- Rec 227 Mountain Biking (1 cr)
- Approved technical competency (contact the CSS or HPERD departments; practical exam administered by Rec and/or CSS faculty) (max 4 cr)

Parks, Protected Areas, and Wilderness Conservation Minor

CSS 490 Wilderness and Protected .Area Management **or**
CSS 493 International Land Preservation and Conservation Systems (3 cr)
WLF 440 Conservation Biology (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 386 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)
- For 429 Landscape Ecology (3 cr)
- Geog 420 Land, Resources, and Environment (3 cr)
- Hist 424 American Environmental History (3 cr)
- Phil 452 Environmental Philosophy (3 cr)

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 340 Leisure and Tourism Enterprises (3 cr)

Course selected from the following (11-12 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 181 Introduction to Hospitality Services Industries (3 cr)
- CSS 381 Hospitality Management and Organization (3 cr)
- CSS 386 Conservation Management and Planning II (4 cr)
- CSS 493 International Land Preservation and Conservation Systems (3 cr)
- CSS 498 Internship (cr arr)
- Geog 340 Business Location Decisions (3 cr)
- Rec 204 Special Topics (cr arr)
- Rec 254 Camp Leadership (3 cr)
- Rec 280 Recreation Practicum (1 cr)
- Rec 487 Recreation Program Planning and Marketing (1 cr)

Conservation Social Sciences Graduate Academic Certificates Requirements

Environmental Education Academic Certificate

CSS 481 Conservation Leadership (3 cr)
CSS 560 Community Ecology for Env. Educators (3 cr)
CSS 562 Field Science Teaching (2 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)

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 of Part 4 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 (404B Educ. Bldg. 83844-3082; 208/885-6587 , Faculty: Anne E. Adams, , John Davis, Emily Duvall, Julie

Fodor, Deanne Gilmore, Karen P. Guilfoyle, Keonghee Tao Han, Teresa Jentsch, Georgia Johnson, Anne Kern, Sally G. Machlis, Cherie R. Major, Melissa McConnell, Rodney McConnell, Jerine Pegg, Richard Pollard, Elizabeth L. Reynolds, Melissa Saul, Matthew Wappett. Professional-Technical and Technology Education Faculty: Ernest F. Biller, John C. Cannon, James Connors, Charles W. Gagel, James A. Gregson, Laura B. Holyoke, K. Allen Kitchel, Jerry R. McMurtry, Lee T. Ostrom, Lou E. Riesenberg, Ben Swan, Jerry L. Tuchscherer, Cheryl Wilhelmsen, Katlin Wolfe, Martha C. 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 though rigorous admission, continuation, and exit criteria, (2) preparation of teachers in a standards driven, integrated, and field-based program, (3) completion of the professional year (Elementary) or semester (Secondary) , 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 Part 6 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 in Part 4.

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 on page 49), successful completion of Praxis II test and the Idaho Comprehensive Literacy Assessment parts 1 and 2 prior to the internship. 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 320	Foundations of Literacy Development (4 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)
MusT 381	Elementary School Music Methods for Nonmajors (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 209	Inquiry-Based 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	Physical Geography (4 cr)
Geol 101	Physical Geology (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	General Astronomy **and**
Phys 104	Astronomy Lab (4 cr)
Phys 111	General Physics I (4 cr)

Life science elective (4 cr):

Biol 102	Biology and Society (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/Physical Education 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)
PEP 350	Elementary Physical and Health Education (3 cr)

Literacy/Arts Education Block:

EDCI 321	Literature for Children (3 cr)
EDCI 322	Integrated Language and Literacy (3 cr)
EDCI 325	Elementary Art Education (3 cr)
EDCI 409	Integrated Methods Practicum II (1 cr)
Dan 360	Children's Dance (1 cr)

Internship Year:

First Semester:

EDCI 466	Literacy Assessment and Intervention (3 cr)
EDCI 483	Elementary Internship I (14 cr)
EDCI 401	Internship Seminar (1 cr)

Second Semeter:

EDCI 484	Elementary Internship II (15 cr)*

**With department approval students can apply to waive the second semester of Elementary Internship and pursue other options that include advisor approved course work and programs like: Study Abroad, Content Area Endorsement, Special Education program, and course work offered by other departments.*

The minimum number of credits required for the degree is 128.

Secondary Education (B.S.Ed.)

Required course work includes the university requirements (see regulation J-3 on page 49); 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" on page 123 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 463	Literacy Methods for Content Learning (3 cr)
EDCI 485	Secondary Internship (15 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
Psyc 101	Intro to Psychology **or**
Psyc 305	Developmental Psychology (3 cr)

Advanced composition course (Engl 207, Engl 208, Engl 209, Engl 291, Engl 292, Engl 309, Engl 313, Engl 317 or Engl 401) (3 cr)

Mathematics elective (math or statistics UI core 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)

Career and Technical Education (B.S.Ed.)

Required course work includes the university requirements (see regulation J-3 on page 49) and the following:

General Professional-Technical and Technology Education Requirements

CTE 351	Principles and Philosophy of Professional-Technical Education (3 cr)
CTE 430	Leadership and Student Organizations (2 cr)
CTE 431	Supervising PTTE Student Organizations (1 cr)
CTE 445	Professional Role Development in PTTE I (2 cr)*
CTE 455	Professional Role Development in PTTE II (1 cr)*
CTE 464	Career Guidance and Transitioning to Work (3 cr)

**Note: CTE 445 and 455 replace the requirement of EDCI 401 (see College of Education requirements)*

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 Professional-Technical and Technology 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)
Bus 425	Retail Distribution Management (3 cr)
Comm 101	Fundamentals of Public Speaking **or**
Comm 111	Introduction to Communication Studies (3 cr)
CTE 104	Input Technologies for the 21st Century (3 cr)
CTE 415	Microcomputer Applications (3 cr)
CTE 416	Website Design and Development **or**
CTE 460	Desktop Publishing (3 cr)
CTE 418	Teaching Economics and Personal Finance (3 cr)
CTE 419	Database Applications and Information Management (3 cr)
CTE 484	Internship in Professional-Technical and Technology Education Teaching (14 cr)
CTE 492	Business and Marketing Education Methods (3 cr)
CTE 495	Administrative Technology Management and Procedures (3 cr)
Econ 201	Principles of Economics (3 cr)
Econ 202	Principles of Economics (3 cr)
EDCI 201	Contexts of Education **or**

CTE 447	Diverse Populations and Individual Differences (2-3 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)
Engl 313	Business Writing (3 cr)
FCS 448	Consumer Economic Issues (3 cr)
Psyc 101	Intro to Psychology **or**
Psyc 305	Developmental Psychology (3 cr)

Accounting, business, economics or CTE electives (6 cr)

Electives to total 128 credits

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 Professional-Technical and Technology Education Requirements and the following:

CTE 420	Evaluation in Professional-Technical Education (3 cr)
CTE 426	Instructional Design and Curriculum (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)

Professional-technical electives approved by advisor to total 128 credits:

CTE 200, 400	Seminar (cr arr)
CTE 203, 403	Workshop (cr arr)
CTE 204, 404	Special Topics (cr arr)
CTE 299, 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 PTE students seeking Idaho Secondary Teaching Certificate include the satisfactory completion of the PRAXIS II Content Area Test, and the following:

Comm 101	Fundamentals of Public Speaking **or**
Comm 132	Oral Interpretation (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)
EDCI 485	Secondary Internship **or**
CTE 484	Internship in Professional-Technical and Technology Education Teaching (18 cr)
EDSP 300	Educating for Exceptionalities (2 cr)
Psyc 101	Intro to Psychology **or**
Psyc 305	Developmental Psychology (3 cr)

C. Engineering & Technology Education Option

Requirements include the General Professional-Technical and Technology 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 354	Construction Technology (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 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 Manufacturing and Robotics (4 cr)
CTE 484	Internship in Professional-Technical and Technology Education Teaching (18 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	General Physics I (4 cr)
Phys 112	General Physics II (4 cr)
Psyc 101	Intro to Psychology **or**
Psyc 305	Developmental Psychology (3 cr)

Electives to total 129 credits

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 Part 5).

A. 45-Credit Art Teaching Major

Art 100	World Art and Culture (3 cr)
Art 110	Visual Communication (2 cr)
Art 111-112	Drawing I-II (5 cr)
Art 121-122	Visual Communication and the Design Process (5 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, 330, 340, 350, 360, 370, 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	Visual Communication (2 cr)
Art 111-112	Drawing I-II (5 cr)
Art 121-122	Visual Communication and the Design Process (5 cr)

Courses selected from Art 211, 214, 221, 231, 241, 251, 261, 271, 280, or Art 314, 321, 330, 340, 350, 360, 370, 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 210	Genetics (4 cr)

Biol 212	Molecular and Cellular Biology (4 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Biol 314	Ecology and Population Biology (4 cr)
Biol 421	Advanced Evolutionary Biology (3 cr)
Chem 111	Principles of Chemistry **or**
Chem 101	Introduction to Chemistry (4 cr)
Chem 275	Carbon Compounds **or**
Chem 277	Organic Chemistry I (3 cr)
Phys 111-112	General Physics I-II (8 cr)

Electives (see list of electives for Biology major in Part 5) (3-4 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 210	Genetics (4 cr)
Biol 212	Molecular and Cellular Biology (4 cr)
Biol 213	Principles of Biological Structure and Function (4 cr)
Biol 314	Ecology and Population Biology (4 cr)

Business Education

22- to 26-Credit Business Education Teaching Minor

Acct 201	Introduction to Financial Accounting and
Acct 202	Introduction to Managerial Accounting (6 cr)
Bus 311	Introduction to Management **or**
Bus 321	Marketing (3 cr)
CTE 415	Microcomputer Applications (3 cr)
CTE 430	Leadership and Student Organizations (2 cr)
CTE 431	Supervising PTTE Student Organizations (1 cr)
CTE 492	Business and Marketing Education Methods (2 cr)
CTE 495	Administrative Technology Management and Procedures (3 cr)
Econ 201	Principles of Economics and
Econ 202	Principles of Economics; **or**
Econ 272	Foundations of Economic Analysis (4-6 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 Professional-Technical Education (3 cr)
CTE 426	Occupational Analysis and Curriculum Development (3 cr)
CTE 464	Career Guidance and Transitioning to Work (3 cr)
EDCI 201	Contexts of Education (2 cr) **or**
CTE 447	Diverse Populations and Individual Differences (2-3 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	Quantitative Analysis (5 cr)
Chem 275, 276	Carbon Compounds and Lab **and**
MMBB 380, 382	Intro Biochem and Lab **or**
Chem 277, 278	Organic Chem I and Lab **and**
Chem 372, 374	Organic Chem II and Lab (8-10 cr)
Chem 302, 303	Principles of Physical Chemistry and Lab (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Phys 111-112	General Physics I-II (8 cr)

Chemistry elective (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)

B. 21-Credit Chemistry Teaching Minor

Chem 111	Prin of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 275, 276	Carbon Compounds and Lab (4 cr)
Chem 302, 303	Principles of Physical Chemistry and Lab (4 cr)
MMBB 380	Introductory Biochemistry (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 I (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, 202	Principles of Economics (6 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)
Bus 364	Insurance (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 33 credits of Required courses as well as 12 credits of Electives:

Chem 111	Principles of Chemistry I (4 cr)
Geog 301	Meteorology (3 cr)
Geol 102	Historical Geology (4 cr)
Geol 324	Principles of Stratigraphy and Sedimentation (4 cr)
Geol 335	Geomorphology (3 cr)
Math 143	Pre-Calculus Algebra & /Analytic Geometry (3 cr)
Phys 103	General Astronomy (3 cr)
Phys 104	General Astronomy Lab (1 cr)
Phys 111	General Physics I (4 cr)

One of the following:

Geog 100	Physical Geography (4 cr)
Geog 450	Global Environmental Change (3 cr)
Geol 101	Physical Geology (4 cr)
Geol 111	Physical Geology for Science Majors (4 cr)

Advisor Approved Science Electives (12 cr)

Economics

A teaching major in economics is not offered.

20-Credit Economics Teaching Minor

Econ 201, 202	Principles of Economics (6 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 Professional-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 175	Introduction to Literary Genres **or**
Engl 215	Introduction to English Studies (3 cr)
Engl 201	English Grammar: Key Concepts and Terms (1 cr)
Engl 291	Beginning Poetry Writing **or**
Engl 292	Beginning Fiction Writing (3 cr)
Engl 309	Advanced Prose Writing (3 cr)
Engl 341 or 342	Survey of British Literature (3 cr)
Engl 343-344	Survey of American Literature (6 cr)
Engl 345	Shakespeare (3 cr)
Engl 401	Writing Workshop for Teachers (3 cr)
Engl 441	Introduction to Study of Language (3 cr)
Engl 445	Literature for Adolescents (3 cr)

Two linguistics courses (Engl 442, 443 or 496; Engl 443 may be taken concurrently with EDCI 485) (6 cr)

Two 400-level English area course (6 cr)

One literature course focusing on multicultural literature (Engl 380, 480, 483, 484; or Engl 404, 481, or 482 when these courses include a major and specific selection of American ethnic literature) (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. 31-Credit English Teaching Major

Engl 175	Introduction to Literary Genres **or**
Engl 215	Introduction to English Studies (3 cr)
Engl 201	English Grammar: Key Concepts and Terms (1 cr)
Engl 309	Advanced Prose Writing (3 cr)
Engl 341 or 342	Survey of British Literature (3 cr)
Engl 343-344	Survey of American Literature (6 cr)
Engl 401	Writing Workshop for Teachers (3 cr)
Engl 441	Introduction to Study of Language (3 cr)
Engl 442 or 443 or 496	Linguistics (3 cr)
Engl 445	Literature for Adolescents (3 cr)

One literature course focusing on multicultural literature (Engl 380, 480, 483, 484; or Engl 404, 481, or 482 when these courses include a major and specific selection of American ethnic literature) (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 175	Introduction to Literary Genres **or**
Engl 215	Introduction to English Studies (3 cr)
Engl 201	English Grammar: Key Concepts and Terms (1 cr)
Engl 309	Advanced Prose Writing (3 cr)
Engl 401	Writing Workshop for Teachers (3 cr)
Engl 441	Introduction to Study of Language (3 cr)

One survey course in both American literature (Engl 343 or 344) and British literature (Engl 341 or 342); at least one of the two survey courses must be Engl 341 or 343 (6 cr)

One literature course focusing on multicultural literature (Engl 380, 480, 483, 484; or Engl 404, 481, or 482 when these courses include a major and specific selection of American ethnic literature) (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 437/447) (4 cr)

Theory, philosophical foundations, testing/identification of limited English proficient students, or applied linguistics in ESL (i.e. Engl 441, 442 or 443) (3 cr)

Practicum or field experience in ESL (i.e. EDCI 402, EDCI 597, Engl 515) (1cr)

At least one course in English language and linguistics (Engl 441, 442, 443) (3 cr)

Electives to total 21 credits (Anth/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 Foreign Languages and Literatures for policies on earning credit for vertically-related courses.

A. 45-Credit French Teaching Major

Fren 101-102	Elementary French I-II (8 cr)
Fren 201-202	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 305	Reading French Texts (3 cr)
Fren 408	Topics in French Culture and Institutions (3 cr)
Fren 449	Practicum in Tutoring (1-2 cr)

Electives chosen from the following (7-10 cr):

Engl 441	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 101-102	Elementary French I-II (8 cr)
Fren 201-202	Intermediate French I-II (8 cr)

Approved upper-div French electives (either Fren 301 or 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 French of less than 22 credits is not acceptable.

Geography

A. 31-Credit Geography Teaching Major

Geog 100	Physical Geography (4 cr)
Geog 165	Human Geography (3 cr)
Geog 180	Geospatial Graphics (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 (3-4 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	Geographic Visualization (4 cr)
Geog 401	Climatology (3 cr)
Geog 427	Spatial Multicriteria Analysis and Optimization (3 cr)

B. 22-Credit Geography Teaching Minor

Geog 100	Physical Geography (4 cr)
Geog 165	Human Geography (3 cr)
Geog 180	Geospatial Graphics (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)

Geology

A teaching major in geology is not offered.

20-Credit Geology Teaching Minor

Geol 101	Physical Geology (4 cr)
Geol 102	Historical Geology (4 cr)
Geol 212	Principles of Paleontology (4 cr)

Electives chosen from the following (5 cr):

Geol 335	Geomorphology (3 cr)
Geol 345	Structural Geology (3-4 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 Foreign Languages and Literatures for policies on earning credit for vertically-related courses.

A. 45-Credit German Teaching Major

Engl 441	Introduction to Study of Language (3 cr)
FLEN 324	German Literature in Translation (3 cr)
Germ 101-102	Elementary German I-II (8 cr)
Germ 201-202	Intermediate German I-II (8 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 101-102	Elementary German (8 cr)
Germ 201-202	Intermediate German (8 cr)

Approved upper-div German electives (either Germ 301 or 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)
FCS 240	Intimate Relationships **or**
Psyc 330	Human Sexuality (3 cr)
H&S 150	Wellness Lifestyles **or**
HPRD 201	Physical Activity, Wellness & Behavior Change (3 cr)
H&S 288	First Aid: Emergency Response (2 cr)
H&S 289	Drugs in Society **and**
H&S 350	Stress Management and Mental Health; **or**
H&S 451	Psychosocial Determinants of Health (3-4 cr)
H&S 423	School Health Education Methods and Administration (3 cr)
H&S 450	Critical Health Issues (3 cr)

Choose one of the following (4 cr):

Biol 102	Biology and Society (4 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Biol 120	Human Anatomy (4 cr)
MMBB 154, 155	Introductory Microbiology and Laboratory (4 cr)

History

A. 45-Credit History Teaching Major

Hist 101-102	History of Civilization (6 cr)
Hist 111-112	Introduction to U.S. History (6 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 101-102	History of Civilization (6 cr)
Hist 111-112	Introduction to U.S. History (6 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 and Hist 102	History of Civilization (6 cr)
Hist 111 and Hist 112	Introduction to U.S. History (6 cr)
PolS 101	Introduction to Political Science and American Government **or**
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 (3 cr)
JAMM 275	Introduction to Broadcasting and Digital Media Production (4 cr)
JAMM 324	News Editing and Production (3 cr)
JAMM 401	Practicum or
JAMM 498	Internship (1 cr)
JAMM 425	Feature Article Writing (3 cr)
JAMM 448	Law of Mass Media (3 cr)

Two courses chosen from the following (6 cr)

JAMM 322	Broadcast News (3 cr)
JAMM 325	Publications Editing (3 cr)
JAMM 427	Public Affairs Reporting (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 (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 401 or 498	Practicum or Internship
JAMM 425	Feature Article Writing (3 cr)
JAMM 448	Law of Mass Media (3 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 Foreign Languages and Literatures 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 101-102	Elementary Latin I-II (or equivalent) (6 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 441	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 101-102	Elementary Latin I-II (or equivalent) (6 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 C420	Classification and Cataloging (4 cr)
LibS C421	Acquisitions and Collection Development in Libraries (3 cr)
LibS C422	Use of School Library and/or C423 Intro to Reference Work (2-5 cr)
LibS C425	Organization and Management of Small Libraries (4 cr)
LibS C427	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 390	Axiomatic Geometry **or**
Math 391	Modern Geometry (3 cr)
Math 461	Abstract Algebra (3 cr)
Math 471	Introduction to Analysis 1 (3 cr)

One of the following (3-4 cr):

Stat 251	Statistical Methods (3 cr)
Stat 271	Statistical Inference and Decision Analysis (4 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)
Math 390 Axiomatic Geometry **or**
Math 391 Modern Geometry (3 cr)
Math 461 Abstract Algebra **or**
Math 471 Introduction to Analysis 1 (3 cr)

One of the following (3-4 cr):
Stat 251 Statistical Methods (3 cr)
Stat 271 Statistical Inference and Decision Analysis (4 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)
Math 390 Axiomatic Geometry **or**
Math 391 Modern Geometry (3 cr)

One of the following (3-4 cr):
Stat 251 Statistical Methods (3 cr)
Stat 271 Statistical Inference and Decision Analysis (4 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

29-Credit Vocal Music Teaching Minor
MusA 114 Studio Instruction (2 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 Conducting I (2 cr)
MusC 139-140 Aural Skills I-II (4 cr)
MusC 141-142 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 (2 cr)
MusT 389 Orff, Kodaly, and Dalcroze (2 cr)
MusT 485 Choral Ensemble Rehearsal Techniques (1 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)
H&S 288 First Aid: Emergency Response (2 cr)
HPRD 201 Physical Activity, Wellness & Behavior Change (3 cr)
HPRD 210 Meaning of Movement and Injury Prevention (2 cr)
PEP 107 Movement Fundamentals (1 cr)
PEP 161 Introduction to Physical Education (1 cr)
PEP 300 Applied Human Anatomy & Biomechanics **or**
PEP 418 Physiology of Exercise (2-3 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 Adapted Methods in Physical Activity Pedagogy (2 cr)
PEP 440 Curriculum & Administration in Physical Activity Pedagogy (1 cr)
Rec 125 Outdoor Leisure Pursuits (2 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, Softball and Archery (1 cr)
PEP 202 Skill and Analysis of Stunts and Tumbling (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.

Biol 102 Biology and Society **or**
Biol 116 Organisms and Environments **or**
Geog 100 Physical Geog **or**
Geog 401 Climatology (3-4 cr)
Chem 111 Principles of Chemistry I (4 cr)
Chem 112 Principles of Chemistry II (5 cr)
Chem 275 Carbon Compounds (3 cr)
Geol 101 Physical Geology (4 cr)
Phys 103 General Astronomy (3 cr)
Phys 211, 212, 213 Engineering Physics I, II, III (12 cr)
Phys 411 Physical Instrumentation I (3 cr)
Additional electives in chemistry, geology, or physics to total 45 credits. Recommended elective courses include Chem 302 & MMBB 380 (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, 212, 213 Engineering Physics I, II, III (12 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)
Geog 100 Physical Geography (4 cr)
Geog 401 Climatology (3 cr)
MMBB 250, 255 General Microbiology and Lab (5 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)

Chem 101	Intro to Chemistry I **or**
Chem111	Prin of Chemistry I (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, 212, 213	Engineering Physics I, II, III (12 cr)
Phys 305	Modern Physics (3 cr)
Phys 411	Physical Instrumentation I (3 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, 212, 213	Engineering Physics I, II, III (12 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, 431, 432, 433, 437, 439, 460, 464, 465, 469

15-18 credits from the following fields:

Comparative Government and Politics. At least 3 credits from the following:
PolS 380, 381, 383, 480, 482, 484, 485, 487

International Relations. At least 3 credits from the following:
PolS 237, 438, 440, 449

Public Administration and Public Law. At least 3 credits from the following:
PolS 451, 452, 454, 460, 467, 468, 469

Political Thought. At least 3 credits from the following:
PolS 425, 426, 428, 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. 45-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 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.

Note: This does not mean that the student will be "Highly Qualified", for social studies under the provisions of the No Child Left Behind Act. For students to become "highly qualified", they must also pass the Praxis II exam in each subject area. A student with a social studies major does not have to earn 20 credits in each subject to take the Praxis in that area.

Note: Due to extensive course overlap, social science majors may NOT select history as a teaching second major or as a minor.

History (18 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)

Modern U.S. or European history (6 cr)

Economics (6 cr):

Econ 201	Principles of Economics (3 cr)
Econ 202	Principles of Economics (3 cr)

Geography – Choose two of the following (6 cr):

Geog 165	Human Geography (3 cr)

Geog 200 World Regional Geography (3 cr)
Geog 330 Urban Geography (3-4 cr)
Geog 360 Population Dynamics and Distribution (3-4 cr)
Geog 365 Political Geography (3 cr)

Political Science (6 cr):
PolS 101 Introduction to Political Science and American Government (3 cr)
PolS 275 American State and Local Government (3 cr)

Sociology/Psychology (6 cr):
Soc 101 Introduction to Sociology (3 cr)
Psyc 101 Introduction to Psychology **or**
Psyc 305 Developmental Psychology (3 cr)

Electives. Additional course from any area listed above excluding history (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)
Anth 220 Peoples of the World **or**
Anth 329 North American Indians (3 cr)
Soc 101 Introduction to Sociology (3 cr)
Soc 230 Social Problems (3 cr)
Approved electives in anthropology and sociology (8 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 Foreign Languages and Literatures for policies on credit for vertically-related courses.

A. 45-Credit Spanish Teaching Major

Span 101-102 Elementary Spanish I-II (8 cr)
Span 201-202 Intermediate Spanish I-II (8 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, 393, or 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 101-102 Elementary Spanish I-II (8 cr)
Span 201-202 Intermediate Spanish I-II (8 cr)
Approved upper-div Spanish electives (either Span 301 or 302 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 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 347 Persuasion **or**
Phil 201 Critical Thinking (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)

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 **or**
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)

Theatre Arts

A. 45-46 Credit Theatre Arts Teaching Major

The 103-104 Theatre Technology I-II (8 cr)
The 105-106 Basics of Performance (6 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 (2-3 cr)
The 468-469 Theatre History I & II (6 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 103-104 Theatre Technology I-II (8 cr)
The 105-106 Basics of Performance (6 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 347 Persuasion **or**
Phil 201 Critical Thinking (3 cr)
Comm 410 Conflict Management (3 cr)
Comm 431 Professional Presentation Techniques (3 cr)
JAMM 100 Media and Society (3 cr)
The 103-104 Theatre Technology I-II (8 cr)
The 105-106 Basics of Performance (6 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)

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)

Undergraduate Academic Certificates Requirements

Technical Workforce Training 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)

Credits to total 15 for this Academic 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 of Part 4 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 Student Organizations (1cr)
CTE 464	Career Guidance & Transitioning to Work (3cr)
CTE 551	Principles and Philosophy of CTE (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 Foundations of Literacy Development (4 cr)

Education Specialist. Offered in adult/organizational learning and leadership.

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 Student Organizations (1cr)
CTE 464	Career Guidance & Transitioning to Work (3cr)
CTE 551	Principles and Philosophy of CTE (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.

Education

Education Undergraduate Academic Certificates Requirements

Human Safety Performance Academic Certificate

CTE 450	Occupational Safety **or**
PTTE 528	Accident Investigation (3 cr) (3 cr)
PTTE 362	Behavior Based Safety (3 cr)
PTTE 436	Human Performance Fundamentals (3 cr)
PTTE 466	Human Performance Field Investigation (3 cr)

Credits to total 12 for this Academic Certificate

Education Graduate Academic Certificates Requirements

Emergency Planning and Management Academic Certificate

PTTE 454	National Incident Management Systems (3 cr)
PTTE 525	Emergency Management and Planning (3 cr)
PTTE 526	Community Emergency Planning (3 cr)

Two of the following (6 cr):

PTTE 452	Fire Emergency Planning (3 cr)
PTTE 486	Homeland Security (3 cr)
PTTE 533	Chemical Hazards (3 cr)
PTTE 534	Biological Hazards (3 cr)

Credits to total 15 for this Academic Certificate

Education Graduate Degree Programs

Master of Science, Technology Training and Development major. Master's degree candidates must fulfill the requirements of the College of Graduate Studies and of the College of Education. See the College of Graduate Studies section of Part 4 for the general requirements applicable to each degree.

Department of Electrical and Computer Engineering

Brian K. Johnson, 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, David P. Egolf, Aicha Elshabini, James F. Frenzel, Karen Z. Frenzel, Kenneth J. Hass, Herbert L. Hess, Brian K. Johnson, Joseph D. Law, Gary

K. Maki, Kenneth V. Noren, Dennis M. Sullivan, Richard W. Wall, Richard B. Wells, Sterling R. Whitaker, 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.

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 department uses a continuous improvement process to meet the electrical and computer engineering program objectives set forth below. Each of the broad program objectives is associated with a number of specific program 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.

The department is proud of it's 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.

The objectives of the electrical engineering program are to produce graduates who (a) have a sound foundation in the principles of science and mathematics and can apply these principles to the solution of technological problems; (b) understand, and are proficient in the use of, the modern theory, techniques, and tools used to solve problems in electrical engineering; (c) can design new products and solve new problems in electrical engineering, and can enhance their technical skills through lifelong learning; (d) can work and communicate effectively, either independently or in a team, to solve technological problems using engineering principles; and (e) have a sound understanding of the human and social ramifications of technological solutions and apply their engineering skills for the overall benefit of society.

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.

The objectives of the computer engineering program are to produce graduates who (a) have a sound foundation in the principles of science and mathematics and can apply these principles to the solution of technological problems; (b) understand, and are proficient in the use of, the modern theory, techniques, and tools used to solve problems in computer engineering; (c) can design new products and solve new problems in computer engineering, and can enhance their technical skills through lifelong learning; (d) can work and communicate effectively, either independently or in a team, to solve technological problems using engineering principles; and (e) have a sound understanding of the human and social ramifications of technological solutions and apply their engineering skills for the overall benefit of society.

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, computer architecture, software engineering, 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 College of Engineering, Part 4), students majoring in electrical engineering or computer engineering must pass a qualifying examination 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 Part 6 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 on page 49) and:

AmSt 301	Studies in American Culture **or**
Phil 103	Ethics (3 cr)
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	Fundamentals of Electronics (3 cr)
ECE 311	Fundamentals of Electronics 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)
Econ 201	Principles of Economics,
Econ 202	Principles of Economics, **or**
Econ 272	Foundations of Economics (3-4 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	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (4 cr)
Stat 301	Probability and Statistics (3 cr)

Science elective selected from Chem 111, Geol 111, MMBB 154/155, or Phys 213 (4 cr)

Technical electives selected from upper-division computer engineering, electrical engineering, and computer science courses (15 cr)

The minimum number of credits for the degree is 128, 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, 212, 240, 241, Math 170, 175, 310, Phys 211, and 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, 121 and 150 and Math 176, and the grades earned in CS 120, 121 and 150 must average 2.50 or higher. Students majoring in computer engineering must earn a grade of C or better in CS 210, 240, 270, and Math 170, 175, 176 for graduation and before registration is permitted in upper-division CS courses.

Any student majoring in computer engineering who accumulates a total of five (5) letter grades of D's and F's in mathematics, science, or engineering courses that are used to satisfy graduation requirementswill be required to undergo special advising as per the Department of Electrical and Computer Engineering's By-Laws (available in the ECE office).

Electrical Engineering (B.S.E.E.)

Required course work includes the university requirements (see regulation J-3 on page 49) and:

AmSt 301 or Phil 103 (3 cr)	
Chem 111	Principles of Chemistry I (4 cr)
CS 112	Introduction to Problem Solving and Programming **or**
CS 120	Computer Science I (3-4 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	Fundamentals of Electronics (3 cr)
ECE 311	Fundamentals of Electronics 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)
Econ 201	Principles of Economics,
Econ 202	Principles of Economics, **or**
Econ 272	Foundations of Economics (3-4 cr)
Engr 210	Engineering Statics (3 cr)
Engr 220	Engineering Dynamics (3 cr)
Engr 360	Engineering Economy (3 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	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (4 cr)
Stat 301	Probability and Statistics (3 cr)

Upper-division engineering science elective chosen from Engr 320, 335, 350, or Engr 428 (3 cr)

Technical electives taken from upper-division Engineering, Math, Physics, and Computer Science courses. 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 416, ECE 420, ECE 430, ECE 440 or ECE 443, ECE 450 and ECE 460. (18 cr)

The minimum number of credits for the degree is128, 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 before registration is permitted in upper-division electrical and computer engineering courses: Chem 111, CS 112 or 120, ECE 210, 211, 212, 213, 240 and 241; Engr 210, and 220; Math 170, 175, 275, and 310; and Phys 211, 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 who accumulate a total of five (5) letter grades of D's and F's in mathematics, science, or engineering courses that are used to satisfy graduation requirements will be required to undergo special advising as per the Department of Electrical and Computer Engineering's By-Laws (available in the ECE office).

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, 430, 450, and (b) technical electives: 9 credits from ECE 413, 432, 445, 452, 455.

The **Integrated Circuit Design** emphasis prepares students for careers in the field of integrated circuit design. It includes courses in analog and digital integrated circuit at both the system and transistor level. Students should take a total of 18 credits from the following: (a) core courses: 13 credits from ECE 410, 411, 415, 445, 460 and (b) technical electives: 3 credits from ECE 412, 413, 416, 417, 440, 452, 470, 476.

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, 423, 427 and 450, and (b) 3 core credits from: 410, 430, 440, and (c) 3 additional credits of technical electives.

Electrical and Computer Engineering Graduate Academic Certificates Requirements

Analog Integrated Circuit Design 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	Pulse and Digital Circuits (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 470 Control Systems (3 cr)
ECE 513 Communication Circuits (3 cr)

Credits to total 12 for this Academic Certificate

Electric Machines and Drives 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)

Credits to total 12 for this Academic Certificate

Power System Protection and Relaying Academic Certificate

Note: A grade of 'B' or higher is required in all coursework 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)

Credits to total 12 for this Academic Certificate

Semiconductor Theory and Devices 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 Pulse and Digital Circuits (3 cr)
ECE 545 Advanced VLSI Design (3 cr)
ME 526 Statistical Thermodynamics (3 cr)
Any 500-Level ECE course (except special topics, thesis credit, etc.) as approved by the certificate coordinator (3 cr)

Credits to total 12 for this Academic 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 of Part 4 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 2.80 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 (CS 341), 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, Associate Dean (125 Janssen Engr. Bldg.; 208/885-6479; www.engboi.uidaho.edu/em).

Technology Training and Development Undergraduate Degree Requirements

Technology Training And Development (B.S.Tech.)

Designed to prepare students for both technical and professional careers in industry and business, particularly for supervisory and other mid-management level positions.

Note, this program is not available on the Moscow campus.

Required course work includes the university requirements (see regulation J-3 on page 49) and one of the following options:

A. Industrial Technology Option

Designed to prepare students for both technical and professional careers in industry and business, particularly for supervisory and other mid-management level positions.

BLaw 265	Legal Environment of Business **or**
PTTE 443	Government Contract Law (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 370	Introduction to Operations Management **or**
ME 410	Principles of Lean Manufacturing **or**
CE 482	Project Engineering (3 cr)
Bus 441	Labor Relations **or**
PTTE 446	Labor Law (3 cr)
Bus 456	Quality Management **or**
PTTE 434	Quality Assurance Organization and Management (3 cr)
Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
CTE 130	Introduction to Electricity and Electronics (3 cr)
CTE 267	Computer Aided Drafting/Design (3 cr)
CTE 415	Microcomputer Applications (3 cr)
CTE 428	Computer Integrated Systems (3 cr)
CTE 450	Occupational Safety (3 cr)
CTE 460	Desktop Publishing (3 cr)
CTE 470	Technical Competence **and/or** approved technical electives (32 cr)
CTE 475	LAN Technology (3 cr)
CTE 481	Computer Integrated Manufacturing and Robotics (3 cr)
Engl 317	Technical Writing (3 cr)
Engr 105	Engineering Graphics (2 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry **or**
Math 160	Survey of Calculus **or**
Math 170	Analytical Geometry and Calculus I (3-4 cr)
Phys 100	Fundamentals of Physics **or**
Chem 112	Principles of Chemistry II (4 cr)
Phys 111, 112	General Physics I-II **or**
Phys 211, 212	Engineering Physics I-II (8 cr)
Psyc 101	Introduction to Psychology (3 cr)
PTTE 333	Industrial Electronics (3 cr)
Stat 251	Statistical Methods **or**
Stat 301	Probability and Statistics (3 cr)

Technical Specialization Block, see dept for course options (16 cr)

Electives to total 128 credits for the degree

Technical Specialist Blocks. Idaho Falls campus: industrial safety technology, quality technology, network and computer electronics, mechanical design technology, generalist, waste management.

Engineering Management

Larry Stauffer, Director (125 Janssen Engr. Bldg.; 208/885-6479; www.engboi.uidaho.edu/em); Denise Engebrecht, Student Advisor; phone 208/364-6123 denisee@uidaho.edu. Core Faculty: Accounting Faculty: Jason Porter; Business Faculty: Scott Metlen and Barry Willis; Civil Engineering Faculty: Lee Ostrom, Mechanical Engineering Faculty: Larry Stauffer; Statistics Faculty: Rick Edgeman and 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 affiliate 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 Part 6 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 of Part 4 for the general requirements applicable to each degree.

Master of Engineering. General M.Engr. requirements apply. The Engineering Management degree requires 34 credits; a minimum of 18 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 Management Fundamentals (3 cr)
Stat 401	Statistical Analysis (3 cr)

Department of English

Gary Williams, Interim Dept. Chair (200 Carol Ryrie Brink Hall 83844-1102; phone 208/885-6156; englishdept@uidaho.edu). Faculty: Douglas Q. Adams, Kim M. Barnes, Mary Clearman Blew, Steven R. Chandler, Thomas A. Drake, E. Richard W. Fehrenbacher, Stephan P. Flores, Walter A. Hesford, Janis Johnson, Mary Ann Judge, Ronald E. McFarland, Jodie Nicotra, Daniel Orozco, Joy Passanante, Brandon R. Schrand, David Sigler, Gordon P. Thomas, 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 in Part 4).

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 Part 6 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 on page 49), the general requirements for the B.A. degree, and one of the following emphases:

A. Literature Emphasis

Foundations (6 cr)
- Engl 215 Introduction to English Studies (3 cr)
- Engl 310 Literary Theory (3 cr)

Literary History (15 cr)
- Engl 257 or 258 Literature of Western Civilization (3 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)

Three courses from the following (9 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 441 Introduction to the Study of Language **or**
- Engl 496 History of the English Language (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 480 Ethnic and Minority Literature (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 (12 cr)
- Four 400-level courses in literature

Capstone (3 cr)
- Engl 490 Senior Seminar (3 cr)

B. Creative Writing Emphasis

Foundations (3 cr):
- Engl 215 Introduction to English Studies (3 cr)

Literary History (12 cr):
- Engl 257 or 258 Literature of Western Civilization (3 cr)
- 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 480 Ethnic and Minority Literature (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)

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 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)

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 209 Inquiry-Based 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 480 Ethnic and Minority Literature (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)

English Electives (12 cr)

Four Engl courses, of which two must be at the 400-level; one of these two 400-level courses must be a linguistics course.

Capstone (3 cr)
Engl 440 Reading, Writing, and Rhetoric (3 cr)

D. Teaching Emphasis

Foundations (3 cr)
Engl 215 Introduction to English Studies (3 cr)

Literary History (15 cr)
Engl 257 or 258 Literature of Western Civilization (3 cr)
Engl 341 or 342 Survey of British Literature (3 cr)
Engl 343-344 Survey of American Literature (6 cr)
Engl 345 Shakespeare (3 cr)

Language (10 cr)
Engl 201 English Grammar, Key Concepts and Terms (1 cr)
Engl 441 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 443 Language Variation (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 480 Ethnic and Minority Literature (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)

400-level English elective (three 400-level English courses, two of which must be literature courses) (9 cr)

Capstone
This requirement is fulfilled for Teaching Emphasis majors by EDCI 485, Internship.

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 341-342 Survey of British Literature (3 cr)
Engl 343-344 Survey of American Literature (3 cr)
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)

Teaching English as a Second Language Minor

Engl 413 ESL Methods I: Basic Oral/Aural Skills **or**
EDCI 437 Secondary Foreign Language Methods (3 cr)
Engl 441 Introduction to the Study of Language (3 cr)
Engl 442 Introduction to English Syntax (3 cr)
Anth 427 or Soc 427 Racial and Ethnic Relations **or**
Anth 261 Language and Culture (3 cr)
EDCI 302 Teaching Culturally Diverse Learners (4 cr)
Electives chosen from among other courses in English language and linguistics or from Anth 261 or 427 if not chosen above (6 cr)

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 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 209 Inquiry-Based Writing (3 cr)

Two of the following courses (if not taken above) (6 cr):
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 209 Inquiry-Based 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)

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 of Part 4 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. At least 27 credits must be at the 500s level. 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.

Students and their major professors and committees will design their programs.

Each candidate for the Master of Arts degree will complete a thesis. The student will complete 27 credits of course work and submit an acceptable thesis, for which a maximum of six credits may be obtained.

Theses may address topics in literature and literary 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.

Each student will take an M.A. examination following completion of the thesis in acceptable form, as confirmed by the thesis director. The oral examination will be designed to test the student's ability to defend his or her thesis 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; theory/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, Robert Smith. Chemical Engineering Faculty: Wudneh Admassu, D. Eric Aston, David C. Drown, Roger A. Korus, Vivek Utgikar, Margrit von Braun. Civil Engineering Faculty: Erik Coats, Fritz R. Fiedler, Jim Liou, Howard S. Peavy, P. Steven Porter, Sunil Sharma.

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 Part 6 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 of Part 4 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:

BAE 532	Bioreactor Theory and Design for Waste Treatment **or**
CE ID&WS534	Environmental Engineering Unit Processes (3 cr)
Chem 418	Environmental Chemistry (3 cr)
CE ID&WS531	Environmental Engineering Unit Operations (3 cr)
ChE 570	Hazardous Waste Management (3 cr)
ChE ID&WS575	Air Pollution Control (3 cr)
EnvE 500	Master's Research and Thesis (6 cr) **or**
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 ID&WS552	Environmental Water Quality
BAE 558	Fluid Mechanics of Porous Materials
CE 435	Hazardous Waste Engineering
CE 522	Hydraulic Design
CE 532	Design of Water and Wastewater Systems II
CE/EnvE 533	Water Quality Management
ChE 560	Biochemical Engineering
ChE 580	Engineering Risk Assessment for Hazardous Waste Evaluations
Geol 309	Ground Water Hydrology
Hydr 563	Hydrogeology

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
Engr 360	Engineering Economy **or**
ChE 453	Process Analysis and Design I
Math 310	Ordinary Differential Equations
Stat 301	Probability and Statistics

Courses that may be required based on input from student's major professor/graduate committee:

CE 325 or BAE 355	Fundamentals of Hydrologic Engineering
CE 330	Fundamentals of Environmental Engineering
ChE 223	Material and Energy Balances

An EnvE faculty committee evaluates deficiencies and makes recommendations for students entering the program without an undergraduate degree in engineering.

Program in Environmental Science

Stephen S. Mulkey, Director (216 Morrill Hall 83844-3006; phone 208/885-6113; FAX 208/885-4674; envs@uidaho.edu; http://www.uidaho.edu/envs). Core Faculty: Susan Childers, Fritz Fiedler, Charles C. Harris, John Lawrence, Robert L. Mahler, J.D. Wulfhorst. Adjunct Biological Science Option Faculty: Nilsa Bosque-Perez, Stephen C. Bunting, Allan B. Caplan, Mark D. Coleman, Stephen P. Cook, Ronald L. Crawford, Anthony S. Davis, Sanford D. Eigenbrode, Edward O. Garton, Paul E. Gessler, Thomas F. Hess, Jodi Johnson-Maynard, Alexander Karasev, Kathleen Kavanagh, Brian Kennedy, James Kingery, John D. Marshall, Joseph P. McCaffrey, 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, J. Michael Scott, Robert W. Smith, David C. Tank, Kerri Vierling, Lee Vierling, Lisette P. Waits. Adjunct Physical Science Option Faculty: Vladimir Aizen, Donald Blackketter, Jan Boll, I. Francis Cheng, Erik Coats, Donald Elger, Jerry P. Fairley, Alexander K. Fremier, Mickey E. Gunter, Jeffrey Hicke, 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, Alistair Smith, Daniel G. Strawn, Vivek Utgikar, Ray von Wandruszka, Chien M. Wai, Von P. Walden, Barbara Cooke Williams, Scott Wood. Adjunct Social Science Option Faculty: Rula Z. Awaad-Rafferty, Stephen C. Cooke, Barbara Cosens, Stephen R. Drown, E. Philip Druker, Jo Ellen Force, Dale D. Goble, Bruce T. Haglund, Lorie Higgins, Steven J. Hollenhorst, Leontina Hormel, Douglas Lind, Michael O'Rourke, Sandra Pinel, Gundars Rudzitis, Nick Sanyal, Larry van Tassell, Philip Watson, Michael Whiteman, Patrick Wilson. General Faculty: Katherine G. Aiken, Donald Crowley, Dennis J. Geist, Harley E. Johansen, James B. Johnson, Guy Knudsen, Karen L. Launchbaugh, Gary E. Machlis, Kenneth Sprenke, Margrit von Braun.

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 multi-disciplinary 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.

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.

Three option areas are offered: biological science, physical science, and social science.

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 Part 6 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 on page 49), 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)
EnvS 497	Senior Research and Thesis (3 cr)
Phil 452	Environmental Philosophy (3 cr)
Stat 251	Statistical Methods (students in physical science 2 option may substitute Stat 301) (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.

CE 326	Hydrologic Measurement Techniques (1 cr)
Chem 112	Principles of Chemistry II (5 cr)
Engl 317	Technical Writing (3 cr)
Geog 100	Physical Geography **or**
Geol 101	Physical Geology (4 cr)
Math 170	Analytic Geometry and Calculus I **or**
Math 160	Survey of Calculus (4 cr)
MMBB 250	General Microbiology (3 cr)

Advisor-directed breadth electives, incl at least one course from the first four areas (24 cr):

Ecology

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
Geog 310	Biogeography (2-3 cr)
MMBB 425	Microbial Ecology (3 cr)
REM 221	Ecology (3 cr)

Natural Resource Economics and Sociology

AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
Anth 220	Peoples of the World (3 cr)
CSS 383	Resource Economics for Environmental Policymaking (3 cr)
Econ 385	Environmental Economics (3 cr)
For 235	Society and Natural Resources (3 cr)

Management

ChE 470 or EnvS 445	Hazardous Waste Management (3 cr)
CSS 486	Public Involvement in Natural Resource Mgt (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Geog 427	Spatial Multicriteria Analysis and Optimization (3 cr)
Geog 444	Environmental Assessment (4 cr)

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)
Phil 417	Philosophy of Biology (3 cr)
PolS 364	Politics of the Environment (3 cr)

Technical

Biol 213	Principles of Biological Structure and Function (4 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 275	Carbon Compounds **or**
Chem 277 and Chem 372	Organic Chemistry (3 cr)
Chem 302	Principles of Physical Chem **or**
Chem 305-306	Physical Chem (3 cr)
Chem 303	Principles of Physical Chem Lab (1 cr)
Chem 418	Environmental Chemistry (3 cr)
EnvS 428	Pollution Prevention (3 cr)
EnvS 429	Environmental Audit (3 cr)
EnvS 479	Introduction to Environmental Regulation (3 cr)
EnvS 498	Internship (1-3 cr)
For 472 or REM 472	Remote Sensing of Environment (3-4 cr)
Geog 301	Meteorology **or**
Geog 401	Climatology (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 450	Global Environmental Change (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)
Math 275	Analytic Geometry and Calculus III (3 cr)
MMBB 380	Introductory Biochemistry (4 cr)
Phys 111	General Physics I **or**
Phys 211	Engr Physics I (4 cr)
Phys 112	General Physics II **or**
Phys 212	Engr Physics II (4cr)
Soil 205	The Soil Ecosystem (3 cr)

Advisor-approved depth electives – include all the courses from at least two of the following areas (20 cr):

Plant Protection

Ent 322	General and Applied Entomology **or**
Ent 491	Principles of Insect Pest Mgt (3 cr)
PlSc 338	Weed Control (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 448	Fish and Wildlife Population Ecol **or**
WLF 440	Conservation Biol (3-4 cr)

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

Take 4 of the 7 courses listed below:

For 330	Forest Ecosystem Processes (2 cr)
For 423	Forest Community Ecology (1 cr)
For 426	Wildland Fire Ecology and Management (3 cr)
For 429	Landscape Ecology (3 cr)
REM 357	Rangeland and Riparian Habitat Assessment (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)

Soils

Soil 437	Soil Biology (3 cr)
Soil 438	Pesticides in the Environment (3 cr)
Soil 446	Soil Fertility (1-3 cr, max 3)

Water

Take at least 4 of the 6 courses listed below:

BAE 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)
Geol 464	The Geochemistry of Natural Waters (3 cr)

Environmental Regulation

Geog 420	Land, Resources, and Environment (3 cr)
Geog 444	Environmental Assessment (4 cr)

Decision Making Tools

For 472 or REM 472	Remote Sensing of Environment (3-4 cr)
Geog 385	GIS Primer (3 cr)
LArc 495	Computer-Aided Regional Landscape Planning (3 cr)

Environmental Chemistry

Chem 418	Environmental Chemistry (3 cr)
Ent 438	Pesticides in the Environment (3 cr)
FST 409	Principles of Environmental Toxicology (3 cr)

Electives to total 128 credits for the 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.

CE 326	Hydrologic Measurement Techniques (1 cr)
Chem 112	Principles of Chemistry II (5 cr)
Engl 317	Technical Writing (3 cr)
Geog 100	Physical Geography **or**
Geol 101	Physical Geology (4 cr)
Math 170	Analytic Geometry and Calculus I **or**
Math 160	Survey of Calculus (4 cr)
Phys 111	General Physics I (4 cr)

Advisor-directed breadth electives, incl at least one course from the first four areas (24 cr):

Ecology

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
Geog 310	Biogeography (2-3 cr)
MMBB 425	Microbial Ecology (3 cr)
REM 221	Ecology (3 cr)

Natural Resource Economics and Sociology

AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
Anth 220	Peoples of the World (3 cr)
CSS 383	Resource Economics for Environmental Policymaking (3 cr)
Econ 385	Environmental Economics (3 cr)
For 235	Society and Natural Resources (3 cr)

Management

ChE 470 or EnvS 445	Hazardous Waste Management (3 cr)
CSS 486	Public Involvement in Natural Resource Mgt (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Geog 427	Spatial Multicriteria Analysis and Optimization (3 cr)
Geog 444	Environmental Assessment (4 cr)

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)
Phil 417	Philosophy of Biology (3 cr)
PolS 364	Politics of the Environment (3 cr)

Technical

Biol 213	Principles of Biological Structure and Function (4 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 275	Carbon Compounds **or**
Chem 277 and Chem 372	Organic Chemistry (3 cr)
Chem 302	Principles of Physical Chem **or**
Chem 305-306	Physical Chem (3 cr)
Chem 303	Principles of Physical Chem Lab (1 cr)
Chem 418	Environmental Chemistry (3 cr)
EnvS 428	Pollution Prevention (3 cr)
EnvS 429	Environmental Audit (3 cr)
EnvS 479	Introduction to Environmental Regulation (3 cr)
EnvS 498	Internship (1-3 cr)
For 472 or REM 472	Remote Sensing of Environment (3-4 cr)
Geog 301	Meteorology **or**
Geog 401	Climatology (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 450	Global Environmental Change (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)
Math 275	Analytic Geometry and Calculus III (3 cr)
MMBB 380	Introductory Biochemistry (4 cr)
Phys 111	General Physics I **or**
Phys 211	Engr Physics I (4 cr)
Phys 112	General Physics II **or**
Phys 212	Engr Physics II (4cr)
Soil 205	The Soil Ecosystem (3 cr)

Advisor-approved depth electives – meet requirements of at least two of the following areas (20 cr):

Water

Take at least 4 of the 6 courses listed below:

BAE 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)
Geol 464	The Geochemistry of Natural Waters (3 cr)

Chemistry

Chem 418	Environmental Chemistry (3 cr)
Chem 454	Instrumental Analysis (4 cr)
FST 409	Principles of Environmental Toxicology (3 cr)
MMBB 380	Introductory Biochemistry (4 cr)

Hazardous Waste

ChE 470 or EnvS 445	Hazardous Waste Management **or**
BAE 433	Bioremediation **or**
Met 406	Treatment Technology for Recycled Waste (3 cr)
ChE 480	Engineering Risk Assessment for Hazardous Waste Evaluations (3 cr)
FST 409	Principles of Environmental Toxicology (3 cr)

Geology

Geol 335	Geomorphology (3 cr)
Geol 361	Geology and the Environment (3 cr)
Geol 423	Principles of Geochemistry (3 cr)
Geol 464	The Geochemistry of Natural Waters (3 cr)

Statistics

GeoE 428	Geostatistics (3 cr)
Stat 401	Statistical Analysis (3 cr)
Stat 422	Sample Survey Methods (3 cr)

Mathematics

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)

Soils

Soil 415	Soil Physics (3 cr)
Soil 422	Environmental Soil Chemistry (3 cr)
Soil 454	Soil Development and Classification (3 cr)

Economics and Management

Econ 385	Environmental Economics (3 cr)
For 472 or REM 472	Remote Sensing of Environment (3-4 cr)
Geog 385	GIS Primer (3 cr) **or**
LArc 395	GIS in Land Planning (3 cr)
Geog 444	Environmental Assessment (4 cr)

Electives to total 128 credits for the degree

C. Physical Science 2 Option

This option is only available to students in Idaho Falls

Chem 112	Principles of Chemistry II (5 cr)
Engl 317	Technical Writing (3 cr)
Geog 100	Physical Geography **or**
Geol 101	Physical Geology (4 cr)
Math 170	Analytic Geometry and Calculus I **or**
Math 160	Survey of Calculus (4 cr)
Phys 111	General Physics I (4 cr)

Advisor-directed breadth electives, incl at least one course from the first four areas (24 cr):

Ecology

For 221	Ecology (3 cr)

Natural Resource Economics and Sociology

Anth 220	Peoples of the World (3 cr)
PTTE 410	Technology and Society (3 cr)

Management

ChE 470	Hazardous Waste Management (3 cr)
EnvS 479	Introduction to Environmental Regulations (3 cr)
For 462	Watershed Science and Management (3 cr)
Geog 424	Hydrologic Applications of GIS and Remote Sensing (3 cr)

History, Philosophy, and Political Science

Geog 364	Idaho and the Pacific Northwest (3 cr)
Hist 423	Idaho and the Pacific Northwest (3 cr)
Hist 424	American Environmental History (3 cr)
Phil 365	Biomedical Ethics (3 cr)
PolS 364	Politics of the Environment (3 cr)

Technical

Biol 116	Organisms and Environments (4 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 275	Carbon Compounds (3 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 305 or Chem 306	Physical Chem (3 cr)
Chem 372	Organic Chemistry II (3 cr)
Chem 418	Environmental Chemistry (3 cr)
EnvS 428	Pollution Prevention (3 cr)
EnvS 429	Environmental Audit (3 cr)
EnvS 479	Introduction to Environmental Regulation (3 cr)
EnvS 498	Internship (1-3 cr)
For 472	Remote Sensing of the Environment (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 450	Global Environmental Change (3 cr)
Geog 475	Advanced GIS (3 cr)
Geol 102	Historical Geology (4 cr)
Geol 309	Ground Water Hydrology (3 cr)
Geol 323	Geology of the Pacific Northwest (3 cr)
Geol 361	Geology and the Environment (3 cr)
Math 175	Analytic Geometry and Calculus II (4 cr)
Math 275	Analytic Geometry and Calculus III (3 cr)
MMBB 380	Introductory Biochemistry (4 cr)
NR 402	GIS Applications in Natural Resources (1 cr)
Phys 112	General Physics II **or**
Phys 212	Engr Physics II (4cr)
REM 407	GIS Application in Fire Ecology and Management (1 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 560	Plant Ecophysiology (3 cr)
Soil 205	The Soil Ecosystem (3 cr)

Advisor-approved depth electives – meet requirements of at least two of the following areas (20 cr):

Water

Take at least 4 of the courses listed below:

BAE 450	Environmental Hydrology (3 cr)
CE 433	Water Quality Management (3 cr)
CSS 573	Planning & Decision Making for Watershed Management (3 cr)
Fish 540	Wetland Restoration (3 cr)
For 462	Watershed Management (3 cr)
Geol 309	Ground Water Hydrology (3 cr)
Geol 464	The Geochemistry of Natural Waters (3 cr)
Hydr 414	Ground Water-Surface Water Interaction (3 cr)

Chemistry

Chem 418	Environmental Chemistry (3 cr)
Chem 454	Instrumental Analysis (4 cr)
FS 409	Principles of Environmental Toxicology (3 cr)
MMBB 380	Introductory Biochemistry (4 cr)

Hazardous Waste

ChE 470 or ChE 570	Hazardous Waste Management (3 cr)
ChE 480 or ChE 580	Engineering Risk Assessment for Hazardous Waste Evaluations (3 cr)
FS 409	Principles of Environmental Toxicology (3 cr)
PTTE 364	Hazardous Materials (3 cr)

Mathematics

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)

Economics and Management

Take at least 4 of the courses listed below:

EnvS 428	Pollution Prevention (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 450	Global Environmental Change (3 cr)
Geog 475	Advanced GIS (3 cr)
Geog 424	Hydrologic Applications of GIS and Remote Sensing (3 cr)

Environmental P{olicy & Regulations

Take at least 4 of the courses listed below:

CSS 572	Human Dimensions of Restoration Ecology (3 cr)
CSS 573	Planning & Decision Making for Watershed Management (3 cr)
EnvS 429	Environmental Audit (3 cr)
EnvS 479	Introduction to Environmental Regulations (3 cr)
EnvS 482	Natural Resource Policy and Law (3 cr)
EnvS 580	Environmental Law and Regulation (3 cr)

Electives to total 128 credits for the 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.

CE 326	Hydrologic Measurement Techniques (1 cr)
Engl 309	Advanced Prose Writing **or**
JAMM 428	Environmental Journalism (3 cr)
Engl 316	Environmental Writing **or**
Engl 317	Technical Writing (3 cr)
Geog 100	Physical Geography (4 cr)
Geol 101	Physical Geology (4 cr)
Math 137	Algebra with Applications **or**
Math 143	Pre-calculus Algebra and Analytic Geom (3 cr)
PolS 235	Political Research Methods and Approaches **or**
Hist 290	The Historian's Craft **or**
Phil 201	Critical Thinking (3 cr)

Advisor-directed breadth electives, including at least one course from the first four areas (24 cr):

Ecology

Biol 314	Ecology and Population Biology (4 cr)
For 221	Ecology (3 cr)
Geog 310	Biogeography (2-3 cr)
MMBB 425	Microbial Ecology (3 cr)
REM 221	Ecology (3 cr)

Natural Resource Economics and Sociology

AgEc 451	Applied Environmental and Natural Resource Economics (3 cr)
Anth 220	Peoples of the World (3 cr)
CSS 383	Resource Economics for Environmental Policymaking (3 cr)
Econ 385	Environmental Economics (3 cr)
For 235	Society and Natural Resources (3 cr)

Management

ChE 470 or EnvS 445	Hazardous Waste Management (3 cr)
CSS 486	Public Involvement in Natural Resource Mgt (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Geog 427	Spatial Multicriteria Analysis and Optimization (3 cr)
Geog 444	Environmental Assessment (4 cr)

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)
Phil 417	Philosophy of Biology (3 cr)
PolS 364	Politics of the Environment (3 cr)

Technical

Biol 213	Principles of Biological Structure and Function (4 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 275	Carbon Compounds **or**
Chem 277 and Chem 372	Organic Chemistry (3 cr)
Chem 302	Principles of Physical Chem **or**
Chem 305-306	Physical Chem (3 cr)
Chem 303	Principles of Physical Chem Lab (1 cr)
Chem 418	Environmental Chemistry (3 cr)
EnvS 428	Pollution Prevention (3 cr)
EnvS 429	Environmental Audit (3 cr)
EnvS 479	Introduction to Environmental Regulation (3 cr)
EnvS 498	Internship (1-3 cr)
For 472 or REM 472	Remote Sensing of Environment (3-4 cr)
Geog 301	Meteorology **or**
Geog 401	Climatology (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 450	Global Environmental Change (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)
Math 275	Analytic Geometry and Calculus III (3 cr)
MMBB 380	Introductory Biochemistry (4 cr)
Phys 111	General Physics I **or**
Phys 211	Engr Physics I (4 cr)
Phys 112	General Physics II **or**
Phys 212	Engr Physics II (4cr)
Soil 205	The Soil Ecosystem (3 cr)

Advisor-approved depth electives chosen from the following, incl five courses from one of the following areas:

Conservation Heritage

Anth 422	Plateau Indians (3 cr)
CSS 489	Personalities and Philosophies in Conservation (2 cr)
Engl 473	American Regional Literature (3 cr)
Engl 484	American Indian Literature (3 cr)
Geog 364	Idaho and the Pacific Northwest (3 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Hist 424	American Environmental History (3 cr)
Hist 428	History of the American West (3 cr)
LArc 480	The Emerging Landscape (3 cr)

Law

EnvS 479	Introduction to Environmental Regulations (3 cr)
Geog 420	Land, Resources, and Environment (3 cr)
Law 937	Natural Resources Law and Legal History (3 cr)
Law 947	Environmental Law I (3 cr)
Law 948	Public Land Law (3 cr)
Phil 470	Philosophy of Law (3 cr)
Phil 571	Ecological Jurisprudence (3 cr)
PolS 364	Politics of the Environment (3 cr)
PolS 467	Constitutional Law (3 cr)
PolS 468	Civil Liberties (3 cr)

Policy and Planning

Comm 331	Conflict Management (3 cr)
CSS 383	Resource Economics for Environmental Policymaking (3 cr)
CSS 385	Conservation Management and Planning I (3 cr)
CSS 387	Environmental Communication Skills (3 cr)
CSS 494	Public Relations for Natural Resources Professionals (3 cr)
Econ 385	Environmental Economics (3 cr)
For 484	Forest Policy and Administration (2 cr)
Geog 444	Environmental Assessment (4 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 (4 cr)
Arch 464	Environmental Control Systems (4 cr)
Geog 400	Seminar (3 cr)
Geog 450	Global Environmental Change (3 cr)
LArc 380	Water in the Urban Context (2 cr)
LArc 480	The Emerging Landscape (3 cr)

Electives to total 128 credits for the degree

Environmental Science Graduate Academic Certificates Requirements

Environmental Contamination Assessment 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)

Environmental Water Science Academic Certificate

Water Quality Elective (3 cr)

ASM 430	Water and Wastewater Operations Management (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)

Credits to total 12 for this Academic 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 of Part 4 for the general requirements applicable to each degree.

Master of Science. Each student will design a study plan in consultation with an advisor and a thesis committee. 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. Contact the Director of the Environmental Sciences program 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 on Part 4 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

Sandra Lee Evenson, Interim 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, 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. Adjunct 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 Part 6 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 132, including at least 36 credits at the 300-level or above. Required course work includes the university requirements (see regulation J-3 on page 49) 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)
EDCI 201	Contexts of Education (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 497	Practicum (9 cr)
H&S 288	First Aid: Emergency Response (2 cr)
Stat 150	Intro to Statistics **or**
Stat 251	Statistical Methods (3 cr)

Computer applications elective (3 cr)

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 223	Evaluation of Apparel and Textiles (3 cr)
FCS 234	Infancy and Early Childhood (3 cr)
FCS 240	Intimate Relationships (3 cr)
FCS 251	Survey of FCS Professions (1 cr)
FCS 334	Middle Childhood-Adolescence (3 cr)
FCS 340	Parent-Child Relationships in Family & Community **or**
FCS 440	Contemporary Family Relationships (3 cr)
FCS 346	Personal and Family Finance and Management (4 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)

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 retail buying and selling, design, and international marketing.

Required course work includes the university requirements (see regulation J-3 on page 49) and:

Art 100	World Art and Culture (3 cr)
Bus 321	Marketing (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 201 or 202	Principles of Economics **or**
Econ 272	Foundations of Economic Analysis (3-4 cr)
FCS 105	Individual and Family Development (3 cr)
FCS 119	Fashion from Concept to Consumer (3 cr)
FCS 123	Textiles (3 cr)
FCS 205	Concepts in Human Nutrition **or**
FCS 462	Eating Disorders (2-3 cr)
FCS 223	Evaluation of Apparel and Textiles (3 cr)
FCS 224	Apparel Design I (3 cr)
FCS 324	Apparel Design II (3 cr)
FCS 329	History of Western Dress (3 cr)
FCS 419	Dress and Culture (3 cr)
FCS 424	Aesthetics for the Apparel Professional (3 cr)
FCS 448	Consumer Economic Issues (3 cr)
Psyc 101	Intro to Psychology **or**
Soc 101	Intro to Sociology (3 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)
Electives to total 128 cr for the 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.

The minimum credits required for graduation are 139, including at least 36 credits at the 300-level or above. Required course work includes the university requirements (see regulation J-3 on page 49) and:

Comm 101	Fundamentals of Public Speaking (2 cr)
EDCI 302	Teaching Culturally Diverse Learners (4 cr)
EDCI 401	Internship Seminar (1 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 460	Early Childhood Assessment (3 cr)
EDSP 461	Early Childhood SPED Curriculum (3 cr)
EDSP 484	Special Education Internship II (7 cr)
EDSP 490	Infant Practicum (7-10 cr)
EDCI 320	Foundations of Literacy Development (4 cr)
EDCI 321	Literature for Children (3 cr)
EDCI 322	Integrated Language & Literacy (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 483	Elementary Internship I (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 497	Practicum: Preschool (8 cr)
Math 301	Early Childhood Mathematics (4 cr)
MusT 381	Elementary School Music Methods for Nonmajors (3 cr)
PEP 350	Elementary Health & Physical Education (3 cr)
Stat 150	Introduction to Statistics **or**
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)

US History course (Hist) or US Government course (PolS) (3 cr)
English Literature Elective (3 cr)
Humanities elective (3 cr)
Natural Science electives (8 cr)
Social Science electives (9 cr)

Food and Nutrition (B.S.F.C.S.)

Required course work includes the university requirements (see regulation J-3 on page 49) 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 **or**
Acct 202	Introduction to Managerial Accounting (3 cr)
Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
Chem 101	Intro to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Chem 275	Carbon Compounds (3 cr)
FCS 105	Individual and Family Development (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 302	Professional Skills in Dietetics II (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	Quantity Food Production Lab (2 cr)
FCS 387	Food Systems Management (3 cr)
FCS 388	Food Systems Management Lab (1 cr)
FCS 390	Research Methods in Food Nutrition (3 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 492	Nutrition Education in the Life Cycle (2 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
MMBB 154, 155	Introductory Biology of Bacteria and Viruses and Lab (4 cr)
MMBB 300	Survey of Biochemistry (3 cr)
Psyc 101	Introduction to Psychology (3 cr)
Soc 101	Introduction to Sociology (3 cr)
Stat 251	Statistical Methods (3 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)

Electives to total 132 cr for the 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)
Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Chem 275	Carbon Compounds (3 cr)
FCS 105	Individual and Family Development (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)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr)
MMBB 154, 155	Introductory Biology of Bacteria and Viruses and Lab (4 cr)
MMBB 300	Survey of Biochemistry (3 cr)
Stat 251	Statistical Methods (3 cr)

FCS electives (12 cr)

Electives to total 128 cr for the 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 of Part 4 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.

Fire Ecology and Management

Jo Ellen Force, Co-Coordinator (204 CNR Bldg. 83844-1133; phone 208/885-7952; fores@uidaho.edu), Karen L. Launchbaugh, Co-Coordinator (205B CNR Bldg. 83844-1135; phone 208/885-6536).

The Fire Ecology and Management major is offered through interdisciplinary cooperation between the Departments of Forest Resources and Rangeland Ecology and Management.

The College of Natural Resources has provided over 30 years of leadership in fire education. We offer more courses focused on fire than any other natural resources school in the country, and deliver science to users in innovative ways. Our courses and degree programs are developed to provide students with real world skills and fundamental principles 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 help solve fire 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 is the only such program in the US.

A fire ecology and management academic minor, graduate and undergraduate academic certificates in fire ecology and management are also available. See the Department of Forest Ecology and Biogeosciences for the requirements of these programs.

Fire Ecology and Management Undergraduate Curricular Requirements

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 357, 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 on page 49) and:

Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Econ 202	Principles of Economics (3 cr)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)
For 221	Ecology **or**
REM 221	Ecology (3 cr)
For 235	Society and Natural Resources (3 cr)
For 274	Forest Measurement and Inventory **or**
REM 357	Rangeland and Riparian Habitat Assessment (3-4 cr)
For 330	Forest Ecosystem Processes (3 cr)
For 375	Introduction to Spatial Analysis for Natural Resource

	Management (3 cr)
For 383	Economics for Natural Resource Managers (3 cr)
For 484	Forest Policy and Administration (2 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry **or**
Math 160	Survey of Calculus (3-4 cr)
NR 101	Exploring Natural Resources (1 cr)
Phys 100	Fundamentals of Physics (4 cr)
REM 402	GIS Application in Natural Resources (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 courses (2-3 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 341	Systematic Botany (3 cr)
REM 353	Rangeland Plant Identification and Ecology (3 cr)

Two of the following courses (8 cr):

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)
PlSc 205	General Botany (4 cr)

Fire Core (14 cr):

For 426	Fire Ecology and Management (3 cr)
For 427	Prescribed Burning Lab (3 cr)
For 450	Fire Behavior (3 cr)
For 451	Fuels Inventory and Management (3 cr)
REM 244	Wildland Fire Management (2 cr)

Ecology (5-6 cr):

Biol 311	Plant Physiology (4 cr)
For 469	Introduction to Forest Insects (2 cr)
Geog 450 or REM 450	Global Environmental Change (3 cr)
REM 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology **or**
REM 441	Restoration Ecology (3 cr)
WLF 314	Wildlife Ecology I (3 cr)
WLF 440	Conservation Biology (3 cr)

Applied Tools and Technology (3-4 cr):

For 435	Remote Sensing of Active Fire and Post-fire Effects (3 cr)
For 472 or REM 472	Remote Sensing of the Environment (3-4 cr)
Geog 301	Meteorology (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 401	Climatology (3 cr)
REM 407	GIS Applications in Fire Ecology and Management (1 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 462	Watershed Science and Management (3 cr)
ForP 430	Forest Engineering and Harvesting (3 cr)
REM 456	Integrated Rangeland Management (3 cr)

Electives to total 128 credits for the degree

UI/WSU Bistate School of Food Science

Barry G. Swanson, Interim Dept. Head (111 Agricultural Science Bldg., 83844-2312; phone 208/885-0707; foodscience@uidaho.edu; www.cals.uidaho.edu/sfs). Faculty: Jeff Bohlscheid, A. Larry Branen, Kerry C. Huber, Sea C. Min, Gregory Möller, Caleb Nindo, Gülhan Ünlu. Adjunct Faculty: Joshua R. Branen, Laurel J. Branen, Kathe A. Gabel, Robert J. Haggerty, Bingjun He, Steven L. McGeehan. Affiliate Faculty: John D. Baranowski, Jungmin Lee, Keshun Liu.

The multi-billion dollar food industry is the largest manufacturing industry in the United States. Food science is the scientific discipline that supports the food and beverage manufacturing industry. Food science is a multidisciplinary science that applies biology, chemistry, nutrition, engineering, and other sciences to improve the safety and quality of food products, develop new food products, and design new, safer, and more energy efficient food processes. 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. There are more job openings for food scientists in the food industry than graduates to fill them. Consequently, starting salaries for food scientists are highly competitive.

Career opportunities are excellent. Entry-level jobs in the food industry include food product development, food process development, food quality assurance, food safety compliance, and technical sales. Food scientists work to enhance the quality of foods through biotechnology, as well as improve the microbial and chemical safety of foods. Food scientists develop new food flavors, extend the shelf life of foods, and devise new processing technologies. All of the food products in a grocery store and many foods offered on restaurant menus have been developed and tested by food scientists.

The UI/WSU Bistate School of Food Science offers the B.S.F.S., M.S. and Ph.D. degrees in food science. The undergraduate program is approved by the Institute of Food Technologists, the primary professional organization for food scientists. Undergraduates complete university requirements, supporting science and mathematics classes during their first two years of study. Most of these courses can be completed at community colleges, prior to transferring to UI. Courses taken in the last two years of the program are discipline specific and include food microbiology, food chemistry, food processing, and food engineering. Faculty from both UI and Washington State University teach courses in the food science program. Some classes are taught on the UI campus and some on the WSU campus, allowing students access to facilities and faculty expertise from both institutions. Undergraduates are encouraged to work on research problems with faculty and participate in internships in the food industry.

Areas of research emphasis include food chemistry, food biotechnology, food safety, food processing/engineering, and food and environmental toxicology. Departmental research programs include studies of the genetic/metabolic engineering of microorganisms, such as lactic acid bacteria, for bio-preservation of food products and conversion of biomass (i.e. potato processing waste to valuable fuels and chemicals); development of new processes and technologies to improve the microbial safety of foods; investigations into mechanism(s) of action of food borne anti-toxicants that may improve human health or reduce chronic human disease; investigation of soft wheat and potato quality, functionality, and end-use potential; assessment of starch behavior and function in food processing operations; utilization of novel protein and starch ingredients in food systems; impact of processing methods on physicochemical properties of foods is being studied by assessing novel extrusion, drying, and evaporation technologies that achieve greater retention of bioactive compounds in foods to promote improvement of human health; thermal, rheological, and mechanical properties of foods and the raw materials used in food processing and edible packaging are investigated to understand their impact on food quality; and examination of natural and engineered processes in the characterization, fate, transport, and control of environmental and food system contaminants. This combination of basic and applied research provides a stimulating environment for graduate and undergraduate students. Faculty in the department supervise graduate students working toward M.S. and Ph.D. degrees in either food science or the multidisciplinary program in environmental science (refer to the Program in Environmental Science for more information on requirements for the M.S. and Ph.D. in environmental science). In addition to admission requirements determined by the College of Graduate Studies, admission to the graduate program in food science requires (1) a minimum GPA of 2.80; (2) GRE scores (no specified minimum score); (3) a letter outlining research interests and career goals of the applicant; and (4) three letters of recommendation, with at least two from individuals in academia. Students for whom English is a foreign language should have a TOEFL score of at least 550. Prior training should include courses in calculus, organic chemistry, microbiology, biochemistry and food science. Acceptance of students deficient in some of these areas will be considered on an individual basis. Prospective graduate students are encouraged to contact the department or individual faculty members to learn more about specific research opportunities.

Courses

See Part 6 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 on page 49) and:

ASM 240	Computer Applications in Biological Systems (3 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 303	Food Processing (3 cr)
FS 416, 417	Food Microbiology and Lab (5 cr)
FS 432	Food Engineering (3 cr)
FS 460, 461	Food Chemistry and Lab (4 cr)
FS 462	Food Analysis (4 cr)
FS 470	Advanced Food Technology (3 cr)
FS 489	Food Product Development (3 cr)
MMBB 154	Introductory Microbiology (3 cr)
MMBB 250, 255	General Microbiology and Lab (5 cr)
Phys 111	General Physics I (3 cr)
Stat 251	Statistical Methods (3 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytical Geometry and Calculus I (4 cr)

And one of the following emphasis areas:

A. Processing Emphasis

Chem 275	Carbon Compounds (3 cr)
Chem 276	Carbon Compounds Lab (1 cr)
MMBB 300	Survey of Biochemistry (3 cr)

Select 12 credits from the following:

AVS 463	Growth and Lactation (3 cr)
FS 230	Food Chemical Safety (3 cr)
FS 304	Cereal Products (2 cr)
FS 363	Animal Products for Human Consumption (3 cr)
FS 398	Internship (1-4 cr, max 4)
FS 406	Evaluation of Dairy Products I (1 cr)
FS 422	Sensory Evaluation of Food and Wine (3 cr)
FS 429	Dairy Products (3 cr)
FS 464	Food Toxicology (3 cr)
FS 465	Wine Microbiology and Processing (3 cr)
FS 499	Directed Study (1-4 cr, max 4)

B. Business Emphasis

Chem 275	Carbon Compounds (3 cr)
Chem 276	Carbon Compounds Lab (1 cr)
MMBB 300	Survey of Biochemistry (3 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 Management (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 321	Marketing (3 cr)
Bus 350	Management Information Systems (3 cr)
Bus 370	Introduction to Operations Management (3 cr)
Econ 202	Principles of Economics **or**
Econ 272	Foundations of Economic Analysis (3-4 cr)
FS 398	Internship (1-4, max 4)

C. Science Emphasis

Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
MMBB 380	Introductory Biochemistry (4 cr)

Select 11 credits from the following:

Chem 253	Quantitative Analysis (5 cr)
Chem 302, 303	Principles of Physical Chemistry & Lab (4 cr)
FS 398	Internship (1-4 cr, max 4)
FS 422	Sensory Evaluation of Food and Wine (3 cr)
FS 464	Food Toxicology (3 cr)
FS 465	Wine Microbiology and Processing (3 cr)
FS 499	Directed Study (1-4 cr, max 4)
Gene 314	General Genetics (3 cr)
MMBB 382	Introductory Biochemistry Laboratory (2 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)

D. Nutrition Emphasis

Chem 275	Carbon Compounds (3 cr)
Chem 276	Carbon Compounds Lab (1 cr)
MMBB 300	Survey of Biochemistry (3 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 462	Eating Disorders (2 cr)
FCS 305	Nutrition Related to Fitness and Sport (2 cr)
FS 230	Food Chemical Safety (3 cr)
FS 398	Internship (1-4 cr, max 4)
FS 422	Sensory Evaluation of Food and Wine (3 cr)
FS 499	Directed Study (1-4 cr, max 4)

Electives to total 128 credits for the 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, 417	Food Microbiology and Lab (5 cr)

Additional courses in food science (FS) (5 cr)

To complete this minor, students must earn a minimum of 20 credits

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 of Part 4 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.cals.uidaho.edu/sfs). 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.cals.uidaho.edu/sfs). 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 independent 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.cals.uidaho.edu/sfs) 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 are designed to prepare students for professional opportunities.

Department of Fish and Wildlife Resources

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, James L. Congleton, Brian C. Dennis, Edward O. Garton, Brian P. Kennedy, Christine M. Moffitt, Christopher A. Peery, Janet L. Rachlow, Kerry P. Reese, Dennis L. Scarnecchia, J. Michael Scott, Kerri T. Vierling, Lisette P. Waits, Frank M. Wilhelm.

Fish and wildlife resources 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 four areas of emphasis within the department: **aquaculture, fisheries, wildlife, and conservation genetics**. Persons interested in aquaculture or fisheries can design their major within the B.S. in Fishery Resources and those interested in wildlife, within the B.S. in Wildlife Resources. 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.

Both professions offer opportunities in law enforcement, communications, and public relations. A common saying, and one with a great deal of truth, is that fish or wildlife management is largely people management.

Bachelor of Science degrees are offered in fishery resources and wildlife resources. 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 NRECB program, see the section on "Natural Resources."

Fish and wildlife 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 fish and wildlife baccalaureate graduates of UI 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 Resources.

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 the overall 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 Part 6 for courses in Fishery Resources (Fish) and Wildlife Resources (WLF).

Fish and Wildlife Resources 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 on page 49) 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)
Chem 275	Carbon Compounds **or**
Chem 277	Organic Chemistry (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Economics (3 cr)
Fish 102	The Fish and Wildlife Professions (1 cr)

For 221	Ecology **or**
REM 221	Ecology (3 cr)
For/CSS 235	Society and Natural Resources (3 cr)
Geol 101	Physical Geology **or**
Soil 205, 206	The Soil Ecosystem and Lab (4 cr)
Math 160	Survey of Calculus (4 cr)
NR 101	Exploring Natural Resources (1 cr)
Phys 100	Fundamentals of Physics **or**
Phys 111	General Physic I (4 cr)
Stat 251	Statistical Methods (3 cr)

Third and Fourth Years

AVS 271	Anatomy and Physiology **or**
Biol 423	Comparative Vertebrate Physiology (4 cr)
Biol 481	Ichthyology (4 cr)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (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 422	Concepts in Aquaculture (3 cr) **or**
Fish 424	Fish Health Management (4 cr)
Fish 495	Seminar (1 cr)
Gene 314	General Genetics **or**
Biol 210	Genetics (3-4 cr)
MMBB 250, 255	General Microbiology and Lab (5 cr)
WLF 448	Fish and Wildlife Population Ecology (4 cr)

Approved work experience in major field required

Electives to total 128 credits for the degree

Ecology and Conservation Biology (B.S.Ecol.Cons.Biol.)

See the section on "Natural Resources" in Part 5.

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 on page 49) 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)
Chem 275	Carbon Compounds **or**
Chem 277	Organic Chemistry I (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Economics (3 cr)
For 221	Ecology **or**
REM 221	Ecology (3 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
Geol 101	Physical Geol **or**
Soil 205, 206	The Soil Ecosystem and Lab (4 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 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):

For 320	Dendrology (4 cr)
REM 341	Systematic Botany (3 cr)
REM 353	Rangeland Plant Identification and Ecology (3 cr)

Third and Fourth Years

AVS 271	Anatomy and Physiology (4 cr)
Gene 314	General Genetics **or**
Biol 210	Genetics (3-4 cr)
Phys 100	Fundamentals of Physics **or**
Phys 111	General Physics I (4 cr)
WLF 314, 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 cr):

Comm 431	Professional Presentation Techniques (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 317	Technical Writing (3 cr)

One of the following (3 cr):

AgEc 477	Law, Ethics, and the Environment (3 cr)
Econ 385	Environmental Economics (3 cr)
For 383	Economics for Natural Resource Managers

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)
WLF 482	Ornithology (4 cr)

Approved work experience in major field required

Electives to total 128 credits for the degree

Fish and Wildlife Resources Academic Minor Requirements

Aquaculture Minor

Biol 481	Ichthyology (4 cr)
Fish 422	Concepts in Aquaculture (3 cr)
Fish 424	Fish Health Management (4 cr)
MMBB 250	General Microbiology (3 cr).
MMBB 255	General Microbiology Lab (2 cr)

Courses selected from the following (10 cr):

AgEc 278	Farm and Agribusiness Management (4 cr)
Fish 398	Renewable Natural Resources Internship (cr arr)
Fish 469	Aquaculture Systems Design (2 cr)
ASM 107	Beginning Welding (2 cr)
AVS 305	Animal Nutrition (4 cr)
Bus 321	Marketing (3 cr)
Ent 472	Aquatic Entomology (3 cr)
ForP 495	Biomaterial Product and Process Development (2 cr)

Fishery Resources Minor

Fish 314	Fish Ecology (3 cr)
Fish 315	Fish Ecology Lab (1 cr)
Fish 495	Seminar (1 cr)
For 221	Ecology **or**
Biol 314	Ecology and Population Biology (3-4 cr)

Four of the following courses (12-15 cr):

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)

To complete this minor, students must earn a minimum of 20 credits

Wildlife Resources Minor

For 221	Ecology **or**
Biol 314	Ecology and Population Biology (3-4 cr)
WLF 314, 315	Wildlife Ecology I and Lab (4 cr)
WLF 316	Wildlife Ecology II (4 cr)
WLF 495	Wildlife Seminar (1 cr)

Three of the following courses (8-11 cr):

Biol 483	Mammalogy (3 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)

To complete this minor, students must earn a minimum of 20 credits

Fish and Wildlife Resources Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Fish and Wildlife Resources. See the College of Graduate Studies section of Part 4 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" in Part 5 for details.

Department of Foreign Languages and Literatures

Bill L. Smith, Interim Dept. Chair (302 Admin. Bldg. 83844-3174; phone 208/885-6179; fax 208/885-5221; forlang@uidaho.edu). Faculty: Demetrio Anzaldo-Gonzales (Spanish), Irina A. Kappler-Crookston (Spanish), Rosanna Lauriola (Classics), Sarah M. Nelson (French), Ruthanne Orihuela (Spanish), Guadalupe Perez-Anzaldo (Spanish), Anne Perriguey (French), Gerd Steckel (German), Ikuyo Suzuki (Japanese).

The study of a foreign language and literature is a way of expanding one's horizons while developing specific linguistic skills that will enhance career, academic, and travel opportunities. One of the many benefits derived from foreign-language study is the ability to transcend linguistic and cultural parochialism. To understand the uniqueness of one's own language and civilization, knowledge of another culture is essential. Language study is the key that unlocks the mysteries surrounding a foreign people. Through language, one is able to explore their literature, art, history, and philosophy–in short, their way of life. In preparing to meet the challenges of a rapidly changing and interdependent world, foreign language expertise plays an increasingly important role. In many areas (business, education, communications, social work, technical and engineering positions, science, law, medicine, etc.), knowledge of a second language is not only desirable but necessary.

The Department of Foreign Languages and Literatures offers a Bachelor of Arts degree with a major in two modern languages (Spanish and French). The department also offers elementary and intermediate level course work in German, Japanese and introductory courses in Nez Perce language. In addition, a cooperative course agreement with Washington State University in nearby Pullman makes it possible for students to complete basic course work in Chinese, Italian and Russian.

The department's business option offer students the opportunity to combine the advanced study of a foreign language with pre-professional course work . Similarly, the international studies major allows students to combine advanced foreign language study with a specific issue and area study focus.

Language instruction at UI is proficiency-oriented in approach and encourages active student involvement from the outset. Language classes are small enough to allow for instructor-student interaction and to ensure that each student receives individual attention. Classroom instruction is supported by a fully equipped language learning laboratory with facilities for audiocassette, and videocassette instruction, as well as international television programming, and computer assisted learning software.

Foreign language majors are required to spend a semester or year studying abroad in an international exchange program. Foreign 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 foreign 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 Part 6 for courses in English (FLEN), Arabic (Arbc), Chinese (Chin), French (Fren), German (Germ), Ancient Greek (Grek), Japanese (Japn), Latin (Latn), Nez Perce (NezP), Russian (Russ), and Spanish (Span). , and General Courses (FL).

Foreign Languages and Literatures 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, Latin, and Classical Studies options. A maximum of 18 such credits may be applied toward the upper-division requirements for the B.A. degree in Foreign Language Spanish option.

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 Foreign Languages and Literatures will evaluate the students' oral and written proficiency and determine which classes studied abroad may count towards the major.

French (B.A.)

Required course work includes the university requirements (see regulation J-3 on page 49), the general requirements for the B.A. degree, and:

In addition to an international experience 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 FLL 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.

It is strongly suggested (but not required) that students a minor in a foreign language offered in the department of Foreign Languages and Literatures (see below) also complete some of their credits through an international experience.

8-9 FLEN credits, of which a minimum of 5-6 FLEN credits is outside of one's language option (8-9 cr)

Fren 101 and Fren 102	Elementary French I-II or equivalent (8 cr)
Fren 201 and Fren 202	Intermediate French I-II or equivalent (8 cr)
Fren 407	Topics in French Literature **or**
Fren 408	Topics in French Culture and Institutions (3 cr)

300-level French courses (20 cr)

FLEN 313 Modern French Literature in Translation (3 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)

Foreign Language (B.A.)

Required course work includes the university requirements (see regulation J-3 on page 49), the general requirements for the B.A. degree, and:

In addition to the course work specified for each option, an international experience is required of students pursuing the French or Spanish options. 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 FLL 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.

It is strongly suggested (but not required) that students pursuing the Classics option or pursuing a minor in a foreign language offered in the department of Foreign Languages and Literatures (see below) also complete some of their credits through an international experience.

8-9 FLEN credits, of which a minimum of 5-6 FLEN credits is outside of one's language option (8-9 cr)

A. Business Option

Designed to provide the student majoring in foreign languages with a liberal arts background and a component of business courses that will form a good beginning for entering a program leading to the degree of Master of Business Administration.

One foreign language, elementary and intermediate (16 cr)
Approved upper-division foreign language courses (including one FL business course or approved alternative) (21 cr)

Acct 201 and Acct 202	Intro to Financial Accounting & Intro to Managerial Accounting (6 cr)
BLaw 265	Legal Environment of Business (3 cr)

Either the College of Business and Economics Integrated Core (Bus 340-345*) or the following (15 or 18 cr):

Bus 301	Financial Management (3cr)
Bus 311	Introduction to Management (3cr)
Bus 321	Marketing (3cr)
Bus 350	Management Information Systems **or**
Bus 351	Introduction to Electronic Commerce (3cr)
Bus 482	International Marketing **or**
Econ 446	International Economics **or**
Econ 447	International Development Economics (3 cr)
Econ 272	Foundations of Econ Analysis **or**
Econ 201 and Econ 202	Prin of Economics (4-6 cr)
FLEN 307	The European Union (3 cr)
Stat 251	Statistical Methods **or**
Stat 271	Statistical Inference & Decision Analysis* (3-4 cr)

**Students completing Bus 340-345 must take Stat 271 and, therefore, either Math 160 or 170*

Spanish (B.A.)

Required course work includes the university requirements (see regulation J-3 on page 49), the general requirements for the B.A. degree, and:

In addition to an international experience 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 FLL 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.

It is strongly suggested (but not required) that students a minor in a foreign language offered in the department of Foreign Languages and Literatures (see below) also complete some of their credits through an international experience.

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 and Span 102	Elementary Spanish I-II (or equivalent) (8 cr)
Span 201 and Span 202	Intermediate Spanish I-II (or equivalent) (8 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)

Foreign Languages and Literatures Academic Minor Requirements

A maximum of 6 credits earned through study abroad may be applied toward the upper-division course requirements for a minor in French, German, Spanish, Latin, and Greek.

A student must receive a C or better for an upper-division course in the appropriate target language to count towards the minor.

Classical Studies Minor

FLEN 270 or Hist 270	Introduction to Greek and Roman Civilization (3 cr)
FLEN 450 or Hist 450	Topics in Classical Civilization (6 cr)
Latn 101	Elementary Latin II (3 cr)
Latn 102	Elementary Latin II (3 cr)
Latn 204	Special Topics (3 cr)

And one of the following (3 cr):

FLEN 210	Introduction to Classical Mythology (3 cr)
FLEN 450 or Hist 450	Topics in Classical Civilization (3 cr)
Latn 499	Directed Study (3 cr)
Phil 320	History of Ancient and Medieval Philosophy (3 cr)

French Minor

Fren 101-102	Elementary French I-II (8 cr)
Fren 201-202	Intermediate French I-II (8 cr)
Fren 301	Adv French Grammar **or**
Fren 302	Adv French Writing Skills (3 cr)

Upper-div courses in French (not including lab-based and lit in translation courses) (6 cr)

German Minor

Germ 101-102	Elementary German I-II (8 cr)
Germ 201-202	Intermediate German I-II (8 cr)
Germ 301	Advanced German Grammar **or**
Germ 302	Advanced German Speaking and Writing (3 cr)

Upper-div courses in German (not including lab-based and lit in translation courses) (6 cr)

Spanish Minor

Span 101-102	Elementary Spanish I-II (8 cr)
Span 201-202	Intermediate Spanish I-II (8 cr)
Span 301	Advanced Grammar (3 cr)
Span 302	Advanced Composition (3 cr)

One additional 300-level course in Spanish (not including lab-based, lit or film in translation, or one-credit conversation practice courses) (3 cr)

Department of Forest Ecology and Biogeosciences

Jo Ellen Force, Dept. Head (204 CNR Bldg. 83844-1133; phone 208/885-7952; fores@uidaho.edu). Forest Resources Faculty: Mark D. Coleman, Stephen P. Cook, Steven Daley Laursen, Anthony S. Davis, Lauren Fins, Jo Ellen Force, Paul E. Gessler, Philip E. Higuera, Kathleen L. Kavanagh, Timothy E. Link, Gary E. Machlis, Ronald L. Mahoney, John D. Marshall, Penelope Morgan, A. George Newcombe, Jay O'Laughlin, Alistair Smith, David Tank. Adjunct Faculty: Cort Anderson, Chad Hoffman, Mark Kimsey, Robert L. Mahler, Jean E. McKendry, J. Michael Scott, Eva Strand, Lee Vierling, Michael R. Whiteman, Jeerapun Worapong. Rangeland Ecology and Management Faculty: Stephen C. Bunting, James L. Kingery, Karen L. Launchbaugh, Ronald Robberecht, Kenneth D. Sanders, Eva K. Strand, Lee A. Vierling.

The Department of Forest Ecology and Biogeosciences offers programs leading to the degrees of: Bachelor of Science in Forest Resources; Master of Science (thesis and non-thesis options); and Doctor of Philosophy with a major in natural resources (administered at the college level for all departments).

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 instructional goal of the Department of Forest Ecology and Biogeosciences is to provide both undergraduate and graduate students of all ethnicities and nationalities with a high-quality general education and the professional knowledge of significant concepts, multiple use principles, social factors, and technical details of forest resources biology, measurements, management, and social science to effectively manage forest resources.

To attain this goal, the departmental faculty and administration will: emphasize the dynamic nature of the sciences and technologies by teaching new concepts and methods and revising the curriculum as necessary; stress understanding rather than rote learning of facts and principles; provide challenging programs to develop individual talents and interests; maintain class sizes in laboratory and field-oriented courses at a level commensurate with instructional effectiveness; maintain student-faculty ratios that allow for more personalized instruction and advising; expand and improve instructional facilities; develop more efficient and effective instructional techniques; expand field-oriented programs, especially at the Experimental Forest and the Forest Nursery, at Moscow and other field stations; encourage and assist students in finding seasonal professional employment and opportunities for involvement in student clubs and professional organizations; and encourage development and research programs for faculty to increase their abilities to pass their knowledge on to others.

The forest resources curriculum not only provides students with an interdisciplinary education, but also the opportunity to emphasize areas of individual interest, such as ecology, forest ecosystem processes, forest social sciences, computer applications in forestry, aerial-photo interpretation (remote sensing), geographic information systems, silviculture, forest genetics and tree improvement, protection against insects, disease, and fire, tree nursery management, and other specialties by selective use of elective credits.

The educational program, leading to the Bachelor of Science in Forest Resources, is accredited by the Society of American Foresters (SAF). SAF is the specialized accrediting body recognized by the Commission on Recognition of Post-secondary Accreditation as the accrediting agency for forestry in the United States.

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 than a few courses 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 a Masters of Natural Resources, MS or PhD. Others have combined this with the Restoration Ecology Certificate program.

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.

Students who wish to work towards this certificate program must be admitted to the University of Idaho as either a degree-seeking or non-degree seeking student. Once admitted you 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. For more information please contact us. Some courses have additional fees.

For additional information please visit the following website: www.cnr.uidaho.edu/wildlandfire.

Graduate Programs. Graduate programs are offered in many forest specializations, including administration/policy, ecology/ecosystem processes, extension, fire ecology/management, genetics/tree improvement/ecogenetics, hydrology/watershed management, mensuration/inventory, nursery management, remote sensing/geographic information systems, silviculture, sociology of natural resources, forest ecosystem management/sustainable forestry, tree physiology, restoration/conservation biology, environmental studies/management, forest protection/entomology/pathology, and regeneration.

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.

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 many types of rangeland together 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.

The Department of Forest Ecology and Biogeosciences in the College of Natural Resources offers a program leading to a Bachelor of Science (B.S.) degree in Rangeland Ecology and Management with career tracks in rangeland conservation, restoration ecology, invasive species, watershed management, riparian ecology, wildlife habitat ecology, and landscape ecology. In addition, the Department offers a B.S. Degree in Fire Ecology and Management in cooperation with the Forest Resources Department. Studies in rangeland ecology and management are founded on a solid understanding of biology, ecology, soils, and vegetation. Field study and evaluation of plant and animal communities are integral parts of the curriculum in rangeland ecology and management. Internships with public land management agencies and private livestock enterprises add to the educational opportunities in the program.

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. The Rangeland Ecology and Management Department at the University of Idaho holds a record of greater than 85% of students graduating with a B.S. in the last 10 years securing careers in natural resource management or advancing to graduate school.

Because of the extent, character, and importance of Idaho's rangelands, excellent opportunities exist for graduate study in all phases of rangeland use and management. Graduate students may earn a Master of Science degree in Natural Resoueces or the Doctor of Philosophy degree in Natural Resources. The graduate program allows for a diversity of courses from a variety of fields such as rangeland ecology, wildlife, animal science, soils, agricultural economics, forestry, fire ecology and others.

Further information can be obtained from the department head (208/885-7952).

Courses

See Part 6 for courses in Forest Resources (For) and Rangeland Ecology and Management (REM).

Forest Ecology and Biogeosciences 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 on page 49) and:

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 116	Organisms and Environments **or**
PlSc 205	General Botany (4 cr)
Chem 101	Introduction to Chem I **or**
Chem 111	Principles of Chem I (4 cr)
Econ 202	Principles of Economics (3 cr)
Engl 317	Technical Writing **or**
Engl 313	Business Writing (3 cr)
For 102	Introduction to Forest Management (1 cr)
For 221	Ecology (3 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
For 274	Forest Measurement and Inventory (4 cr)
For 320	Dendrology (4 cr)
For 324	Forest Regeneration (3 cr)
For 330	Forest Ecosystem Processes (3 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 383	Economics for Natural Resource Managers (3 cr)
For 424	Forest Dynamics and Management (4 cr)
For 462	Watershed Science and Management (3 cr)
For 468	Forest and Plant Pathology (2 cr)
For 469	Introduction to Forest Insects (2 cr)
For 474	Forest Inventory (3 cr)
For 484	Forest Policy and Administration (2 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry (3 cr) or SAT math score of 610 or above, or ACT math score of 27 or above
NR 101	Exploring Natural Resources (1 cr)
Phys 100	Fundamentals of Physics **or**
Phys 111	General Physics 1 (4 cr)
Soil 205, 206	The Soil Ecosystem and Lab (4 cr)
Stat 251	Statistical Methods (3 cr)

Restricted Electives (16 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 426	Fire Ecology and Management (3 cr)
For 423	Forest Community Ecology (1 cr)
For 425	Forest Nutrient Cycling (3 cr)
For 426	Fire Ecology and Management (3 cr)
For 427	Prescribed Burning Lab (3 cr)
For 463	Hydrologic Measurement Techniques (1 cr)
For 472 or REM 472	Remote Sensing of the Environment (3-4 cr)
For 497	Senior Thesis (2-4 cr)
ForP 277	Wood Anatomy and Identification (3 cr)
ForP 430	Forest Engineering and Harvesting (3 cr)
ForP 432	Designing Forest Access (3 cr)
ForP 434	Forest Tractor and Cable Systems (4 cr)
ForP 444	Primary Wood Products Manufacturing (3 cr)
Geog 301	Meteorology (3 cr)
Geog 385	GIS Primer (3 cr)
Geol 111	Physical Geology for Science Majors (4 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)
PolS 364	Politics of the Environment (3 cr)
REM 357	Rangeland and Riparian Habitat Assessment (3 cr)
REM 402	GIS Application in Natural Resources **or**
REM 407	GIS Applications in Fire Ecology and Management (1-2 cr)
REM 429	Landscape Ecology (3 cr)
REM 440	Wildland Restoration Ecology **or**
REM 441	Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Rangeland Ecology Current Topics and Field Studies (1 cr)
Soil 446	Soil Fertility (1-3 cr)
Soil 454	Soil Development and Classification (3 cr)
Stat 401	Statistical Analysis (3 cr)
WLF 314	Wildlife Ecology I (3 cr)
WLF 316	Wildlife Ecology II (3 cr)
WLF 440	Conservation Biology (3 cr)

Electives to total 128 credits for the degree

Rangeland Ecology and Management (B.S.Rangeland Ecol.-Mgt.)

Required course work includes the university requirements (see regulation J-3 on page 49) and:

First and Second Years

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)
Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Chem 275	Carbon Compounds (3 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 201, 202	Principles of Economics (6 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
Math 143	Pre-calculus Algebra and Analytic Geometry **or**
Math 160	Survey of Calculus (3-4 cr)
REM 221	Ecology **or**
For 221	Ecology or (3 cr)
REM 251	Rangeland Principles (2 cr)
Soil 205	The Soil Ecosystem (3 cr)
Soil 206	The Soil Ecosystem Lab (1 cr)
Stat 251	Principles of Statistics (3 cr)

Third and Fourth Years

Engl 317	Technical Writing **or**
Engl 313	Business Writing (3 cr)
Fish 430	Riparian Ecology and Management (3 cr)
REM 341	Systematic Botany (3 cr)
REM 351	Wildland Plant Identification Field Studies (3 cr)
REM 357	Rangeland and Riparian Habitat Assessment (3 cr)
REM 402	Applied Spatial Analysis in Natural Resources **or**
For 375	Introduction to Spatial Analysis for Natural Resource Management (2-3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 452	Western Wildland Landscapes (2 cr) **and**
Geog 310	Biogeography (2-3 cr); **or**
For 429	Landscape Ecology (3 cr)
REM 456	Integrated Rangeland Management (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Rangeland Ecology Current Topics and Field Studies (1 cr)
Soil 454	Soil Development and Classification (3 cr)

Students must also complete 19 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.

Electives to total 128 credits for the 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 (Part 5).

Fire Ecology and Management (B.S.Fire.Ecol.Mgmt.)

For information on an undergraduate major in fire ecology and management, see the Fire Ecology and Management section (Part 5).

Forest Ecology and Biogeosciences Academic Minor Requirements

Fire Ecology and Management Minor

Fire Core (8 cr):
For 426 Fire Ecology and Management (3 cr)
REM 244 Wildland Fire Management (2 cr)

One of the following (3 cr):
For 427 Prescribed Burning Laboratory (3 cr)
For 450 Fire Behavior (3 cr)
For 451 Fuels Inventory and Management (3 cr)

Ecology (2-3 cr):
For 330 Forest Ecosystem Processes (3 cr)
REM 429 Landscape Ecology (3 cr)
REM 440 Wildland Restoration Ecology (3 cr)
REM 459 Rangeland Ecology (2 cr)
REM 460 Rangeland Ecology Current Topics and Field Studies (1 cr)
WLF 314 Wildlife Ecology I (3 cr)

Applied Tools and Technology (3 cr):
For 375 Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 435 Remote Sensing of Active Fire and Post-fire Effects (3 cr)
Geog 301 Meteorology (3 cr)
Geog 385 GIS Primer (3 cr)
Geog 401 Climatology (3 cr)
Geog 475 Advanced GIS (3 cr)
REM 402 Applied Spatial Analysis in Natural Resources (2 cr)
REM 407 GIS Applications in Fire Ecology and Management (1 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 462 Watershed Science and Management (3 cr)
For 484 Forest Policy and Administration (2 cr)
ForP 430 Forest Engineering and Harvesting (3 cr)
REM 456 Integrated Rangeland Management (3 cr)

To complete this minor, students must complete a minimum of 20 credits from the list above, with at least 12 credits in courses numbered 400 or above.

Forest Resources Minor

For 221 Ecology (3 cr)
For 235 Society and Natural Resources (3 cr)
For 274 Forest Measurement and Inventory (4 cr)
For 320 Dendrology (4 cr)
For 484 Forest Policy and Administration (2 cr)

One or more of the following courses:
For 375 Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 383 Economics for Natural Resource Managers (3 cr)
For 474 Forest Inventory (3 cr)

One or more of the following courses:
For 324 Forest Regeneration (3 cr)
For 330 Forest Ecosystem Processes (3 cr)
For 424 Forest Dynamics and Management (4 cr)
For 462 Watershed Science and Management (3 cr)
ForP 430 Forest Engineering and Harvesting (3 cr)
REM 244 Wildland Fire Management (2 cr)
WLF 314 Wildlife Ecology I (3 cr)

To complete this minor, students must complete a minimum of 20 credits from the list above

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 221 Ecology **or**
For 221 Ecology or (3 cr)
REM 251 Rangeland Principles (2 cr)
REM 353 Rangeland Plant Identification and Ecology (3 cr)
REM 459 Rangeland Ecology (2 cr)
REM 460 Rangeland Ecology Current Topics and Field Studies (1 cr)

Two of the following courses (6 cr):
REM 357 Rangeland and Riparian Habitat Assessment (3 cr)
REM 429 Landscape Ecology (3 cr)
REM 440 Wildland Restoration Ecology (3 cr)
REM 456 Integrated Rangeland Management (3 cr)

One of the following courses (or a course not chosen above) (3 cr):
AVS 474 Beef Cattle Science (3 cr)
AVS 476 Sheep Science (3 cr)
Fish 430 Riparian Ecology and Management (3 cr)
For 426 Fire Ecology and Management (3 cr)
For 462 Watershed Management (3 cr)
PlSc 338 Weed Control (3 cr)
PlSc 410 Biology of Weeds (3 cr)
REM 244 Wildland Fire Management (2 cr)
REM 454 Invasive Plant Management (3 cr)
Soil 454 Soil Development and Classification (3 cr)
WLF 314 Wildlife Ecology I (3 cr)

Forest Ecology and Biogeosciences Undergraduate Academic Certificate Requirements

Fire Ecology, Management and Technology 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 426 Fire Ecology and Management (3 cr)
For 487 Fire Effects and Landscape Ecology (3 cr)
For 526 Fire Ecology (3 cr)
Equivalent Coursework

Ecology Course Group (2-3 cr):
For 330 Forest Ecosystem Processes (3 cr)
For 429 Landscape Ecology (3 cr)
REM 440 Wildland Restoration Ecology (3 cr)
REM 459 Rangeland Ecology (2 cr)
REM 460 Rangeland Ecology Current Topics and Field Studies (1 cr)
Equivalent Coursework

Fuels and Fuels Management Course Group (3 cr):
For 427 Prescribed Burning Lab (3 cr)
For 433 Science-Based Fuels Management Planning (2 cr)
For 450 Fire Behavior (3 cr)
For 451 Fuels Inventory and Management (3 cr)
For 453 Fuels Analysis Techniques (1 cr)
For 486 Fuels, Fuels Management and Fire Science (3 cr)
Equivalent Coursework

Applied Tools and Analysis Course Group (3 cr):
For 375 Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 435 Remote Sensing of Active Fire and Post-fire Effects (3 cr)
For 472 or REM 472 Remote Sensing of the Environment (3-4 cr)
For 475 Financial Aspects of Fire Management (3 cr)
For 570 Advanced Remote Sensing Measurement Methods (3 cr)
For 572 Spatial and Biophysical Modeling (3 cr)
Geog 475 Advanced GIS (3 cr)
REM 402 Applied Spatial Analysis in Natural Resources (2 cr)
REM 407 GIS Application in Fire Ecology and Management (1 cr)
Equivalent Coursework

Management, Planning and Policy Course Group (2-3 cr):
CSS 490 Wilderness and Protected Area Management (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 488 Fire and Land Management (3 cr)

For 529 Forest Ecosystem Analysis (3 cr)
ForP 430 Forest Engineering and Harvesting (3 cr)
REM 456 Integrated Rangeland Management (3 cr)
Equivalent Coursework
Credits to total 15 for this Academic Certificate

Forest Ecology and Biogeosciences Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the College of Natural Resources.

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 (208/885-6426).

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 Office of Career and Professional Planning 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 on page 49), sufficient electives must be taken to total 128 credits. *A minimum of 48 credits must be earned in courses numbered 300 and above.* Not more than 40 credits in any one discipline may be counted in the 128 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 48 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

Harley Johansen, Dept. Chair (203 McClure Bldg. 83844-3021; phone 208/885-6216; geog@uidaho.edu; http://www.scihome.uidaho.edu/geography). Faculty: John Abatzoglou, Raymond J. Dezzani, Tim Frazier, Jeffrey Hicke, Karen S. Humes, Harley E. Johansen, Hejun Kang, Gundars Rudzitis, Von P. Walden. Research Faculty: Vladimir Aizen. Adjunct Faculty: Elena M. Aizen. Adjunct Instructor: Edwin J. DeYoung. Affiliate 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.scihome.uidaho.edu/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.scihome.uidaho.edu/geography/.

Courses

See Part 6 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	Physical Geography (4 cr)
Geog 165	Human Geography (3 cr)
Geog 200	World Regional Geography (3 cr)
Geog 385	GIS Primer (3 cr)
Geog 390	Geographic Visualization (4 cr)
Geog 493	Senior Seminar in Applied 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 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)

Student must also choose 3 credits from the following courses in physical geography (3 cr):

Geog 301	Meteorology (3 cr)
Geog 310	Biogeography (3 cr)
Geog 401	Climatology (3 cr)
Geog 450	Global Environmental Change (3 cr)

12 additional credits in Geography courses, for a total minimum number of 37 credits in Geography

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 Undergraduate Academic Certificates Requirements

Geographic Information Systems Academic Certificate

Geog 385	GIS Primer (3 cr)
Geog 475	Geographic Information Systems (3 cr)

Electives (9 cr)

Geog 390	Geographic Visualization (4 cr)
Geog 407	Spatial Analysis and Modeling (3 cr)
Geog 424 or Geog 524	Hydrologic Applications of GIS and Remote Sensing (3 cr)
Geog 427	Spatial Multicriteria Analysis and Optimization (3 cr)
Geog 483	or Geog 583 Remote Sensing/GIS Integration (3 cr)
Geog 479	GIS Programming (2 cr)
Geog 507	Spatial Analysis and Modeling (3 cr)
Geog 580	GIS Seminar (3 cr)

Credits to total 15 for this Academic 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 of Part 4 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 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 (322 Mines Bldg. 83844-3022; phone 208/885-6192). Faculty: Susan E. Childers, John Davis, Jerry P. Fairley, Dennis J. Geist, Mickey E. Gunter, Peter E. Isaacson, Gary S. Johnson, Simon A. Kattenhorn, William C. McClelland, John S. Oldow, James Osiensky, Judith T. Parrish, Kenneth F. Sprenke, Scott A. Wood. Adjunct Faculty: Roy M. Breckenridge, Virginia S. Gillerman, Michael J. Nicholl, Kurt L. Othberg, Christian R. Petrich, Robert W. Smith, John A. Welhan, Barbara Cooke Williams, Thomas J. Williams, Allan H. Wylie.

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 subdisciplines 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 geochemistry, geophysics, petrology, economic geology, paleontology, hydrogeology, geochronology, structural analysis, tectonics, and geomechanics. 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 or geophysics at those institutions may take transferable preparatory courses at UI.

Courses

See Part 6 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 on page 49) and:

Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Engl 317	Technical Writing (3 cr)
Geog 385	GIS Primer (3 cr)
Geol 101 or Geol 111	Physical Geology (4 cr)
Geol 102	Historical Geology (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 (3 cr)
Geol 423	Principles of Geochemistry (3 cr)
Geol 490	Field Geology II (3 cr)
Phys 111 and Phys 112	General Physics I-II; **or**
Phys 211 and Phys 212	Engineering Physics I-II (8 cr)

And the completion of one of the following options and electives approved by the advisor to total 128 credits for the degree.

A. General Geology Option

Geol 212	Principles of Paleontology (4 cr)
Geol 335	Geomorphology (3 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II,
Math 330	Linear Algebra, **or**
Stat 251	Statistical Methods (3-4 cr)

Advisor-approved electives in geology (9 cr)

B. Hydrogeology Option

Geol 309	Ground Water Hydrology **or**
Hydr 409	Quantitative Hydrogeology (3 cr)
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)
Stat 251	Statistical Methods **or**
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 413 or Hydr 513	Ground Water Resource Evaluation (3 cr)
Hydr 414 or Hydr 514	Ground Water-Surface Water Interaction (3 cr)
Hydr 464 or Hydr 564	The Geochemistry of Natural Waters (3 cr)
Hydr 496	Hydrogeology Senior Thesis (3 cr)
Hydr 576	Fundamentals of Modeling Hydrogeologic Systems (3 cr)

Hydrogeology electives chosen from the following if not used above (3 cr):

BAE 351	Hydrology **or**
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 413 or Hydr 513	Ground Water Resource Evaluation (3 cr)
Hydr 414 or Hydr 514	Ground Water-Surface Water Interaction (3 cr)
Hydr 464 or Hydr 564	The Geochemistry of Natural Waters (3 cr)
Hydr 496	Hydrogeology Senior Thesis (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)

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)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geom and Calculus I (4 cr)
Stat 251	Statistical Methods **or**
Stat 301	Probability and Statistics (3 cr)

Advisor approved electives in geology (6 cr)

D. Environmental Geology Option

Geol 212	Principles of Paleontology (4 cr)
Geol 309	Ground Water Hydrology **or**
Hydr 409	Quantitative Hydrogeology (3 cr)
Geol 335	Geomorphology (3 cr)
Geol 344	Earthquakes and Seismic Hazards **or**
Geol 361	Geology and the Environment (3 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geom and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II, **or**
Math 330	Linear Algebra, **or**
Stat 251	Statistical Methods (3-4 cr)

Environmental geology electives chosen from the following (9 cr):

BAE 351	Hydrology (3 cr)
BAE 433	Bioremediation (3 cr)
BAE 452	Environmental Water Quality (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Chem 275, 276	Carbon Compounds and Lab **or**
Chem 277, 278	Organic Chem I and Lab (4 cr)
Chem 418	Environmental Chemistry (3 cr)
Geog 401	Climatology (3 cr)
Geol 410	Techniques of Ground Water Study (3 cr)
Geol 464 or Hydr 464	The Geochemistry of Natural Waters (3 cr)
MMBB 250, 255	General Microbiology and Lab (5 cr)
Soil 205, 206	The Soil Ecosystem and Lab (4 cr)

E. Geological Education Option

Biol 115	Cells and the Evolution of Life (4 cr)
Geog 100	Physical Geography (4 cr)
Geog 401	Climatology (3 cr)
Geol 212	Principles of Paleontology (4 cr)
Geol 335	Geomorphology (3 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geom and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II, **or**
Math 330	Linear Algebra, **or**
Stat 251	Statistical Methods (3-4 cr)
Phys 103, 104	General Astronomy and Lab (4 cr)
PlSc 205	General Botany (4 cr)

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 448	Tectonics (3 cr)
Geol 498	Senior Thesis (4 cr)
Math 170	Analytic Geometry and Calculus I (4 cr)
Math 175	Analytic Geometry and Calculus II **or**
Math 330	Linear Algebra (3-4 cr)

Geological Sciences Academic Minor Requirements

Geology Minor

Geol 101	Physical Geology **or**
Geol 111	Physical Geology for Science Majors (4 cr)
Geol 102	Historical Geology (4 cr)

Electives in geology (12 cr)

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 of Part 4 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 Health, Physical Education, Recreation, and Dance

Kathy Browder, Dept. Chair (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921). Faculty: Kathy D. Browder (Graduate Program Coordinator), Damon D. Burton, D. Clark Dickin, Dennis G. Dolny (Exercise Science & Health Coordinator), Mary Heller, Gregory J. Halloran (Dance Coordinator), Kevin Johnston, Grace Goc Karp (Physical Education Coordinator), Michael L. Kinziger (Recreation Coordinator), Elizabeth E. Miller (Basic Instruction Program Coordinator), Alan M. Nasypany (Athletic Training Program Director), David R. Paul, Philip W. Scruggs, Jeffrey G. Seegmiller, Sharon K. Stoll.

The Department of Health, Physical Education, Recreation and Dance is one of four departments in the College of Education. The department participates in the Ph.D. in education, with tracks in sport pedagogy & character education and exercise science, and in the interdisciplinary Ph.D. in Neuroscience; the department offers master's degrees in recreation and participates in the M.S. in Neuroscience and the M.S. in Bioregional Planning; the department also offers baccalaureate degrees in athletic training, 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 indoor tennis courts, nine racquetball courts, indoor and outdoor tracks, weight rooms, climbing wall and rope course, and expansive field and play areas. In addition, activity classes are taught in the Student Recreation Center.

The baccalaureate degree in athletic training program will assist the student in preparing to work in a multi-faceted medical environment that provides care to the physically active individual. Students will gain the knowledge and skills necessary in the prevention, acute care, evaluation, treatment, and rehabilitation of injuries and illnesses to the physically active individual, and will also acquire an understanding of athletic training administration and professional development.

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.

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, physical education, sport science, and coaching..

Graduate programs include master's degrees in movement and leisure sciences; and a doctorate in education with specialization tracks in the HPERD areas. Each program is described more fully in the following pages. Please see the departmental web page for information regarding admission requirements.

Courses

See Part 6 for courses in Dance (Dan), Health and Safety (H&S), Physical Education (PEB & PEP), and Recreation (Rec).

Health, Physical Education, Recreation, and Dance Undergraduate Curricular Requirements

Courses required in all majors in the Department of Health, Physical Education, Recreation and Dance:

CTE 111	Computer Skills or approved elective (3 cr)
HPRD 201	Physical Activity, Wellness & Behavior Change (3 cr)
HPRD 210	Meaning of Movement and Injury Prevention (2 cr)
HPRD 350	Behavior Change in Physical Activity (1 cr)
HPRD 351	Social and Environmental Aspects of Physical Activity (1 cr)
HPRD 429	Leadership, Pedagogy and Programming in Physical Activity (3 cr)
HPRD 486	Programming and Marketing for Healthy, Active Lifestyles (2 cr)

Athletic Training (B.S.P.E.)

The Athletic Training major has two portions to the education program, didactic and clinical. Prior to application to the clinical portion of the program, a pre-professional phase is required which includes a grade of 'C' or better in prerequisite courses (Biol 120, Biol 121, H&S 245, H&S 288 and PEP 101) and successful completion of an observation period in the athletic training room (PEP 171). See the Athletic Training Education Program Director for the specific information regarding admission into the clinical portion of the program. This information includes admission requirements, pre-professional phase course work and observation period requirements, technical standards for admission, and an application form.

Additionally, to maintain good standing in the clinical portion of the program, the student must meet specific criteria, which includes maintaining a 2.75 cumulative GPA and a grade of 'C' or better in all professional courses. See the Athletic Training Education Program Director for specific information regarding continuation in the clinical portion of the program.

Required course work includes the university requirements (see regulation J-3 on page 49), the Department of HPERD core and the following course work:

Professional Courses (56 cr):

Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
FCS 305	Nutrition Related to Fitness and Sport (2 cr)
H&S 232	Medical Terminology (2 cr)
H&S 245	Introduction to Athletic Injuries (3 cr)
H&S 288	First Aid: Emergency Response (2 cr)
H&S 462	General Medicine for Physically Active Individuals (1 cr)
H&S 463	Pharmacology for Physically Active Individuals (1 cr)
H&S 464	Athletic Training Lower Extremity Evaluation (3 cr)
H&S 466	Athletic Training Upper Extremity Evaluation (3 cr)
H&S 467	Athletic Training Rehabilitation (3 cr)
H&S 468	Athletic Training Modalities (3 cr)
H&S 469	Athletic Training Organization and Administration (3 cr)
H&S 470	Seminar in Athletic Training (2 cr)
PEP 101	Introduction to Athletic Training (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 HPERD (3 cr)
PEP 493	Fitness Assessment and Prescription (3 cr)

One of the following (3 cr):

Engl 207	Persuasive Writing (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 209	Inquiry-Based Writing (3 cr)
Engl 313	Business Writing (3 cr)
Engl 317	Technical Writing (3 cr)

Clinical Experiences (10 cr):

H&S 390	Athletic Training High School Clinical Experience (1 cr)
H&S 391	Athletic Training Sports Medicine Clinical Experience (1 cr)
H&S 392	Athletic Training General Medical & Orthopedic Clinical Experience (1 cr)
PEP 171	Athletic Training Clinical Experience I – Observation (1 cr)
PEP 272	Athletic Training Clinical Experience II (1 cr)
PEP 273	Athletic Training Clinical Experience III (1 cr)
PEP 371	Athletic Training Clinical Experience IV (1 cr)
PEP 372	Athletic Training Clinical Experience V (1 cr)
PEP 471	Athletic Training Clinical Experience VI (1 cr)
PEP 472	Athletic Training Clinical Experience VII (1 cr)

Electives to total 128 cr for the degree

Dance (B.S.Dan.)

A successful audition is required for admission to the degree program. Please contact the Department of HPERD at (208) 885-7921 for audition information. Required coursework includes the university requirements (see regulation J-3 on page 49), the Department of HPERD 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 147-148	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)

Electives to total 128 cr for the degree

Exercise Science and Health (B.S.P.E.)

Required course work includes the university requirements (see regulation J-3 on page 49), the Department of HPERD core, and the following.

Biol 120	Human Anatomy (4 cr)
Biol 121	Human Physiology (4 cr)
FCS 205	Concepts in Human Nutrition (3 cr)
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 451	Psychosocial Determinants of Health (3 cr)
H&S 490	Health Promotion (3 cr)
PEP 100	Introduction to Sport Sciences (1 cr)
PEP 300	Applied Human Anatomy and Biomechanics (3 cr)
PEP 360	Motor Behavior (3 cr)

PEP 418 Physiology of Exercise (3 cr)
PEP 455 Design & Analysis of Research in HPERD (3 cr)
PEP 493 Fitness Assessment and Prescription **or**
PEP 305 Applied Sports Psychology (3 cr)
PEP 495 Practicum (3 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 209 Inquiry-Based Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)

Electives to total 128 cr for the degree

Physical Education (B.S.Ed.)

Required course work includes the university requirements (see regulation J-3 on page 49), the Department of HPERD 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, Softball and Archery (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 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, at least 6 of the 14 credits of required skill courses, PEP 161, 300, 360, EDCI 201, 301, minimum 2.75 GPA, appropriate portfolio evidence, and advisor recommendation.

PEP 412 Elementary Methods in Physical Activity Pedagogy (3 cr)
PEP 414 Proseminar in Physical Education (1 cr)
PEP 421 Secondary Methods in Physical Activity Pedagogy (3 cr)
PEP 424 Adapted Methods in Physical Activity Pedagogy (2 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 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)
PEP 484 Internship in Physical Education Teaching (14 cr)
Psyc 101 Intro to Psychology **or**
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 209 Inquiry-Based Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)

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 in Part 4.

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 on page 49), an academic minor or 20 credits in an approved cognate area of study, the Department of HPERD core and the following coursework:

H&S 288 First Aid: Emergency Response **or**
Rec 290 Wilderness First Responder (or Emergency Responder Certification) (2-3 cr)
Psyc 101 Introduction to Psychology (3 cr)
Psyc 305 Developmental Psychology (3 cr)
Rec 102 Introduction to Recreation Professions (1 cr)
Rec 110 Recreation for People with Disabilities (3 cr)
Rec 125 Outdoor Leisure Pursuits (2 cr)
Rec 243 Recreation Activities (2 cr)
Rec 260 Historical Perspectives of Leisure and Society (3 cr)
Rec 280 Recreation Practicum (1 cr)
Rec 365 Leisure and the Aging Process (3 cr)
Rec 410 Trends and Legal Issues in Leisure Services (3 cr)
Rec 455 Design and Analysis of Research in HPERD (3 cr)
Rec 487 Recreation Program Planning and Marketing (1 cr)
Rec 493 Management of Leisure Services and Facilities (3 cr)
Rec 495 Practicum in Tutoring (1 cr)
Rec 498 Internship in Recreation (9 cr)

Additional courses selected from the following (4 cr):
Rec 208 Professional Involvement in Recreation (1 cr)
Rec 254 Camp Leadership (3 cr)
Rec 256 Camp Counseling Practicum (2-3 cr)
Rec 340 Hospitality, Leisure, and Recreation Enterprises (3 cr)
Rec 420 Experiential Education (2 cr)

One of the following (3 cr):
Engl 207 Persuasive Writing (3 cr)
Engl 208 Personal and Exploratory Writing (3 cr)
Engl 209 Inquiry-Based Writing (3 cr)
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)

One of the following (1-2 cr):
PEB 108 Water-Based Sports and Fitness Activities (1 cr)
PEP 244 Lifeguarding (2 cr)
PEP 266 Aquatic Instructor's Course (2 cr)

Four courses (only two may be B.I.P. courses, Dan 105 or PEB 106, 107) selected from Dan 105; PEB 106, 107, PEP 132, 133, 134, 135, 136, or 202; Rec 220, 221, 222, 223, 224, 225, 226, or 227 (4-5 cr)

Electives to total 128 cr for the degree

Health, Physical Education, Recreation, and Dance Academic Minor Requirements

Coaching Minor

Note: PEP 300 and PEP 418 have prerequisite requirements.

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 220 Coaching Youth Sports (1 cr)
PEP 300 Applied Human Anatomy and Biomechanics **or**
PEP 418 Physiology of Exercise (2-3 cr)

PEP 305	Applied Sports Psych **or**
PEP 310	Cultural and Phil Aspects of Sport (2-3 cr)
PEP 495	Practicum (1 cr)

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)

7 Credits selected from Ballet, Jazz, and Modern:

Dan 216	Techniques (cr arr)
Dan 416	Advanced Technique (cr arr)

Outdoor Recreation Leadership Minor

For information on an academic minor in Outdoor Recreation Leadership, see the Department of Conservation Social Sciences section (Part 5).

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 245	Introduction to Athletic Injuries **or**
H&S 288	First Aid: Emergency Response (2-3 cr)
H&S 350	Stress Management and Mental Health (2 cr)
PEP 201	Fitness Activities and Concepts (2 cr)
PEP 418	Physiology of Exercise (3 cr)
PEP 495	Practicum (40 hrs minimum) (1 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 105	Land-Based Individual and Group Fitness Activities: Dance Aerobics or Jazzercise (1 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 310	Cultural and Philosophical Aspects of Sport (2 cr)
PEP 493	Fitness Assessment and Prescription (3 cr)

Sustainable Tourism and Leisure Enterprises Minor

For information on an academic minor in Sustainable Tourism and Leisure Enterpreises, see the Department of Conservation Social Sciences section (Part 5).

Health, Physical Education, Recreation, and Dance 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 Health, Physical Education, Recreation and Dance. See the College of Graduate Studies section of Part 4 for the general requirements applicable to each degree.

Master of Science, Movement and Leisure Sciences major. This program develops in students the skills, tools, and philosophy necessary to be servant leaders in organizations related to physical activity, sport and recreation.

Doctor of Philosophy. 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.

The department also participates in the interdisciplinary Ph.D. in Neuroscience. Persons interested in doctoral study should visit the College of Education and departmental web page for more information about admission requirements and application procedures.

Department of History

Richard B. Spence, Dept. Chair (315 Admin. Bldg. 83844-3175; phone 208/885-6253). Faculty: Katherine G. Aiken, Ian D.Chambers, Dale T. Graden, Ellen E. Kittell, Sean M. Quinlan, Adam Sowards, Richard B. Spence, Pingchao Zhu. Adjunct 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 Part 6 for courses in History (Hist).

History Undergraduate Curricular Requirements

History (B.A.)

Required course work includes the university requirements (see regulation J-3 on page 49), the general requirements for the B.A. degree, and:

Lower-division courses selected from the following (9 cr):

Hist 101-102	History of Civilization (6 cr)
Hist 111-112	Introduction to U.S. History (6 cr)
Hist 180	Introduction to East Asian History (3 cr)
Hist 290	The Historian's Craft (3 cr)

Upper-division history courses, including a seminar in senior year (27 cr)
Related fields (20 cr)

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 on page 49), the general requirements for the B.S. degree, and:

Lower-division courses selected from the following (9 cr):

Hist 101-102	History of Civilization (6 cr)
Hist 111-112	Introduction to U.S. History (6 cr)
Hist 180	Introduction to East Asian History (3 cr)
Hist 290	The Historian's Craft (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 257-258	Literature of Western Civilization (6 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)

History Academic Minor Requirements

History Minor

History courses chosen from the following* (9 cr):

Hist 101-102	History of Civilization (6 cr)
Hist 111-112	Introduction to U.S. History (6 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 American, or African history and at least 3 cr in Ancient, European, or Asian history) (9 cr)
History elective (3 cr)

**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 of Part 4 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

Debbie A. 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).

Courses

See Part 6 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 on page 49) and CLASS requirements for either the B.A. or B.S. degree apply. This program requires a minimum of 128 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 of Part 4 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.

Martin School of International Studies

Bill L. Smith, 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 Part 6 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 on page 49), the general requirements for the B.A. degree, and:

Econ 201 and 202	Principles of Economics; **or**
Econ 272	Foundations of Economic Analysis (4-6 cr)
IS 310	The United Nations **or**
PolS 235	Political Research Methods and Approaches (3 cr)
IS 495	International Studies Senior Seminar (3 cr)
PolS 237	International Politics **or**
PolS 205	Introduction to Comparative Politics (3 cr)
Stat 150	Intro to Statistics **or**
Stat 251	Statistical Methods (3 cr)

Six credits chosen from:

Anth 220	Peoples of the World (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 323	Political Economy (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 including: Chin 331, Chin 330, Chin 363, Russ 410, and Russ 430. (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)
JS 335 or Soc 335	Terrorism, Society and Justice (3 cr)
PolS 382	Post-Communist Politics (3 cr)
PolS 438	Conduct of 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)

B. International Economics and Business

AgEc 481	Agricultural Markets in a Global Economy (3 cr)
Bus 481	International Finance (3 cr)
Bus 482	International Marketing (3 cr)
Econ 446	International Economics (3 cr)
Econ 447	International Development Economics (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)
For 495	International Wildland Management (1-3 cr, max 3)
Geog 350	Geography of Development (3 cr)
Geog 360	Population Dynamics and Distribution (3 cr)
Geog 409	Rural Development (3 cr)
PolS 480	Politics of Development (3 cr)
REM 358	Natural Resources of the World (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 435	Latin America: The Colonial Era (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 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 305	Reading French Texts (3 cr)
Fren 407	Topics in French Literature (3 cr)
Fren 408	Topics in French 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	European Cultural History, 1600-1800 (3 cr)
Hist 366	Intellectual and Cultural History of Modern Europe (3 cr)
Hist 447	The Renaissance (3 cr)
Hist 451	Age of the French Revolution (3 cr)
Hist 452	19th Century Europe (3 cr)
Hist 455	20th Century 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)
Hist 469	Modern France (3 cr)
PolS 381	Western 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 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)
IS 326	Topics in African Studies (3 cr)
Phil 307	Buddhism (3 cr)

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 Affairs, consisting of the following:

- a minimum of 6 credits chosen from Anth 220, Geog 200, IS 310,JAMM 490, PolS 205, PolS 237
- 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.

School of Journalism and Mass Media

R. Kenton Bird, Director (347 Admin. Bldg 83844-3178; phone 208/885-6458). Faculty: Abubakar Alhassan, Denise Bennett, R. Kenton Bird, H. James Clark, Patricia Hart, Susan Hinz, Bill Loftus, Glenn Mosley, Shawn O'Neal, Vicki Rishling, Julie Scott, Mark Secrist, Rebecca Tallent, Dinah Zeiger.

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 80 of the 128 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 20-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 affiliations with Northwest Public Radio and Idaho Public Television, which have operations located at the Radio-TV Center.

Courses

See part 6 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. All students must have completed a minimum of 58 credits to enroll in any upper-division course (numbered 300 or above) offered by the school. Registration preference in all courses is given to School of Journalism and Mass Media majors.

A student who graduates with a major in the School of Journalism and Mass Media must complete a minimum of 128 credits of which a maximum of 12 credits can come from experiential courses (Practicum – JAMM 401, 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 42 hours of courses in Journalism and Mass Media toward the 128-credit degree requirement and are required to take no fewer than 65 hours in the liberal arts and sciences.

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 121 must be completed with a grade of C or better before a major may enroll in any other Journalism and Mass Media courses.

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 340	Cultural Diversity and the Media (3 cr)
JAMM 377	Documentary (3 cr)
JAMM 379	Hollywood Portrayals of Journalists (3 cr)
JAMM 378	American Television Genres (3 cr)
JAMM 440	Culture and 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 490	Global Media (3 cr)

Nine 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 on page 49), 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.)

Broadcasting and Digital Media (B.A. OR B.S. *)

Required course work includes the university requirements (see regulation J-3 on page 49), 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 370	Digital Audio Production (3 cr)
JAMM 375	Broadcast Television and Studio Program Production (3 cr)
JAMM 376	Digital Animation in Mass Media (3 cr)
JAMM 377	Documentary (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	Digital Media Thesis Production (3 cr)
JAMM 478	Broadcast/Cable/Web Programming (3 cr)

Journalism (B.A. OR B.S. *)

Required course work includes the university requirements (see regulation J-3 on page 49), the School of Journalism and Mass Media core, and the following:

JAMM 225 Reporting (3 cr)

Twelve 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 427	Public Affairs Reporting (3 cr)
JAMM 428	Environmental Journalism (3 cr)

(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 on page 49), the School of Journalism and Mass Media core, and the following:

JAMM 225	Reporting (3 cr)
JAMM 252	Principles of 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)

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 three of the following (9 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)

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 radio-television or digital media courses to meet specific career goals (9 cr)

Credits to total 20 for this Academic Minor

Journalism Minor

JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 225	Reporting (3 cr)
JAMM 341	Mass Media Ethics (3 cr)
JAMM 448	Law of Mass Media (3 cr)

Two journalism-related courses to meet specific career goals (6 cr)

Public Relations Minor

JAMM 100	Media and Society (3 cr)
JAMM 121	Media Writing (3 cr)
JAMM 252	Principles of Public Relations (3 cr)
JAMM 341	Mass Media Ethics (3 cr)
JAMM 448	Law of Mass Media (3 cr)

Two public relations-related courses to meet specific career goals (6 cr)

Program in Latin American Studies

Guadalupe Perez-Anzaldo, Coordinator (308 Admin. Bldg. 83844-3174; phone 208/885-7876; gperezan@uidaho.edu). Faculty: Demetrio Anzaldo-González, Dale T. Graden, Sam H. Ham, Peter E. Isaacson, Irina Kappler-Crookston, William J. McLaughlin, Guadalupe Pérez-Anzaldo, Laura Putsche, William L. Smith.

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 Part 6 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 on page 49), the general requirements for the B.A. degree, including Spanish for the foreign language requirement, and:

Hist 435	Latin America: The Colonial Era (3 cr)
Hist 438	Modern Mexico **or**
Hist 439	Modern Latin America (3 cr)
Span 306	Culture and Institutions of Latin America (3 cr)
Span 401-402	Readings: Spanish Literature and Spanish American Literature (6 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	Comparative Slavery and Emancipation in the Atlantic World (3 cr)
Span 402	Readings: Spanish American Literature (3 cr)
Span 404	Special Topics (with prior approval of program coordinator)

**Students are strongly urged to elect those courses marked with an asterisk and to take Hist 101-102 (History of Civilization) in their freshman year.*

Department of Leadership and Counseling

Russell A. Joki, Dept. Chair (322 E. Front Street, Suite 400, Boise, Idaho 83702; 208/364-4099; rjoki@uidaho.edu). Counseling and School Psychology (CASP) Faculty Moscow campus: Linda Taylor;; Coeur d' Alene CASP campus: Steven Duvall, Sachin Jain. Educational Leadership Faculty Boise campus: Mary E. Gardiner, Michael J. Johnson, Russell A. Joki, 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, Jerry Tuchscherer, Martha C. Yopp.

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, post-secondary 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 Part 6 for courses in Adult/Organizational Learning and Leadership (AOLL), Counseling and School Psychology (CASP) and Educational Administration (EDAD).

Leadership and Counseling Graduate Academic Certificates Requirements

Adult Basic Education/GED Instructor 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)

Credits to total 15 for this Academic Certificate

Human Resource Development 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 of Sustainable Leadership (3 cr)
AOLL 583	Organizational Leadership (3 cr)

Credits to total 15 for this Academic Certificate

Leadership and Counseling Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Counseling and School Psychology and Educational Leadership. See the College of Graduate Studies section of Part 4 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.

Graduate Education/Educational Leadership. 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.

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: Zaid Abdo, Hirotachi Abo, Lyudmyla Barannyk, Arie Bialostocki, Dora Bialostocki, Monte Boisen, Rob Ely, Frank Gao, Jennifer Johnson-Leung, Paul Joyce, Stephen M. Krone, Mark J. Nielsen, Cynthia M. Piez, Brooks Roberts, Matthew Rudd, Hunter S. Snevily, Kirk C. Trigsted, Hong Wang.

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–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 Part 6 for courses in Mathematics (Math).

Mathematics Undergraduate Curricular Requirements

Mathematics (B.S.)

Required course work includes the university requirements (see regulation J-3 on page 49) 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)
Math 330	Linear Algebra **or**
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 (3 cr)
Math 462	Abstract Algebra **or**
Math 472	Introduction to Analysis 2 (3 cr)
Math 471	Introduction to Analysis 1 (3 cr)

Three credits in Math electives numbered above 310.

Six credits chosen from Math 385, ECE 455, Stat 401, or any Math course numbered above 400.

Supporting Courses:

Phys 211	Engineering Physics I (3 cr)
Phys 212	Engineering Physics II (3 cr)
Stat 251	Statistical Methods **or**
Stat 301	Probability and Statistics (3 cr)

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 1 (3 cr)
Math 472	Introduction to Analysis 2 (3 cr)

Supporting Courses:

CS 112	Introduction to Problem Solving and Programming **or**
CS 120	Computer Science I (3-4 cr)
Stat 401	Statistical Analysis (3 cr)
Stat 423	Beginning SAS Programming (1 cr)

One course selected from the following (3-4 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 353	Quantitative Economics and Forecasting (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)

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 385	Theory of Computation (3 cr)
Math 395	Analysis of Algorithms (3 cr)
Math 428	Numerical Methods (3 cr)

Three courses from the following (9 cr):

Math 415	Cryptography (3 cr)
Math 426	Discrete Optimization (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 (3 cr)
Math 462	Abstract Algebra (3 cr)
Math 476	Combinatorics (3 cr)
Math 480	Partial Differential Equations (3 cr)

Two courses from the following (6 cr):

Math 310	Ordinary Differential Equations (3 cr)
Math 326	Linear Optimization (3 cr)
Math 376	Discrete Mathematics II (3 cr)
Stat 301	Probability and Statistics (3 cr)

Any Math course numbered 401-499, Stat 401, or ECE 455 (3 cr)

Supporting courses:

CS 120	Computer Science I (4 cr)
CS 121	Computer Science II (4 cr)

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 1 (3 cr)
Math 472	Introduction to Analysis 2 (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:

CS 112	Introduction to Problem Solving and Programming **or**
CS 120	Computer Science I (3-4 cr)
Stat 301	Probability and Statistics **or**
Math 452	Mathematical Statistics (3 cr)

Two courses at the 300 level or above in one area of science, engineering, or other quantitative area.

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)

In addition to the above courses, an additional three math courses numbered above 400, excluding Math 513-519 (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)
CS 112	Introduction to Problem Solving and Programming **or**
CS 120	Computer Science I (3-4 cr)
Econ 201	Principles of Economics (3 cr)
Econ 202	Principles of Economics (3 cr)
Stat 401	Statistical Analysis (3 cr)
Stat 423	Beginning SAS Programming **or**
Bus 339	Spreadsheet Modeling (1 cr)

At least two course selected from the following (6 cr):

Bus 302	Intermediate Financial Management (3 cr)
Bus 408	Security Analysis (3 cr)
Bus 463	Portfolio Management (3 cr)
Bus 464	Derivatives and Financial Engineering (3 cr)
Bus 465	Introduction to Market Trading (3 cr)
Bus 481	International Finance (3 cr)
Econ 351	Intermediate Macroeconomic Analysis (3 cr)
Econ 352	Intermediate Microeconomic Analysis (3 cr)

Both of the following:

Bus 364	Insurance (3 cr)
Math 455	Applied Actuarial Science (1 cr)

One course selected from the following (3-4 cr):

Stat 301	Probability and Statistics (recommended) (3 cr)
Stat 251	Statistical Methods (3 cr)

One course selected from the following (3 cr):

Econ 353	Quantitative Economics and Forecasting (3 cr)
Stat 433	Econometrics (3 cr)
Stat 550	Regression (3 cr)

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 401	Statistical Analysis (3 cr)

Any other 400-level math course

Supporting courses:

Acct 202	Introduction to Managerial Accounting (3 cr)
Bus 370	Introduction to Operations Management (3 cr)
CS 112	Introduction to Problem Solving and Programming **or**
CS 120	Computer Science I (3-4 cr)
Stat 301	Probability and Statistics (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 and Design (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/ Stat 433	Econometrics (3 cr)

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)

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 of Part 4 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, 510-519, 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 170-175-275).

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, 510-519, 599, 600, seminars, and directed study) be completed or transferred (with at least 18 credits completed at UI). The department requires the ability to translate into English from mathematical work in one of the languages: Chinese, French, German, and Russian; a substitute language is sometimes allowed.

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; http://www.uidaho.edu/engr/ME). Faculty: Michael J. Anderson, Steven W. Beyerlein, Ralph S. Budwig, John C. Crepeau, Karen R. Den Braven, Donald F. Elger, Fred Gunnerson, Jay McCormack, Edwin M. Odom, Steven G. Penoncello, Gabriel Potirniche, Karl K. Rink, Larry A. Stauffer, Judith A. Steciak, Robert R. Stephens, Akira Tokuhiro, Eric Wolbrecht.

Mechanical engineering is concerned with the application of the principles of science and technology in the creation of products and systems to 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 extend and to 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.

Mechanical Engineering Objective Statement

(Changes subsequent to this publishing may be viewed at www.uidaho.edu./engr/ME/)

Undergraduate Program: The Mechanical Engineering Program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, ph. 410-347-7700. Our educational objectives are based on the needs of our constituencies. We focus on the professional and personal development of our students. We continuously assess and improve our undergraduate curriculum. Our department is a college and university leader in the use of innovative teaching methods, in horizontal and 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 the faculty. The strengths of our program are a strong engineering science foundation as demonstrated by outstanding Fundamentals of Engineering Exam performance; a strong design experience featuring 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.

Program Objective Statement

As a faculty we are committed to a transformational educational experience that focuses on both the (a) professional and (b) personal development of our students. We want our graduates to have and (c) continue to develop a strong foundation in the science of engineering. We want our engineers to know how to do the (d) application of engineering. We want our engineers to be (e) known as leaders in their chosen career path. We expect our graduates to (f) have a positive impact on both their profession and community and to be able to (g) effectively communicate their role as engineers.

Graduate Program: We maintain and continuously improve a graduate curriculum focused in five sub-areas: mechanics and materials science, dynamics systems, thermodynamics and energy, design and manufacturing, and fluids and heat transfer. We conduct research in relevant areas of engineering. Graduate students receive quality mentoring and advising.

Service: We provide engineering services (teaching, consulting, outreach, testing and research) to support industry and national laboratories.

We support education throughout Idaho and beyond by:

- Providing quality distance education through the Engineering Outreach Program.
- Supporting and including our faculty at distance sites.
- Collaborating with faculty at other educational centers.

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, donations of time, equipment and money, and periodic evaluation.

General questions regarding the undergraduate program should be addressed to the Advising Coordinator at (telephone 208/885-5024; bschoenb@uidaho.edu). Faculty members are available to discuss details of the program in their specialty areas with interested students.

An academic minor in mechanical engineering is available. Contact the department for more information.

Mechanical Engineering Graduate Program. The following graduate degrees are available in mechanical engineering: Ph.D., M.S., and

M.Engr. (non-thesis degree). The department also offers a program in nuclear engineering. Please see appropriate section in this catalog. Minimum preparation for graduate study in mechanical engineering is a B.S. degree in mechanical engineering that is accredited by the Accreditation Board for Engineering and Technology (A.B.E.T.). 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.

Graduate students will develop a plan of study in consultation with their academic advisor that will provide for reasonable concentration in a particular field of interest and a selection of related courses, some of which may be taught outside of the department. The thesis topic will generally be selected from research topics being pursued by members of the departmental faculty.

Courses

See Part 6 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 the Accreditation Board for Engineering and Technology.

Note: Pre-advising is required to register in any ME course. To graduate in this program, a student may 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 on page 49), 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 320	Engineering Thermodynamics and Heat Transfer (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 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	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (4 cr)
Phys 213	Engineering Physics III (4 cr)

One from the following (3-4 cr):

Econ 201	Principles of Economics (3 cr)
Econ 202	Principles of Economics (3 cr)
Econ 272	Foundations of Economics (4 cr)

Nine credits of the following Technical Electives (9 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 415	Materials Selection and Design (3 cr)
ME 417 or ME 517	Turbomachinery (3 cr)
ME 418 or ME 518	Discrete System Simulation and Animation (3 cr)
ME 420 or ME 520	Fluid Dynamics (3 cr)
ME 421 or ME 521	Advanced Computer Aided Design (3 cr)
ME 422	Applied Thermodynamics (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 451 or ME 551	Experimental Methods in Fluid Dynamics and Heat Transfer (3 cr)
ME 461	Fatigue and Fracture Mechanics (3 cr)
ME 481	Control Systems (3 cr)
ME 525	Advanced Heat Transfer (3 cr)
ME 526	Statistical Thermodynamics (3 cr)
ME 527	Thermodynamics (3 cr)
ME 529	Combustion and Air Pollution (3 cr)
ME 534	Mechanics of Composite Materials (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)
ME 585	Design for Six Sigma (3 cr)

Six credits of the following Technical Electives (6 cr):

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)
Math 330	Linear Algebra (3 cr)
Math 371 or Phys 371	Mathematical Physics (3 cr)
Math 420	Complex Variables (3 cr)
Math 428	Numerical Analysis (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 1 (3 cr)
Math 472	Introduction to Analysis 2 (3 cr)
Math 480	Partial Differential Equations (3 cr)
ME 401	Engineering Team Projects (2-3 cr)
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 415	Materials Selection and Design (3 cr)
ME 417 or ME 517	Turbomachinery (3 cr)
ME 418 or ME 518	Discrete System Simulation and Animation (3 cr)
ME 420 or ME 520	Fluid Dynamics (3 cr)

ME 421 or ME 521	Advanced Computer Aided Design (3 cr)
ME 422	Applied Thermodynamics (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 451 or ME 551	Experimental Methods in Fluid Dynamics and Heat Transfer (3 cr)
ME 461	Fatigue and Fracture Mechanics (3 cr)
ME 481	Control Systems (3 cr)
ME 499	Directed Study (cr arr)
ME 525	Advanced Heat Transfer (3 cr)
ME 526	Statistical Thermodynamics (3 cr)
ME 527	Thermodynamics (3 cr)
ME 529	Combustion and Air Pollution (3 cr)
ME 534	Mechanics of Composite Materials (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)
ME 585	Design for Six Sigma (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 401	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 407	Group Mentoring III (1 cr)
ME 408	Group Mentoring IV (1 cr)

The minimum number of credits for the degree is 128, not counting Engl 101, Math 143, and other courses that might be required to remove deficiencies.

To continue in the program, students majoring in mechanical engineering 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 better than a C in mathematics, science or engineering courses used to satisfy lower division requirements before registration is permitted in upper-division mechanical engineering courses. The specific lower-division courses are: Chem 111; Engr 210, Engr 220, and Engr 240; Math 170, Math 175, Math 275; ME 123, ME 223, MSE 201; and Phys 211, Phys 212, and Phys 213. In addition, a grade higher than C must be earned in at least five of these courses. A grade of P (pass) in any of these courses is considered as a C grade in satisfying this certification requirement.

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)
Bus 439	Systems and Simulation **or**
Bus 456	Quality Management (3 cr)
CTE 352	Manufacturing: Metallic Materials and Processes (3 cr)
Econ 202	Principles of Economics (3 cr)
ME 481	Control Systems (3 cr)
ME 410	Principles of Lean Manufacturing (3 cr)
ME 415	Materials Selection and Design (3 cr)

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 324	Dynamic Analysis in Machine Design (3 cr)
ME 325	Machine Component Design I (3 cr)
ME 345	Heat Transfer (3 cr)

Mechanical Engineering Graduate Academic Certificates Requirements

Heating, Ventilation and Air Conditioning (HVAC) 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	(s) Analysis of Thermal Energy Systems

Credits to total 12 for this Academic 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 of Part 4 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 Microbiology, Molecular Biology and Biochemistry

Bruce L. Miller, Interim Dept. Head (142 Life Science Bldg 83844-3052; phone 208/885-7966; mmbb@uidaho.edu; www.ag.uidaho.edu/mmbb). Faculty: Gustavo A. Arrizabalaga, Carolyn H. Bohach, Gregory A. Bohach, Allan B. Caplan, Douglas G. Cole, Ronald L. Crawford, Elizabeth (Lee) Fortunato, Kurt E. Gustin, Patricia L. Hartzell, Zonglie Hong, Jill L. Johnson, Scott D. Kobayashi, Wusi C. Maki, Bruce L. Miller, Scott A. Minnich, Tanya Miura, Andrzej Paszczynski. Adjunct Faculty: I. Francis Cheng, Susan E. Childers; Margaret A. Davis, Guy R. Knudsen, Matthew J. Morra, Troy L. Ott, Eva M. Top. Affiliate Faculty: William A. Apel, Debonny Barsky-Shoaf, Amy E. Bryant, Frederick S. Colwell, James K. Fredrickson, Rick L. Ornstein, Yong Ho Park, Francisco F. Roberto, Robert D. Rogers, Dennis L. Stevens, Daphne L. Stoner, Kasthuri Venkateswaren, James H. Wolfram. Emeritus faculty: Donald L. Crawford, Richard Heimsch, Duane LeTourneau

The Microbiology major is concerned with the study of microscopic forms of life, their distribution, importance, and role in such diverse areas as control and diagnosis of diseases, agricultural biotechnology, environmental and pollution control, and genetic engineering.

The molecular biology and biotechnology and biochemistry majors are the study of the molecular basis of life, the chemical, physical, and genetic properties of living things, their metabolic processes, and the new technologies for the genetic engineering of organisms.

The Department of Microbiology, Molecular Biology and Biochemistry offers the degrees of Bachelor of Science in Microbiology, Bachelor of Science in Molecular Biology and Biotechnology and Bachelor of Science in Biochemistry. Students may choose to emphasize general microbiology, molecular biology and biotechnology or biochemistry by appropriate course choices. In addition, the department offers the degree of Bachelor of Science in Medical Technology for students who have earned the Bachelor of Science in Microbiology at UI and have completed medical technology training in an accredited hospital school. In each case, the curriculum emphasizes the need for a broad cultural base and specific training in biology, chemistry, mathematics, and physics, in addition to courses in the specialty area. Well-equipped laboratories are available and advanced students are encouraged to undertake research problems with the faculty. The department also provides courses for students who are majoring in other areas of the university and wish to obtain increased understanding of the sciences. This degree is a perfect entry into professional schools (medical, dental, pharmacy, medical technology) and allied health fields (nursing, veterinary medicine, dental hygienist). Students are invited to inquire about academic minors in the department.

The Department of Microbiology, Molecular Biology and Biochemistry is a research and teaching unit within the College of Agricultural and Life Sciences with extensive research expertise and instructional responsibilities in molecular biology, microbiology, and biochemistry. Scientists in the department are in the forefront of research with bacteria, fungi, viruses, plants, protein chemistry, molecular motors, and environmental science. The department is actively engaged in the use of emerging technology and maintains state-of the art equipment for scientific analysis. Advanced students are encouraged to undertake research problems where they work with the faculty in well-equipped laboratories. This degree is a perfect entry into professional schools (medical, dental, pharmacy, medical technology) and allied health fields (nursing, veterinary medicine, dental hygienist). The department welcomes students who are majoring in other areas of the university and wish to obtain increased understanding of the sciences. Students are invited to inquire about academic minors in the department.

Current research efforts designed to add to our scientific knowledge base include studies on the biochemistry and molecular biology of host-pathogen interactions, molecular motors, microbial toxins, environmentally-significant degradative processes, the regulation of gene expression, developmental biology of prokaryotes and eukaryotes, regulation of sporulation, plant molecular, cellular and developmental biology, and microbial ecology. In addition to these basic research interests, faculty are involved in applying new knowledge to applied problems in biotechnology. Much of this work is in association with the University of Idaho's Environmental Biotechnology Institute (EBI), which coordinates environmental biotechnological research between university departments and encourages joint endeavors between diverse disciplines.

This combination of basic and applied research, funded at the multi-million dollar level, provides a stimulating environment where **graduate students** can gain extensive research experience in all aspects of modern microbiology, biochemistry, and molecular biology. Students can select from a broad range of courses presenting the latest information in all areas of biochemical and microbial sciences. All members of the departmental faculty are actively involved in research and teaching programs that provide students with a broad perspective of important problems in modern biology. Prospective students may call or write to the department (or e-mail mmbb@uidaho.edu) or individual faculty members for additional information concerning ongoing research activities and the availability of research assistantships.

In addition to the admission requirements of the Graduate College, prospective graduate students should have maintained an overall B average for all course work taken and have majored in an area of biological or chemical sciences. Results of the Graduate Record Examination (GRE) and three letters of recommendation are required. Students for whom English is a foreign language must have a TOEFL score of at least 580. Prior training should have included courses in general biology and chemistry, organic chemistry, biochemistry, calculus, physics, and introductory microbiology. Acceptance of students deficient in some of these areas will be considered on an individual basis. In such cases, it will be expected that the deficiencies will be removed early during the graduate program.

Courses

See Part 6 for courses in Microbiology, Molecular Biology and Biochemistry (MMBB).

Microbiology, Molecular Biology and Biochemistry Undergraduate Curricular Requirements

Biochemistry (B.S.Biochem.)

Required course work includes the university requirements (see regulation J-3 on page 49) and:

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 210	Genetics **or**
Gene 314	General Genetics (3-4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253	Quantitative Analysis (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 380	Introductory Biochemistry (4 cr)
MMBB 382	Introductory Biochemistry Laboratory (2 cr)
MMBB 400	Seminar (1cr)
MMBB 442	Advanced Biochemistry II (3 cr)
Phys 211	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (4 cr)
Stat 251	Statistical Methods (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 465	Principles of Biophysical Chemistry (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)
MMBB 520	Instrumental Analysis (2 cr)

Electives to total 128 credits for the degree

Microbiology (B.S.Microbiol.)

Required course work includes the university requirements (see regulation J-3 on page 49) and:

Biol 210	Genetics **or**
Gene 314	General Genetics (3-4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Chem 372	Organic Chemistry II (3 cr)
Engl 317	Technical Writing **or**
Engl 207	Persuasive Writing **or**
Engl 208	Personal and Exploratory Writing **or**
Engl 209	Inquiry-Based Writing (3 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)
MMBB 154	Introductory Microbiology (3 cr)
MMBB 250	General Microbiology (3 cr)
MMBB 255	General Microbiology Laboratory (2 cr)
MMBB 380	Introductory Biochemistry (4 cr)
MMBB 400	Seminar (1 cr)
MMBB 440	Advanced Laboratory Techniques **or**
MMBB 401	Undergraduate Research (4 cr in one semester)
Phys 111	General Physics I **or**
Phys 211	Engineering Physics I (4 cr)
Phys 112	General Physics II **or**
Phys 212	Engineering Physics II (4 cr)
Stat 251	Statistical Methods (3 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)
MMBB 471	Advanced Pathogenesis: Host Pathogen Interactions (3 cr)

At least two of the following molecular biology electives (5-6cr):

MMBB 422	Cellular and Molecular Basis of Disease (3 cr)
MMBB 450	Molecular Mechanisms in Microbiology (2 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)

Total 128 cr for the 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.

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 (MMBB 421) 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 of MMBB 421 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 on page 49) and:

Biol 210	Genetics **or**
Gene 314	General Genetics (3-4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Chem 372	Organic Chemistry II (3 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)
MMBB 154	Introductory Microbiology (3 cr)
MMBB 250	General Microbiology (3 cr)
MMBB 255	General Microbiology Laboratory (2 cr)
MMBB 380	Introductory Biochemistry (4 cr)
MMBB 421	Hospital Internship (32 cr)
MMBB 400	Seminar (1 cr)
MMBB 409	Immunology (3 cr)
MMBB 412	Pathogenic Microbiology (3 cr)
Phys 111	General Physics I **or**
Phys 211	Engineering Physics I (4 cr)
Phys 112	General Physics II **or**
Phys 212	Engineering Physics II (4 cr)
Stat 251	Statistical Methods (3 cr)

One of the following English Courses (3 cr):

Engl 207	Persuasive Writing (3 cr)
Engl 208	Personal and Exploratory Writing (3 cr)
Engl 209	Inquiry-Based 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)

Electives to total 128 credits for the degree

Molecular Biology and Biotechnology (B.S.M.B.B.)

Required course work includes the university requirements (see regulation J-3 on page 49) and:

Biol 115	Cells and the Evolution of Life (4 cr)
Biol 210	Genetics **or**
Gene 314	General Genetics (3-4 cr)
Chem 111	Principles of Chemistry I (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Chem 253	Quantitative Analysis (5 cr)
Chem 277	Organic Chemistry I (3 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Chem 372	Organic Chemistry II (3 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)
MMBB 250	General Microbiology (3 cr)
MMBB 255	General Microbiology Lab (2 cr)
MMBB 380	Introductory Biochemistry (4 cr)
MMBB 382	Introductory Biochemistry Laboratory (2 cr)
MMBB 400	Seminar (1cr)
MMBB 442	Advanced Biochemistry II (3 cr)
MMBB 485	Prokaryotic Molecular Biology **or**
MMBB 487	Eukaryotic Molecular Genetics (3 cr)
MMBB 488	Genetic Engineering (3 cr)
Phys 111	General Physics I **or**
Phys 211	Engineering Physics I (4 cr)
Phys 112	General Physics II **or**
Phys 212	Engineering Physics II (4 cr)

Stat 251 Statistical Methods (3 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 432 Virology (3 cr)
- MMBB 475 Cell Biology (3 cr)
- MMBB 485 Prokaryotic Molecular Biology (3 cr)*
- MMBB 487 Eukaryotic Molecular Genetics (3 cr)*
- MMBB 520 Instrumental Analysis (2 cr)

Electives to total 128 credits for the degree

Note: Either MMBB 485 or 487 may be used as an elective if not taken above as a required course.

Microbiology, Molecular Biology and Biochemistry Academic Minor Requirements

Biochemistry Minor

MMBB 380 Introductory Biochemistry (4 cr)
MMBB 442 Advanced Biochemistry II (3 cr)

Courses selected from the following (12 cr):
- Chem 302, 303 Principles of Physical Chemistry and Lab (or equiv) (4 cr)
- MMBB 382 Intro Biochem Lab or 484 Biochem Lab (2 cr)
- MMBB 400 Seminar (2 cr)
- MMBB 401 Undergrad Research (1-4 cr)

Microbiology Minor

MMBB 250 General Microbiology (3 cr)
MMBB 255 General Microbiology Lab (2 cr)
MMBB 380 Introductory Biochemistry (4 cr)

Three courses selected from the following (8-10 cr):
- MMBB 409 Immunology (3 cr)
- MMBB 412 Pathogenic Microbiology (3 cr)
- MMBB 416 Food Microbiology (3 cr)
- MMBB 425 Microbial Ecology (3 cr)
- MMBB 440 Advanced Laboratory Techniques (4 cr)
- MMBB 450 Molecular Mechanisms in Microbiology (2 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)

Molecular Biology and Biochemistry Minor

MMBB 380 Introductory Biochemistry (4 cr)
MMBB 442 Advanced Biochemistry II (3 cr)
MMBB 476 Biophysical Chemistry, **or**
Chem 302 Principles of Physical Chemistry, **or**
Chem 305-306 Physical Chemistry (3 cr)

Three courses from the following (8-10 cr):
- MMBB 382 Introductory Biochemistry Lab (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)

Microbiology, Molecular Biology and Biochemistry Graduate Degree Programs

Candidates must fulfill the requirements of the College of Graduate Studies and the Department of Microbiology, Molecular Biology and Biochemistry. See the College of Graduate Studies section of Part 4 for the general requirements applicable to each degree.

Seamless Bachelor of Science/Master of Science. Thesis and non-thesis options are offered. The seamless B.S./M.S. degree program in microbiology, molecular biology and biochemistry enables qualified students to pursue the M.S. degree before completion of a B.S. degree in either microbiology, biochemistry or molecular biology/biotechnology. The classical B.S. degree from MMBB is typically completed by the fourth year of undergraduate training and will continue to be the route selected by most students. However, students accepted into the seamless program may work toward completion of both the B.S. and M.S. requirements during their fourth and fifth years or additional years if necessary. Successful students will receive both degrees upon completion of their studies. Provided that adequate academic and research progress is achieved, some students could complete the requirements for both the B.S. and M.S. in five years. Requirements for completion of the B.S. and M.S. degrees through the seamless program, and qualifications of graduates, are expected to be identical to those earning the degrees through the conventional path in which the two degrees are earned sequentially. Students interested in this program should discuss their options with their academic advisors. Identification of a graduate advisor plus formal application and acceptance to the MMBB graduate program and the College of Graduate Studies must be completed before the beginning of the fourth year. Once accepted, students must work toward completing the requirements for both degrees under the supervision of their graduate advisors and graduate committees in accordance with departmental and university guidelines. In regard to official standing within the university, students in the seamless program are classified as graduate students during their fourth and fifth years.

Master of Science. Thesis and non-thesis options are offered. The M.S. degree may be earned in microbiology, molecular biology and biochemistry. 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. Students must take MMBB 589 during the fall and spring of the first year and take MMBB 511 for 1 credit every year. The student is also expected to include MMBB 501 (seminar) each semester. One semester of teaching is required and is obtained through participation in the department's teaching programs. Students are required to pass the core courses MMBB 541, 542, and either 585 or 587. The final exam for MMBB 589 serves as the qualifying exam and is given in May of the first year. A master's candidate prepares a written thesis documenting completion of a laboratory research program. The thesis must be approved by the student's major professor and supervisory committee and be defended during an oral examination. Publication of data from the thesis in the peer-reviewed literature is expected.

Doctor of Philosophy. The Ph.D. degree may be earned in microbiology, molecular biology and biochemistry. A doctoral student develops a graduate program of at least 78 semester hours in consultation with his or her major professor and graduate committee. Students must take MMBB 589 during the fall and spring of the first year. The final exam for MMBB 589 serves as the qualifying exam and is given in May of the first year. Defense of a formal research proposal is required during the second year as part of the preliminary exam. The student is also expected to take MMBB 511 every year and enroll in 501 (seminar) each semester, with active participation in the form of one or more seminar presentations during the course of his or her graduate career. Students are required to pass the core courses MMBB 541, 542, and either 585 or 587. Two semesters of participation in the department's teaching programs are required. A preliminary examination is required in year two prior to admission to final candidacy for the degree. All candidates prepare a formal dissertation reflecting original thought and independent laboratory investigation and defend it during an oral presentation as a final step toward their degree. Publication of data from the dissertation in the peer-reviewed, scientific literature is expected.

Department of Military Science

MAJ Jay C. Gardner, Dept. Head (West End, Mem. Gym. 83844-2424; phone 208/885-6528; armyrotc@uidaho.edu). Faculty: MAJ Shane Goodson, SFC Joseph Petzinger, MSG Thomas Thon, CPT Timothy Tate.

Army ROTC, as represented at UI by the Department of Military Science, 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. At this time active duty is not a requirement but is something for which students compete. Graduates also choose from among 26 different branches or specialties. Those not choosing active duty serve with the Army Reserves or Army National Guard on a part-time basis. Two- and three-year scholarships are available.

All levels of course work combine classroom instruction with practical exercises. The basic course, consisting of a one-credit course each freshman semester and a two-credit course each sophomore semester, is designed to provide men and women with information on opportunities as an officer in the Army on active duty or in the National Guard or Army Reserve. The two-year basic curriculum covers Army career opportunities, confidence building exercise, map reading, leadership, management principles, first aid, and other life skills with broad applications beyond the military. Students may voluntarily participate in one of several adventure activities (rappelling, rifle marksmanship, white water rafting, downhill skiing, paintball etc.). Basic-course students, other than scholarship students, do not make a military commitment during this period. These students survey Army opportunities and decide whether to continue in the program as advanced-course students.

The advanced course consists of a three-credit course normally taken each semester during the last two years of university study and includes a five-week advanced camp at Fort Lewis, Washington (normally after the junior year). Students in the advanced course receive monthly stipends during the school year. Study centers on leadership styles and techniques with special emphasis placed on small-unit leadership.

The primary objective of the Army ROTC program is to develop leadership and management skills in students. Supplementary objectives include enhancement of the student's abilities in speaking and writing, goal seeking, and problem solving. Key to the program is the development of personal attributes essential to military service. Those attributes include sound situational assessment, decision making, and the ability to know, understand, and lead people. Additionally, the department hopes to cultivate within its students a strong sense of personal integrity, self-discipline, and responsibility.

Prior to commissioning, all cadets must demonstrate proficiency in communications, military history, and computer literacy. 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, www.armyrotc.uidaho.edu/.

Courses

See Part 6 for courses in Military Science (MS).

Military Science Academic Minor Requirements

Military Science Minor

MS 301-302	Advanced Leadership and Management (6 cr)
MS 311-312	Leadership Lab (2 cr)
MS 401-402	Seminar in Leadership and Management (6 cr)
MS 411-412	Leadership Lab (2 cr)

Four to six courses from the following (10 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 151, 152	Physical Fitness Training (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)
MS 251, 252	Physical Fitness Training (2 cr)
MS 289	Leadership Training Course (1-6 cr)
MS 299	Directed Study (cr arr, max 4 cr)
MS 351, 352	Physical Fitness Training (2 cr)
MS 451, 452	Physical Fitness Training (2 cr)
MS 471-472	Command and Staff Functions (4 cr)
MS 489	National Advanced Leadership Course (1-6 cr)

Armed Forces Credits received for prior military service as determined by the University

**Note: A maximum of 4 credits of MS 151, 152, 251, 252, 351, 352, 451, and 452 may be used towards completion of the Military Science Minor.*

Lionel Hampton School of Music

Kevin B. Woelfel, Director (205 Music Bldg. 83844-4015; phone 208/885-7281; music@uidaho.edu; www.music.uidaho.edu); Susan M. Hess, Assistant Director. Faculty: Carol Padgham Albrecht, Pamela G. Bathurst, Daniel J. Bukvich, Barry Bilderback, J. Roger Cole, Ferenc P. Cseszko, Robert H. Dickow, Loraine D. Enloe, Leonard L. Garrison, Alan J. Gemberling, Susan M. Hess, Torrey E. Lawrence, , James L. Murphy, Michael Murphy, James E. Reid, Vanessa R. Sielert, Vern A. Sielert, Chris A. Thompson, Kevin B. Woelfel, Kay Zavislak. Adjunct 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 (www.class.uidaho.edu/music/mastintro.asp) 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 Part 6 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.

MusH 101 and 111. Music majors may NOT use MusH 111 to satisfy UI core curriculum requirements. MusH 111 is part of the professional course work–12 credits in music history–required for the major.

If a music major takes MusH 101, he or she must have 14 credits of courses other than MusH 101 in order to satisfy the humanities/social sciences core requirement.

If a transfer student has taken a 100-level survey of music course prior to enrollment as a music major in the School of Music, the student may use this course in lieu of MusH 111. If world music was not addressed in the transfer course, students will have to meet a level of competency in world music.

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.

Keyboard Proficiency. Minimum keyboard proficiency for all music majors, including transfer students but excluding BFA musical theatre majors, is met by passing the LHSOM keyboard proficiency examination. Transfer students who have either completed all required piano classes or have passed a proficiency exam at another accredited institution, must take the LHSOM keyboard proficiency exam within their first two semesters, or they will be required to take the two-year class piano sequence. The keyboard proficiency exam must be completed by music majors (other than piano majors) prior to enrollment in MusA 114, Studio Instruction: Piano. For more information, go to www.class.uidaho.edu/music/studres.asp.

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 334, or for a composition major to enroll in MusC 325, the student must have been granted upper-division standing (UDS). Except for double majors where one major is not in music, students applying for UDS must: (1) have completed three semesters of music theory (MusC141/142/241), Aural Skills (MusC 139/140/239), one semester of music history (MusH 111), and three semesters of Piano Class (MusA 145/146/245), all with a grade of "C" or better; (2) have passed with a grade of "C" or better or be currently enrolled in Theory IV (MusC 242), Aural Skills IV (MusC 240), and Piano Class IV (MusA 246); and (3) 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, 334, or MusC 325). 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 will be asked to leave the program.

For a B.F.A. musical theatre major to enroll in MusA 324, the student must have been granted B.F.A. standing. B.F.A. musical theatre students applying for B.F.A. standing must: (1) have completed two semesters of music theory, two semesters of aural skills, one semester of music history (MusH 101 or 111), and two semesters of class piano all with a grade of "C" or better; and (2) have passed a special jury examination demonstrating the mastery of the fundamentals of the student's major area of performance and the potential to continue improving in a manner that will lead to the successful completion of performance requirements of the degree. Students who fail to pass the UDS requirements within three tries will be asked to leave the program.

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.

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 in Part 3. 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.

Music: Applied Music (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3 on page 49), 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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	Theory of Music (10 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, 322, 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)

Electives to total 128 cr for the 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: In order to graduate, piano students must pass a Keyboard Scale and Arpeggio Proficiency Exam. This exam is to be completed either at the senior recital audition or at a piano jury during the student's final year in school.

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 on page 49), 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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	Theory of Music (10 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, 322, 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 (6 cr)
Upper-division MusC elective (2 cr)
MusA ensembles (in eight different semesters) (8 cr)

Electives to total 128 cr for the 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)
MusH J440/J540	Studies in American Music (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 on page 49), 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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	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, 322, 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) (8 cr)

Electives to total 128 cr for the 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 on page 49) 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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	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, 322, 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)

Electives to total 128 cr for the degree

Note: In order to graduate, piano students must pass a Keyboard Scale and Arpeggio Proficiency Exam. This exam is to be completed either at the senior recital audition or at a piano jury during the student's final year in school.

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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	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, 322, 323	Music in Western Civilization (9 cr)
MusH 450	Orchestral Literature **or**
MusH 451	Repertoire (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 (eight different semesters chosen from MusA 121/321 Concert Band, MusA 122/322 Orchestra, MusA 125/325 Symphonic Band or 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)
Electives to total 128 cr for the 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 on page 49) 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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	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, 322, 323	Music in Western Civilization (9 cr)
MusH 452	Solo Vocal Repertoire (2 cr)
MusH 453	Opera 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 283-284	Diction for Singers (4 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 (2 cr)
Electives to total 128 cr for the degree

Music: Composition (B.Mus.)

Required course work includes the university requirements (see regulation J-3 on page 49) 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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	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, 322, 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) (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)) (one semester of MusA 315, Collaborative Piano, is reqd of students whose major applied medium is keyboard) (2 cr)
Music electives to complete 84 cr in music (4 cr)
Electives to total 128 cr for the 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)

Note: In order to graduate, piano students must pass a Keyboard Scale and Arpeggio Proficiency Exam. This exam is to be completed either at the senior recital audition or at a piano jury during the student's final year in school.

Music: Business (B.Mus.)

Required course work includes the university requirements (see regulation J-3 on page 49) and:

Acct 201	Introduction to Financial Accounting **and**
Acct 202	Introduction to Managerial Accounting (6 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 201-202	Principles of Economics (6 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)

MusA ensemble (in eight different semesters) (see "Ensemble Participation" above for requirements) (8 cr)

MusC 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	Theory of Music (10 cr)

MusC elective at the 300 or 400 level (2-3 cr)

MusH 111	Introduction to Music Literature (3 cr)
MusH 321, 322, 323	Music in Western Civilization (9 cr)

MusH elective at the 400 level (2-3 cr)

MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)

Music electives (to total 64 credits in music) (0-2 cr)

Stat 251	Statistical Methods (3 cr)

Two of the following courses (6 cr):

BLaw 265	Legal Environment of Business (3 cr)
Bus 324	Buyer Behavior (3 cr)
Bus 412	Human Resource Management (3 cr)
Bus 413	Leadership and Organizational Behavior (3cr)
Bus 425	Retail Distribution Management (3 cr)
Bus 427	Services Marketing (3 cr)

Note: In order to graduate, piano students must pass a Keyboard Scale and Arpeggio Proficiency Exam. This exam is to be completed either at the senior recital audition or at a piano jury during the student's final year in school.

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 283-284 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 of Part 4.

Required course work includes the university requirements (see regulation J-3 on page 49) 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 302	Teaching Culturally Diverse Learners (4 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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	Theory of Music (10 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, 322, 323	Music in Western Civilization (9 cr)
MusT 382	Elementary School Music Methods for Music Majors (3 cr)
MusT 383	Principles of Music Teaching (3 cr)
MusT 385	Choral Music in the Secondary School (2 cr)
MusT 432	Practicum: Music Teaching (14 cr)
MusT 435	Pedagogy and Materials: Voice (2 cr)
MusT 445	Proseminar in Music Teaching (2 cr)
MusT 485	Choral Ensemble Rehearsal Techniques (1 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)
MusX 283-284	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)

** Voice majors must register for piano class before enrolling in applied piano instruction.*

B. Keyboard

Note: In order to graduate, piano students must pass a piano scale and arpeggio proficiency exam. This exam is to be completed either at the senior recital audition or at a piano jury during the student's final year in school.

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 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, 487	Conducting I, II (4 cr)
MusA 490	Half Recital (0 cr)
MusC 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	Theory of Music (10 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, 322, 323	Music in Western Civilization (9 cr)
MusT 382	Elementary School Music Methods for Music Majors (3 cr)
MusT 383	Principles of Music Teaching (3 cr)
MusT 385	Choral Music in the Secondary School (2 cr)
MusT 432	Practicum: Music Teaching (14 cr)
MusT 435	Pedagogy and Materials: Voice (2 cr)
MusT 445	Proseminar in Music Teaching (2 cr)
MusT 485	Choral Ensemble Rehearsal Techniques (1 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 140	Convocation (seven semesters) (0 cr)
MusX 283-284	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)

** 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 of Part 4.

Required course work includes the university requirements (see regulation J-3 on page 49) 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 302	Teaching Culturally Diverse Learners (4 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, 487	Conducting I, II (4 cr)
MusA 324	Studio Instruction (6 cr)
MusA 490	Half Recital (0 cr)
MusC 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	Theory of Music (10 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, 322, 323	Music in Western Civilization (9 cr)
MusT 251, 253, 254, 255, 352	Instrumental Techniques (5 cr)
MusT 382	Elementary School Music Methods for Music Majors (3 cr)
MusT 383	Principles of Music Teaching (3 cr)
MusT 386	Instrumental Music in the Secondary School (2 cr)
MusT 432	Practicum: Music Teaching (14 cr)
MusT 445	Proseminar in Music Teaching (2 cr)
MusT 465	Jazz Band Rehearsal Techniques (1 cr)
MusT 466	Marching Band Techniques (1 cr)
MusT 467	Band Literature and Rehearsal Techniques (1 cr)
MusT 486	Orchestral Literature and Rehearsal 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, MusA 125/325 Symphonic Band 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)
Electives to total 128 cr for the 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 (1 cr)

Electives in ensembles, combos, or applied study (5 cr)

Note: In order to graduate, piano students must pass a Keyboard Scale and Arpeggio Proficiency Exam. This exam is to be completed either at the senior recital audition or at a piano jury during the student's final year in school.

** 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, MusA 125/325 Symphonic 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, MusA 125/325 Symphonic 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 quitar 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 on page 49) 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 302	Teaching Culturally Diverse Learners (4 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 139-140, 239-240	Aural Skills (6 cr)
MusC 141-142, 241-242	Theory of Music (10 cr)
MusC 328	Instrumental and Choral Arranging (3 cr)
MusH 111	Introduction to Music Literature (3 cr)
MusH 321, 322, 323	Music in Western Civilization (9 cr)
MusT 251, 253, 254, 255, 352	Instrumental Techniques (5 cr)
MusT 382	Elementary School Music Methods for Music Majors (3 cr)
MusT 383	Principles of Music Teaching (3 cr)
MusT 385	Choral Music in the Secondary School (2 cr)
MusT 386	Instrumental Music in the Secondary School (2 cr)
MusT 432	Practicum: Music Teaching (14 cr)
MusT 445	Proseminar in Music Teaching (2 cr)
MusT 465	Jazz Band Rehearsal Techniques (1 cr)
MusT 466	Marching Band Techniques (1 cr)
MusT 467	Band Literature and Rehearsal Techniques (1 cr)
MusT 485	Choral Ensemble Rehearsal Techniques (1 cr)
MusT 486	Orchestral Literature and Rehearsal 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, MusA 125/325 Symphonic Band, 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)
Electives to total 128 cr for the degree

Note: In order to graduate, piano students must pass a piano scale and arpeggio proficiency exam. This exam is to be completed either at the senior recital audition or at a piano jury during the student's final year in school.

** 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, MusA 125/325 Symphonic 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 quitar 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.)

Required course work includes the university requirements (see regulation J-3 on page 49) 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 111	Introduction to Music Literature **or**
MusH 101	Survey of Music (3 cr)
MusH 330	History of Music Theatre (3 cr)
MusX 101	Orientation for Music Majors (0 cr)
MusX 283	Diction for Singers (1 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 305	Intermediate Acting (3 cr)
The 306	Intermediate Acting (3 cr)
The 390	Theatre Practice (in four different semesters; at least 2 semesters in production and 2 semesters in performance) (4 cr)
The 418	Voice Studio (3 cr, max 18)
The 425	BFA Acting Studio (12 cr)

Dance Electives (6 cr over 6 semesters) to be chosen from Dan 105, 216, and 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)

**Note: Transfer students must have a minimum of 2 semesters of dance at the University of Idaho*

Music Academic Minor Requirements

Music Minor

Note: Ensemble participation is recommended to meet the music electives requirement.

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 139-140	Aural Skills I-II (4 cr)
MusC 141-142	Theory of Music I-II (4 cr)
MusH 101	Survey of Music **or**
MusH 111	Introduction to Music Literature (3 cr)
MusX 140	Convocation (2 semesters) (0 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)

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 of part 4 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 keyboard, woodwinds, brass, percussion, strings, and voice); composition; piano pedagogy and performance studies; or accompanying. Admission to the Master of Music program varies by the area of concentration. Please see the Lionel Hampton School of Music website (www.class.uidaho.edu/music/mastintro.asp) 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

William J. McLaughlin, Interim Dean, College of Natural Resources (202C CNR Bldg. 83844-1138; phone 208/885-6442); Michael Whiteman, Associate Dean.

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 Ranch Field 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 Part 6 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 128 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 on page 49) 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)
Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Econ 202	Principles of Economics **or**
Econ 272	Foundations of Economic Analysis (3-4 cr)
Engl 317	Technical Writing (3 cr)
For 221	Ecology **or**
REM 221	Ecology (3 cr)
For 235 or CSS 235	Society and Natural Resources (3 cr)
Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus I (4 cr)
NR 101	Exploring Natural Resources (1 cr)
NR 200	(s) Seminar (1 cr)
REM 341	Systematic Botany **or**
For 320	Dendrology (3-4 cr)
Stat 251	Statistical Methods (3 cr)

Choose one of the following (3 cr):

AgEc 451	Land and Natural Resource Economics (3 cr)
Econ 385	Environmental Economics (3 cr)
For 383	Economics for Natural Resource Managers (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 (2 cr):

CSS 485	Ecology and Conservation Biology Internship (2 cr)
CSS 497	Senior Thesis (2 cr)
Fish 485	Ecology and Conservation Biology Internship (2 cr)
Fish 497	Senior Thesis (2 cr)
ForP 485	Ecology and Conservation Biology Internship (2 cr)
For 485	Ecology and Conservation Biology Internship (2 cr)
For 497	Senior Thesis (2 cr)
NR 497	Senior Thesis (2 cr)
REM 485	Ecology and Conservation Biology Internship (2 cr)
REM 497	Senior Thesis (2 cr)
WLF 485	Ecology and Conservation Biology Internship (2 cr)
WLF 497	Senior Thesis (2 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, For/REM 429, Soil 205/206, and WLF 316 or Fish 316.

For 330	Forest Ecosystem Processes (3 cr)
For 429 or REM 429	Landscape Ecology (3 cr)
Phys 100	Fundamentals of Physics **or**
Phys 111	General Physics I (4 cr)
Soil 205	The Soil Ecosystem (3 cr)
Soil 206	The Soil Ecosystem Lab (1 cr)
WLF 316	Wildlife Ecology II **or**
Fish 316	Principles of Population Dynamics (2-4 cr)

Quantitative Resource Analysis Restricted Electives (two courses from the following):

CSS 310	Social Research Methods in Conservation (4 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 472 or REM 472	Remote Sensing of Environment (3 cr)
For 474	Forest Inventory (3 cr)
Geog 385	GIS Primer (3 cr)
REM 357	Rangeland and Riparian Habitat Assessment (3 cr)
Stat 401	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 454	Invasive Plant 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, Fish 435, For 423, For 463, REM 460, and/or WLF 315) (10 cr):

Biol 421	Advanced Evolutionary Biology (3 cr)
Biol 478	Animal Behavior (3 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)
Fish 435	Wetland Ecology and Management (3 cr)
For 423	Forest Community Ecology (1 cr)
For 426	Fire Ecology and Management (3 cr)
For 463	Hydrologic Measurement Techniques (1 cr)
For 468	Forest and Plant Pathology (2 cr)
For 469	Introduction to Forest Insects (2 cr)
Geog 310	Biogeography (2-3 cr)
Geog 450 or REM 450	Global Environmental Change (3 cr)
MMBB 425	Microbial Ecology (3 cr)
PlSc 410	Biology of Weeds (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Rangeland Ecology Current Topics and Field Studies (1 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 481	Conservation Leadership (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
CSS 489	Personalities and Philosophies in Conservation (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)
Geog 444	Environmental Assessment (3 cr)
Hist 424	American Environmental History (3 cr)
Phil 382	Philosophy of Ecology (3 cr)
Phil 452	Environmental Philosophy (3 cr)
Phil 457	Natural Resource Ethics (3 cr)
PolS 364	Politics of the Environment (3 cr)

Electives to total 128 credits for the degree

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, For/REM 429, Phil 452, CSS 493, Fish or WLF 316, and WLF 440.

Biol 421	Advanced Evolutionary Biology (3 cr)
CSS 493	International Land Preservation and Conservation Systems (3 cr)
For 429	Landscape Ecology (3 cr)
Gene 314	General Genetics (3 cr)
Phil 452	Environmental Philosophy (3 cr)
WLF 316	Wildlife Ecology II **or**
Fish 316	Principles of Population Dynamics (2-4 cr)
WLF 440	Conservation Biology (3 cr)

Quantitative Resource Analysis Restricted Electives (two courses from the following):

CSS 310	Social Research Methods in Conservation (4 cr)
For 375	Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 472 or REM 472	Remote Sensing of Environment (3-4 cr)
For 474	Forest Inventory (3 cr)
Geog 385	GIS Primer (3 cr)
REM 357	Rangeland and Riparian Habitat Assessment (3 cr)
Stat 401	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 454	Invasive Plant 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, Fish 435, For 423, For 463, REM 460, and/or WLF 315) (6 cr):

Biol 478	Animal Behavior (3 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)
Fish 435	Wetland Ecology and Management (3 cr)
For 330	Forest Ecosystem Processes (3 cr)
For 423	Forest Community Ecology (1 cr)
For 426	Fire Ecology and Management (3 cr)
For 463	Hydrologic Measurement Techniques (1 cr)
For 468	Forest and Plant Pathology (2 cr)
For 469	Introduction to Forest Insects (2 cr)
Geog 310	Biogeography (2-3 cr)
Geog 450 or REM 450	Global Environmental Change (3 cr)
MMBB 425	Microbial Ecology (3 cr)
PlSc 410	Biology of Weeds (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)
REM 459	Rangeland Ecology (2 cr)
REM 460	Rangeland Ecology Current Topics and Field Studies (1 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)
REM 353	Rangeland Plant Identification and Ecology (3 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)
Geog 444	Environmental Assessment (3 cr)
Hist 424	American Environmental History (3 cr)
Phil 382	Philosophy of Ecology (3 cr)
Phil 457	Natural Resource Ethics (3 cr)
PolS 364	Politics of the Environment (3 cr)

Electives to total 128 credits for the degree

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)
For 221	Ecology **or**
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 Products (ForP)
- Forest Resources (For)
- Natural Resources (NR)
- Rangland Ecology and Management (REM)
- Wildlife Resources (WLF)

Minimum of 20 credits are required to complete this minor

Natural Resources Graduate Academic Certificates Requirements

Restoration Ecology Academic Certificate

CSS 572	Human Dimensions of Restoration Ecology (3 cr)
CSS 580	Restoration Ecology Practicum (2 cr)
Fish 540	Wetland Restoration (3 cr)
For 426	Fire Ecology and Management **or**
For 526	Fire Ecology (3 cr)
REM 440	Wildland Restoration Ecology (3 cr)

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 of Part 4 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. General M.N.R. requirements apply. To provide the breadth of knowledge required in this 30-credit degree, students must complete a minimum of two courses in each of the four major emphasis areas (policy, planning, and law; human dimensions; ecology and resources; and tools and technology). Students will select courses based on their academic background and career goals. Students must also complete two 3-day, 1-credit colloquia to be offered on the UI campus. An additional 6 credits of advisor-approved electives is to be selected from nonlisted courses. The M.N.R. Committee may approve course substitutions.

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

CAPT. W. Scott Ryder, Dept. Head (101 Navy Bldg. 83844-1122; phone 208/885-6333; www.navy.uidaho.edu/). Faculty: CDR Mark Roemhildt, LT Ryan Stofferahn, LT Eddie Nance, LT Clayton Roberts, Capt Sean Hennessy.

The Navy-Marine Corps Officer Education Program (NOEP) provides instruction and training for young men and women 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 in a field of their choice from the university. Emphasizing sustained strong academic performance along with leadership and physical fitness training, the goal of NROTC is to develop each midshipman to his or her highest mental, moral, and physical capability in preparation for assuming a position of high trust and responsibility as a commissioned officer in the United States Naval Service.

Both scholarship and non-scholarship programs are offered in four-, three-, and two-year options. Application is normally made for four-year scholarship programs during the senior year in high school, however, students may apply directly to the professor of naval science for the College Program (non-scholarship option) at the beginning of their freshman year. Application for the three- or two-year programs may be made during the student's freshman or sophomore year. Information concerning any of these programs may be obtained from the professor of naval science.

The Naval Science Program consists of 20 semester hours of professional naval courses covering subjects such as engineering, navigation, military organization, and leadership. Scholarship students must also complete all requirements for the Bachelor of Naval Science degree (see courses). All uniforms and naval science textbooks are provided.

Upon graduation, the midshipmen are commissioned as officers in the U.S. Navy or U.S. Marine Corps. All new officers receive orders to active duty and are assigned to a broad spectrum of communities such as naval aviation, surface warfare, submarines, Marine ground or aviation forces, or other specialized fields.

Scholarship Program. Scholarship benefits include tuition, fees, a book allowance, and a monthly stipend of up to $400. Initial selections are based on college entrance examination scores (SAT or ACT) and high school or college level academic performance.

A student on scholarship participates in three summer training cruises of four to six weeks duration. During the first cruise, students are introduced to the submarine, , surface warfare, aviation communities, and Marine operating forces. The second and third cruises are aboard ships of the Pacific or Atlantic fleet and often include travel to Europe or the Far East, or the Mountain Warfare Training Center for Marine options. During summer cruises, the students receive one-half the pay of newly commissioned officers, room, and board. Graduates of this program are commissioned as active duty reserve officers in the Navy or Marine Corps.

College Program. Application for this program is made directly to the head of the Department of Naval Science. Students receive their uniforms and naval science textbooks at no cost and begin receiving a monthly $350 stipend at the beginning of their junior year ($400 during senior year). This program requires one training cruise during the summer following the junior year aboard a ship of the Pacific or Atlantic Fleet. During the cruise, students receive one-half the pay of newly commissioned officers, room, and board. College Program graduates are commissioned as active duty reserve officers. Also, College Program students may be nominated by the professor of naval science to receive a scholarship, beginning in the sophomore year. College Program students complete six credits of algebra and trigonometry, six credits of physical science, six credits of English composition, and three credits of introductory computer science in addition to naval science courses.

Marine Corps Option. Both male and female Scholarship and College Program students who desire a Marine Corps commission may apply for the Marine Corps Option during their first three years in college. Students taking this option enroll in specialized courses on Marine Corps subjects during their junior and senior years and participate in Officers Candidate School at the Marine Corps Development and Education Center, Quantico, Virginia, during the summer following their junior year.

Nursing Option. A selected number of scholarships are available for the Navy Nursing Program. Nursing students spend one to two years studying naval science and other entry-level courses at the University of Idaho. Students must be accepted to an accredited nursing school by the end of their sophomore year to complete their RN training. Lewis-Clark State College in Lewiston, Idaho, and the Intercollegiate College of Nursing in Spokane, Washington are available for nursing education in conjunction with UI Naval ROTC. Nurse option students participate in battalion activities, and also attend two summer training cruises during their college career. Graduates are commissioned as active duty reserve officers in the Navy Nurse Corps.

Naval Science Institute. Navy-Marine Corps Scholarship and College Program applicants entering the program after completion of their sophomore year will be required to attend the Naval Science Institute (NSI) during the summer between their sophomore and junior years. At the NSI they will study the material taken by the four-year candidates during their freshman and sophomore years. On completion of the 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 afloat cruise between their junior and senior years. Applications must be submitted no later than March of the sophomore year. The top NSI graduates are awarded scholarships for their last two years of college. The remaining graduates enter the College Program and receive those benefits.

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 Part 6 for courses in Naval Science (NS).

Natural Resources Academic Minor Requirements

Naval Science Minor

NS 102, 201	Ships Systems I, II (6 cr)
NS 202	Seapower and Maritime Affairs (2 cr)

A minimum of 12 credits chosen from the two lists below. Students must complete a minimum of four upper-division courses and at least 2 courses from each list (12 cr):

Two to three courses 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 (2 cr)
NS 402	Naval Leadership and Ethics (3 cr)
NS 412	Amphibious Operations (3 cr)

Two to three courses from the following:

Hist 430	U.S. Diplomatic History (3 cr)
Hist 455	20th Century Europe (3 cr)
Hist 457	History of the Middle East (3 cr)
Hist 458	Military History (3 cr)
PolS 205	Introduction to Comparative Politics (3 cr)
PolS 237	International Politics (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 480	Politics of Development (3 cr)
PolS 487	Political Violence and Revolution (3 cr)
Soc 301	Introduction to Diversity and Stratification (3 cr)

Minimum of 20 credits are required to complete this minor

Program in Neuroscience

Richard B. Wells, Program Director (Morrill Hall Room 104; phone 208/885-6242; neuro@uidaho.edu ; http://www.grad.uidaho.edu/neuro/). Faculty: Terry Armstrong, Kathy Browder, Eric Brauns, John Byers, Steven Chandler, D. Clark Dickin, Brian Dyre, James Frenzel, Patrick Hrdlicka, Kevin Kelliher, Marc Klowden, Michael Laskowski, Stephen Lee, Milos Manic, Steve Meier, Michael O'Rourke, Barrie Robison, Terence Soule, Deborah Stenkamp, Richard Wells, Steffen Werner, Mark Yama.

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.

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 of part 4 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

Fred Gunnerson, 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, Fred Gunnerson, 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 Part 6 for courses in Nuclear Engineering (NE).

Nuclear Engineering Graduate Academic Certificates Requirements

Nuclear Criticality Safety 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 525	Neutron Transport Theory (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)

Credits to total 12 for this Academic Certificate

**Note: Students are encouraged to complete NE 533 Monte Carlo Methods.*

OR

Track 2:

PTTE 512	Fundamental Concepts of Nuclear Science **or**
NE 450	Principles of Nuclear Engineering (3 cr)
PTTE 513	Nuclear Criticality Safety (3 cr)
PTTE 514	Nuclear Safety **or**
NE 470	Nuclear Reactor Safety (3 cr)
PTTE 516	Nuclear Rules and Regulations (3 cr)

Credits to total 12 for this Academic 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 of part 4 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 Part 6 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 on page 49), the general requirements for either the B.A. or B.S. degree, and:

OrgS 210	Introduction to Organizational Sciences (1 cr)
OrgS 310	Applications/Experience in Organizational Sciences (1-6 cr)
OrgS 410	Capstone Project in Organizational Sciences (1-6 cr)
OrgS 444	Methods and Analysis in Organizational Science (4 cr)

Complete four of the following courses (12 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)
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)
Engl 209	Inquiry-Based 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)
Psyc 320	Introduction to Social Psychology (3 cr)
Psyc 345	Group Dynamics (3 cr)

Workplace Relations

Select 6 courses from at least 3 different disciplines from the courses listed for this specialization (18 cr):

AOLL 410	Foundations of Human Resource Development (3 cr)
AOLL 473	Foundations of Adult Education and Adult Development (3 cr)
Anth 327	Belief Systems (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 413	Leadership and Organizational Behavior (3 cr)
Comm 235	Organizational Communication (3 cr)
Comm 335	Intercultural Communication (3 cr)
Comm 410	Conflict Management (3 cr)
Comm 492	Dark Side of Communication (3 cr)
Hist 425	Immigration and Ethnicity in the United States (3 cr)
PolS 451	Public Administration (3 cr)
Psyc 315	Psychology of Women (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)
Psyc 345	Group Dynamics (3 cr)
Psyc 404	Special Topics (3 cr)
Psyc 419	Adult Development and Aging (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)

Non-Profit and Community Organization

Select 6 courses from at least 3 different disciplines from the courses listed for this specialization (18 cr):

AOLL 410	Foundations of Human Resource Development (3 cr)
Bus 311	Introduction to Management (3 cr)
Bus 413	Leadership and Organizational Behavior (3 cr)
Bus 414	Entrepreneurship (3 cr)
Comm 347	Persuasion (3 cr)
Comm 456 or JAMM 456	Nonprofit Fundraising (3 cr)
Comm 404	Special Topics (3 cr)
Comm 431	Applied Business and Professional Communication (3 cr)
CSS 481	Conservation Leadership (3 cr)
CSS 486	Public Involvement in Natural Resource Management (3 cr)
FCS 448	Consumer Economic Issues (3 cr)
JAMM 252	Principles of Public Relations (3 cr)
JAMM 325	Publications Editing (3 cr)
JAMM 350	Public Relations Writing and Production (3 cr)
JAMM 404	Special Topics (3 cr)
JAMM 444	Mass Media and Public Opinion (3 cr)
JAMM 452	Public Relations Campaign Design (3 cr)
OrgS 404	Special Topics (3 cr)
PolS 450	Nonprofit Organization and Management (3 cr)
PolS 451	Public Administration (3 cr)
PolS 452	Administrative Law and Regulation (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)
Soc 301 or Anth 301	Introduction to Diversity and Stratification (3 cr)
Soc 315	Community Service Learning (3 cr)

One academic minor* or academic certificate chosen from the following (12-20 cr):

Academic Minors:
- Aging Studies
- American Indian Studies
- American Studies
- Communication Studies
- History
- International Studies
- Justice Studies
- Psychology
- American Government/Public Law
- Public Administration and Policy
- Religious Studies
- Sociology
- Women's Studies
- Academic Minors from other disciplines may be substituted with advisor's approval

Academic Certificates:
- Diversity and Stratification
- Entrepreneurship
- Organizational Dynamics
- University of Idaho Leadership Certificate

Electives to total 128 cr for the degree

**Note: If 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. Adjunct 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 Part 6 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 on page 49), the general requirements for either the B.A. or B.S. degree, and:

Phil 103	Ethics (3 cr)
Phil 201	Critical Thinking **or**
Phil 202	Intro to Symbolic Logic (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)

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)

** 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)

Philosophy Minor

Phil 103	Ethics **or**
Phil 201	Critical Thinking **or**
Phil 202	Intro to Symbolic Logic **or**
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)

Three upper-division philosophy courses (9 cr)

Religious Studies Minor

See the Religious Studies section for details on this minor.

Philosophy Undergraduate Academic Certificates Requirements

Global Justice Academic Certificate

This academic certificate program is offered jointly with the Department of Sociology and Anthropology.

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

Anth 203	Workshop **or**
Soc 403	Workshop (1 cr)*
Phil 491 or Soc 491	Seminar in Professional Ethics and Diversity (3 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)*

Credits to total 15 for this Academic Certificate

**Approval of program coordinator required*

Professional Ethics Academic Certificate

This academic certificate program is offered jointly with the Department of Sociology and Anthropology.

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

Phil 361	Professional Ethics (3 cr)
Phil 491 or Soc 491	Seminar in Professional Ethics and Diversity (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 382	Philosophy of Ecology (3 cr)
Phil 450	Ethics in Science (3 cr)
Phil 452	Environmental Philosophy (3 cr)
Phil 457	Natural Resource Ethics (3 cr)
Phil 470	Philosophy of Law (3 cr)
Soc 403	Workshop (1-3 cr)*
Soc 423	Social Class & Stratification (3 cr)

Credits to total 13 for this Academic 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 of Part 4 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 coursework 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

Wei Jiang Yeh, 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 non-technical 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 Part 6 for courses in Physics (Phys).

Physics Undergraduate Curricular Requirements

Physics (B.S.)

Required course work includes the university requirements (see regulation J-3 on page 49) 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	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (4 cr)
Phys 213	Engineering Physics III (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	Thermal and Statistical Physics (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, and Phys 465 (at least 15 cr).

3 credits in the humanities in addition to the minimum university-wide core requirements.*

3 credits in the social sciences in addition to the minimum university-wide core requirements.*

Electives to total 128 credits for this degree

**Courses satisfying additional Humanities and Social Sciences may be found in Part 3 Regulation J-d of the General Catalog. See your academic advisor for a listing of appropriate courses.*

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 463, Phys 443, Phys 444.)

Electives to total 128 credits for this degree

Physics (B.A.)

Required course work includes the university requirements (see regulation J-3 on page 49) 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	Engineering Physics I (4 cr)
Phys 212	Engineering Physics II (4 cr)
Phys 213	Engineering Physics III (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)

6 credits in the humanities, 3 of which in a course numbered 300 or above in addition to the minimum university-wide core requirements.*

3 credits in the social sciences, 3 of which in a course numbered 300 or above in addition to the minimum university -wide core requirements.*

4 credits in any course(s) numbered 300 or above approved by student's advisor

Physics Academic Minor Requirements

Physics Minor

Phys 211, 212	Engineering Physics I, II (8 cr)
Phys 213	Engineering Physics III **or**
Engr 210	Engineering Statics (3-4 cr)

Physics courses numbered 300 or above (usual prerequisites are Math 170, 175, 275) (12 cr)

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 of Part 4 for the general requirements applicable to each degree.

Master of Science (Non-thesis Option). 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, 533, 541-542, and 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). 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, 541-542, and 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. 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), 511, 521, 533, 541-542, 550-551, 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, even if not formally registered for credit in this course.

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 have to take this exam no later than 28 months after entering the graduate program. 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 six months 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

James B. Johnson, Dept. Head (242 Iddings Wing, Ag Sci Bldg 84844-2339; phone 208/885-6277; pseshead@uidaho.edu). Crop and Weed Science Division: Division Chair, Robert S. Zemetra, Jack Brown, Jianli Chen, Pamela J.S. Hutchinson, Alexander Karasev, Don W. Morishita, Oliver Neher, Timothy S. Prather, Glenn E. Shewmaker, Shree P. Singh, Donald C. Thill, Juliet M. Windes, and Robert S. Zemetra. Entomology Division: Division Chair, Sanford D. Eigenbrode, Juan M. Alvarez, James D. Barbour, Edward J. Bechinski, Nilsa A. Bosque-Pérez, Sanford D. Eigenbrode, Marc J. Klowden, and Mark Schwarzländer, Eric Wenninger. Horticultural Science Division: Division Chair, Jeffrey C. Stark, Danny L. Barney, Esmaeil Fallahi, Sanjay Gupta, Saad L. Hafez, Joseph C. Kuhl, Stephen L. Love, S. Krishna Mohan, Phillip Nolte, Nora L. Olsen, Jeffrey C. Stark, Michael Thornton, Robert R. Tripepi, Phillip S. Wharton. Soil and Land Resources Division: Division Chair, Robert L. Mahler, Aurelio Briones, Bradford D. Brown, Robert Heinse, Jodi L. Johnson-Maynard, Hans Kok, 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, within the College of Agricultural and Life Sciences, offers an option in Sustainable Crop and Land Systems within the B.S. Agricultural and Life Sciences major, and M.S., and Ph.D. degrees in entomology, plant science, and soil science.

The Department includes degree programs that focus on the earth's biological and physical resources allowing 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, can prepare students for continuing education or employment in many fields of biology.

Undergraduate Degree Program:

The multidisciplinary, departmental **major Sustainable Crop and Landscape Systems**, offers students broad-based preparation in agricultural, horticultural, biological and ecological sciences. There are five areas of emphasis within this degree:

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 can 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 can tailor their academic program in the basic and applied aspects of crop science to suit their individual interests and career goals. The crop and weed science option 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 can learn about many facets of **horticulture**, including horticultural crop production (floral crops, woody landscape plants, fruits or vegetables). Students can enroll in courses highlighting production and management of horticultural crops that are economically significant to Idaho and the nation. Students can select courses to help them specialize in a particular career path. An internship is also available, providing insights into professional horticulture careers. Courses in a plant science, soils, biology, and entomology further enhance the knowledge needed for a professional career in horticulture. Students enrolled in this option can prepare for careers in management and operation of commercial greenhouses, nurseries, orchards, vineyards, and vegetable farms. This option is also flexible enough to enable students to pursue science-oriented careers or advanced degree studies. Students can also focus on **urban landscape management**. They have the opportunity to focus on managing and maintaining the various components of urban landscapes including trees, shrubs, herbaceous plantings, and turf grass. Majors can specialize in landscape maintenance and golf and sports turf management. The package of courses will prepare students for positions in landscape maintenance and tree and turf management within the growing green industries in the Northwestern United States and nationally.

The undergraduate **soil and land use**emphasis area is offered for students who are interested in businesses, industries, and government agencies associated with soils and farm chemicals, as professional soil scientists working with the formation, classification, chemistry, physics, and fertility of valuable soil resources, or as environmental scientists in conserving or improving soil and water quality. Courses in geology, botany, chemistry, and physics, in addition to soils, are stressed.

The **plant biotechnology** emphasis area will interest you if you 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. In this program you 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 yield, improved nutritional value, and/or disease, insect 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, you will learn how to modify plant genes to improve the crop plants potential for use in biofuel production. Hands-on experience is possible doing undergraduate research in the plant biotechnology laboratories in the Department of Plant, Soil and Entomological Sciences. The plant biotechnology emphasis will prepare students for graduate education or professional careers in academia or industry in the areas of genomics, genetic engineering, marker assisted plant breeding, plant genetics, molecular biology, tissue culture, molecular virology, and other topics.

The degree offerings are designed to prepare students for graduate school and a variety of rewarding career opportunities. Each of these degree programs is based on a curriculum designed to prepare students for present and future employment. The department offers students the opportunity to work closely with faculty in classroom and field situations. The faculty members provide wide educational experiences for students who major in this department. Formal courses are offered as needed to serve the students in the various degree programs, and additional specialization may be obtained by enrolling in directed study, special topics, seminar, and other courses, with particular faculty members. An internship program also is available to provide students with practical job experience and to open doors for career opportunities.

For advanced studies, specially equipped laboratories for histology, anatomy, and physiology and greenhouse laboratory units with controlled temperature and light programmed rooms and growth chambers are available. A state of the art biotechnology facility that has space to accommodate 101 faculty, staff, and students is also available. The university has 1,145 acres for field crops, orchards, and livestock located close to campus. Excellent field and laboratory facilities are also available at research and extension centers at Aberdeen, Parma, and Twin Falls. The department has three important scientific collections: the entomology museum, the soil monolith collection and a weed herbarium. Additionally, the graduate program is closely coordinated with the Departments of Entomology, Crop and Soil Sciences, Horticulture and Landscape Architecture, and Plant Pathology at Washington State University (eight miles away), enhancing the department's offerings.

Faculty members are concerned with the needs and interests of individual students. Questions regarding programs, arrangements, or facilities are welcome. Prospective majors in entomology, plant science, or soil and land resources should consult the department head in Room 242, Agricultural Science Building, or telephone 208/885-6277.

Courses

See Part 6 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 on page 49) and:

Agricultural and Life Science Core

ASM 305	GPS and Precision Agriculture (3 cr)
Biol 115	Cells and the Evolution of Life (4 cr)
Chem 101	Introduction to Chemistry I **or**
Chem 111	Principles of Chemistry I (4 cr)
Comm 101	Fundamentals of Public Speaking (2 cr)
Engl 313	Business Writing **or**
Engl 317	Technical Writing (3 cr)
Soil 205	The Soil Ecosystem (3 cr)
Stat 251	Statistical Methods (3 cr)

One of the following (3-4cr):

Math 130	Finite Mathematics (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)

Sustainable Crop and Landscape Systems Courses

AgEd 406	Exploring International Agriculture (2 cr)
Biol 213	Principles of Biological Structure and Function **or**
PlSc 205	General Botany (4 cr)
Chem 275	Carbon Compounds **or**
Chem 277	Organic Chemistry I (3 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 (3-5 cr)

Chem 253	Quantitative Analysis (5 cr)
MMBB 250, 255	General Microbiology and Lab (5 cr)
MMBB 300	Survey of Biochemistry (3 cr)

And one of the following emphases:

A. Insects and Society

Biol 116	Organisms and Environments (4 cr)
Biol 210	Genetics (4 cr)
Biol 212	Molecular and Cellular Biology (4 cr)
Biol 314	Ecology and Population Biology (4 cr)
Chem 112	Principles of Chemistry II (5 cr)
Gene 314	General Genetics (3 cr)
Ent 440	Insect Identification (4 cr)
Ent 441	Insect Ecology (3 cr)
Ent 446	Host Plant Resistance to Insects and Pathogens (3 cr)
Ent 484	Insect Anatomy and Physiology (3 cr)
Ent 491	Principles of Insect Pest Management (3 cr)

Biotechnology Electives (3 cr)
Entomology Electives (5 cr)
Life Science Electives (6 cr)
Mathematics Electives (4 cr)
Physics Electives (4 cr)
Electives to total 128 cr for the degree

B. Soil and Land Use

Chem 112	Principles of Chemistry II (5 cr)
CS 101	Introduction to Computer Science **or**
CS 112	Introduction to Problem Solving and Programming (3 cr)

Geol 101	Physical Geology or
Geol 111	Physical Geology for Science Majors (4 cr)
Phys 111	General Physics I (4 cr)
Phys 112	General Physics II (4 cr)
Soil 206	The Soil Ecosystem Lab (1 cr)
Soil 415	Soil and Environmental Physics (3 cr)
Soil 422	Environmental Soil Chemistry (3 cr)
Soil 425	Microbial Ecology **or**
Soil 437	Soil Biology (3 cr)
Soil 446	Soil Fertility (3 cr)
Soil 454	Soil Development and Classification (3 cr)
Soil 499	Directed Study (1 cr)

Electives to total 128 cr for the degree

C. Sustainable Cropping Systems

Chem 276	Carbon Compounds Lab (1 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Gene 314	General Genetics (3 cr)
MMBB 154, 155	Introductory Microbiology and Lab (4 cr)
PlSc 338	Weed Control (3 cr)
PlSc 398	Internship **or**
PlSc 499	Directed Study (3 cr)
PlSc 401	Plant Growth and Development (3 cr)
PlSc 407	Field Crop Production (3 cr)
PlSc 416	Plant Pathology Laboratory (1 cr)
PlSc 446	Plant Breeding (3 cr)
PlSc 480	Field Trip (1 cr)
PlSc 499	Directed Study (cr arr)
Soil 206	The Soil Ecosystem Lab (1 cr)
Soil 446	Soil Fertility (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 Products
- Forest Resources
- Landscape Architecture
- Microbiology, Molecular Biology and Biochemistry
- Physics
- Plant Science
- Rangeland Ecology and Management
- Soils

Electives to total 128 cr for the degree

Recommended Courses:

PlSc 360	World Agricultural Systems (3 cr)
PlSc 408	Cereal Science (3 cr)
PlSc 410	Biology of Weeds (3 cr)
PlSc 412	Advanced Cropping Systems (3 cr)
PlSc 418	Post-Harvest Biology and Technology (3 cr)
PlSc 433	Plant Tissue Culture Techniques (3 cr)
PlSc 490	Potato Science (3 cr)
Stat 401	Statistical Analysis (3 cr)

D. Environmental Horticulture

Chem 276	Carbon Compounds Lab (1 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Gene 314	General Genetics (3 cr)
MMBB 154, 155	Introductory Microbiology and Lab (4 cr)
PlSc 201	Principles of Horticulture (3 cr)
PlSc 300	Plant Propagation (3 cr)
PlSc 338	Weed Control (3 cr)
PlSc 398	Internship or PlSc Directed Study (3 cr)
PlSc 401	Plant Growth and Development (3 cr)
PlSc 416	Plant Pathology Laboratory (1 cr)
Soil 206	The Soil Ecosystem Lab (1 cr)
Soil 446	Soil Fertility (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 Products
- Forest Resources
- Landscape Architecture
- Microbiology, Molecular Biology and Biochemistry
- Physics
- Plant Science
- Rangeland Ecology and Management
- Soils

Electives to total 128 cr for the degree

Recommended Courses:

PlSc 302	Golf and Sports Turf Management (3 cr)
PlSc 310	Pomology (3 cr)
PlSc 313	Viticulture and Small Fruits (3 cr)
PlSc 332	Interior Plantscaping (2 cr)
PlSc 340	Nursery Management (3 cr)
PlSc 341	Nursery Management Laboratory (1 cr)
PlSc 357	Greenhouse Management and Crop Production (3 cr)
PlSc 358	Greenhouse Management and Crop Production – Lab (1 cr)
PlSc 418	Post-Harvest Biology and Technology (3 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)

E. Plant Biotechnology

Chem 276	Carbon Compounds Lab (1 cr)
Chem 278	Organic Chemistry I: Lab (1 cr)
Gene 314	General Genetics (3 cr)
MMBB 154, 155	Introductory Microbiology and Lab (4 cr)
MMBB 488	Genetic Engineering (3 cr)
PlSc 201	Principles of Horticulture (3 cr)
PlSc 338	Weed Control (3 cr)
PlSc 398	Internship or PlSc Directed Study (3 cr)
PlSc 401	Plant Growth and Development (3 cr)
PlSc 433	Plant Tissue Culture Techniques (3 cr)
PlSc 446	Plant Breeding (3 cr)
Soil 206	The Soil Ecosystem Lab (1 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 Products
- Forest Resources
- Landscape Architecture
- Microbiology, Molecular Biology and Biochemistry
- Physics
- Plant Science
- Rangeland Ecology and Management
- Soils

Electives to total 128 cr for the degree

Recommended Courses:

Biol 212	Molecular and Cellular Biology (4 cr)
Biol 444	Genomics (3 cr)
MMBB 380	Introductory Biochemistry (4 cr)
MMBB 485	Prokaryotic Molecular Biology (3 cr)
MMBB 486	Plant Biochemistry (3 cr)
MMBB 487	Eukaryotic Molecular Genetics (3 cr)
PlSc 407	Field Crop Production (3 cr)
PlSc 408	Cereal Science (3 cr)
PlSc 416	Plant Pathology Laboratory (1 cr)

PlSc 418	Post-Harvest Biology and Technology (3 cr)
PlSc 451	Vegetable Crops (3 cr)
PlSc 490	Potato Science (3 cr)
Soil 446	Soil Fertility (3 cr)
Stat 401	Statistical Analysis (3 cr)

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 360	World Agricultural Systems (3 cr)
PlSc 408	Cereal Science (3 cr)
PlSc 438	Pesticides in the environment (3 cr)
PlSc 446	Plant Breeding (3 cr)
PlSc 469	Seed Production (3 cr)
Soil 446	Soil Fertility (1-3 cr, max 3)

Entomology Minor

Ent 322	General and Applied Entomology (4 cr)

Entomology electives (16 cr)

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 302	Sport and Golf Turf Management (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	Plant Materials and Design 1 (3 cr)
PlSc 310	Pomology (3 cr)
Soil 205	The Soil Ecosystem (3 cr)

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 447	Fundamentals of Biological Control (3 cr)
Ent 472	Aquatic Entomology (3 cr)
Ent 491	Principles of Insect Pest Management (3 cr)
PlSc 410	Biology of Weeds (3 cr)
PlSc 438	Pesticides in the Environment (3 cr)

Credits to total 20 for this minor

Soil Science Minor

Soil 205, 206	The Soil Ecosystem and Lab (4 cr)
Soil 415	Soil Physics (3 cr)
Soil 422	Environmental Soil Chemistry (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 cr for the minor:

Soil 437	Soil Biology (3 cr)

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 of Part 4 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, Bryan S. McQuide, 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.

Courses

See Part 6 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. The course work also includes the university requirements (see regulation J-3 on page 49), 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 426	History of Political Philosophy I or II (3 cr)
Stat 251	Statistical Methods (3 cr)

Other courses in political science (including a minimum of 20 credits in upper-division courses and at least 6 credits in each of the following areas: (1) American government/public law/public administration and (2) comparative/international politics) (23 cr)

Courses in upper-division related fields (20 cr)

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. Course work also includes the university requirements (see regulation J-3 on page 49), 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)
PolS 435	Advanced Political Science and Research Methods (3 cr)
Stat 251	Statistical Methods (3 cr)

Other courses in political science (including a minimum of 20 credits in upper-division courses and at least 6 credits in each of the following areas: (1) American government/public law/public administration and (2) comparative/international politics) (23 cr)

Research methods (may be counted as related field cr if upper-division) (3 cr)

Courses in upper-division related fields (20 cr)

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)
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)

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 380	Canadian Political System (3 cr)
PolS 381	Western European Politics (3 cr)
PolS 480	Politics of Development (3 cr)

International Politics

PolS 438	Conduct of 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)

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 481	International Finance (3 cr)
Econ 385	Environmental Economics (3 cr)
Econ 407	Public Finance (3 cr)
Econ 415	Market Structure and Governmental Policy (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)

Political Science Minor

PolS 101	Intro to Political Science and American Government (3 cr)
PolS 425	History of Political Philosophy I **or**
PolS 426	History of Political Philosophy II **or**
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)

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)

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 of Part 4 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

Kenneth D. Locke, Dept. Chair (206 Student Health Ctr. 83844-3043; phone 208/885-6324). Faculty: Stephen P. Banks, Benajmin Barton, Ernesto Bustamante, Traci Craig, Brian P. Dyre, Annette Folwell, Kenneth D. Locke, Mikaela L. Marlow, Steven E. Meier, Jamie C. Nekich, Richard Reardon, Todd J. Thorsteinson, Steffen Werner, Alan Whitlock, Charla Windley, Mark F. Yama. Adjunct Faculty: Martha A. Kitzrow, Charles R. Morrison, Diane L. Phillips-Miller, Joan Pulakos, Steve Saladin. Affiliate Faculty: Curt C. Braun, Susan G. Hill, Justin G. Hollands, Margaret Jelinek Lewis.

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.

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 or Communications 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 degree requires students to take courses in the fields of speech, interpersonal and organizational communication as well as research methods and statistics. 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 masters 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 either 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 Part 6 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 on page 49), the general requirements for either the B.A. or B.S. degree, and:

Biol 102	Biology and Society **or**
Biol 115	Cells and the Evolution of Life (4 cr)
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)

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 497, Psyc 498, and/or Psyc 499. A grade of C or better must be earned in each course taken to complete this category.

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)

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 335 Intercultural Communication (3 cr)
- Comm 347 Persuasion (3 cr)
- Comm 404 Special Topics (3 cr)
- Comm 410 Conflict Management (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)

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, 403, 497, or 499).

Psychology and Communication Studies Graduate Academic Certificates Requirements

Organizational Dynamics Academic Certificate

- AOLL 410 Foundations of Human Resource Development (3 cr)
- Bus 413 Leadership and Organizational Behavior (3 cr)
- PolS 451 Public Administration (3 cr)
- Psyc 541 Social Psychology in the Workplace (3 cr)

Psychology and Communication Studies Graduate Degree Program

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 of Part 4 for the general requirements applicable to all M.S. degrees.

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. Affiliate Faculy: 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 Part 6 for courses in Religious Studies (RelS).

Religious Studies Academic Minor Requirements

Religious Studies Minor

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) (12 cr):

Asian, Pacific, and Indigenous Religious Traditions

Anth 329	North American Indians (3 cr)
Anth 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	Buddhism (3 cr)
RelS 204/ 404	Special Topics related to this category
RelS 314	Philosophies and Religions of India (3 cr)
RelS 315	Philosophies and Religions of China and Japan (3 cr)

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	The Renaissance (3 cr)
Hist 448	The Reformation (3 cr)
Phil 302	Biblical Judaism: Texts and Thought (3 cr)
Phil 303	Early Christianity: Texts and Thought (3 cr)
RelS 204 or RelS 404	Special Topics related to this category
RelS 280	Philosophy and Religion of Islam (3 cr)

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	Belief Systems (3 cr)
CORE 116	Core Discovery: The Sacred Journey: Religions of the World **or**
CORE 166	Core Discovery: The Sacred Journey: Religions of the World (3-4cr)
Engl 375	The Bible as Literature (3 cr)
RelS 204or RelS 404	Special Topics related to this category
RelS 407	Seminar in Philosophy of Religion (3 cr)
RelS 413	Psychology of Religion (3 cr)
Soc 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	Italian Renaissance Art and Culture (3 cr)
FLEN 210	Introduction to Classical Mythology (3 cr)
Hist 101and 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

To complete this minor, students must complete a minimum of 21 credits

Foreign languages appropriate to the minor are strongly recommended. For example, Japanese or Chinese is recommended for concentration in Asian and Pacific traditions, and Greek or Latin for those focusing on Western traditions.

Department of Sociology and Anthropology

Donald E. Tyler, Dept. Chair (101 Phinney Hall 83844-1110; phone 208/885-6751). Anthropology Faculty: Stacey Camp, Rodney P. Frey, John A. Mihelich, Laura Putsche, R. Lee Sappington, Donald E. Tyler, Mark S. Warner. Sociology Faculty: Patrick Gillham, Leontina Hormel, John A. Mihelich, Melanie-Angela Neuilly, Debbie A. Storrs. Brian Wolf. Adjunct Faculty: Margaret J. Harvey, Gary E. Machlis, Virginia Babcock. Affiliate Faculty: Caroline D. Carley, Alan G. Marshall, Ronald J. Sipe, Deward E. Walker, Priscilla S. Wegars, Larry Young.

The department provides students with two interrelated disciplines in which they can pursue a B.A. or B.S. degree: Sociology, with an emphasis in Inequalities and Globalization, Criminology, or General Sociology, and Anthropology. Students can also pursue a minor in either of these fields, a minor in American Indian studies, an Academic Certificate in Diversity and Stratification, and an Archaeological Technician Certificate. Our department is an ideal home for students interested in developing their understanding of people and society, small and large-scale cultures, culture history, cultural 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. This educational experience, coupled with ample opportunity for interactions with faculty, provide 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 want to make a positive difference in the world and who are curious about themselves and the world they live in. The goal of sociology is to help students develop a "sociological imagination," the ability to understand how their and others' experiences, behavior, and opportunities are tied to the historical moment and social forces beyond their immediate control. The Inequalities and Globalization track focuses on understanding issues related to social, global and environmental justice, which has become increasingly important in our modern, globalized world. Criminology, an important area of sociology, has been described as the study of "making of law, breaking of law, and society's reaction 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, violence and victimology, policing, and applied research. Our program provides students opportunities to gain practical work experience through the form of 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, applied research, as well as forming a foundation for graduate education in Sociology, Criminology, 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 go into many successful careers, as well as into advanced programs of graduate studies.

The minor in American Indian studies is available through the Department of Sociology and Anthropology. In cooperation with regional Indian communities and with other academic departments within the university, the interdisciplinary and experiential curriculum of the American Indian studies minor provides students with a background in the culture, history, and literature of American Indians. It also addresses current American Indian issues.

The department offers the academic certificate in Diversity and Stratification. The purpose of the certificate 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.

The 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. An applicant to the program must hold a bachelor's degree from an accredited college or university and must have a minimum 3.00 overall GPA. An undergraduate major in anthropology is not required. Students who otherwise meet eligibility requirements but who do not have sufficient background in anthropology will be required to take additional undergraduate courses. The number of classes will vary with the degree of deficiency and the student's demonstrated potential for advanced academic work. Preparation in statistics is required and proficiency in one non-English language is strongly recommended. Students with marginal qualifications may be admitted on a provisional status or may be advised to complete a year of undergraduate study in anthropology before being considered for the graduate program. Students with an overall GPA less than 3.00 but greater than 2.80 will be considered on a provisional status if their grades in upper-division classes average 3.00 or better. Students who do not have the required GPA but who have strong recommendations or acceptable professional experience will be considered for the graduate program after completing 12 credits of post-baccalaureate study in upper-division or graduate anthropology courses with A or B grades. Although the department does not require the Graduate Record Examination, applicants with marginal qualifications should take it and submit their score with their application. 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.

The department contains the Laboratory of Anthropology. The laboratory houses collections and provides a laboratory environment for research, teaching, and hands-on experience for students. The laboratory also holds the Archive of Pacific Northwest Anthropology, Archaeological Survey of Idaho Northern Repository, historical and prehistoric archaeological collections, and the Asian American Comparative Collection. The metal cleaning and preservation facilities are among the largest and most modern in the western states. The laboratory 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 Part 6 for courses in Anthropology (Anth), Justice Studies (JS), and Sociology (Soc).

Sociology and Anthropology Undergraduate Curricular Requirements

Anthropology (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3 on page 49), 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)
Anth 441	Intro to Study of Language **or**
Anth 261	Language and Culture **or**
Anth 450	Descriptive Linguistics (3 cr)
Soc 101	Introduction to Sociology (3 cr)
Stat 251	Statistical Methods (3 cr)

Anthropology electives (upper-division) (15 cr)
Related fields as approved by the department (12 cr)

Sociology (B.A. or B.S.)

Required course work includes the university requirements (see regulation J-3 on page 49), 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 230	Social Problems **or**
Soc 250	Social Conflict (3 cr)
Soc 310	Methods of Social Research (3 cr)
Soc 311	Development of Social Theory (3 cr)
Stat 251	Statistical Methods (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	Soc 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 uper-division emphasis electives (9 cr):

JS 425	Criminal Law (3 cr)
Soc 315	Community Service Learning (1-4 cr, max 4)**
Soc 320	Sociology of Substance Abuse (3 cr)
Soc 330	Juvenile Delinquency (3 cr)
Soc 332	Corrections (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 439	Inequalities in the Justice System (3 cr)
Soc 450	Dynamics of Social Protest (3 cr)
Soc 498	Internship (1-6 cr, max arr)**

***Note: A maximum of 3 credits may be earned in Soc 315, Soc 367, and Soc 498, respectfully*

B. Inequalities and Globalization

Anth 301 or Soc 301	Introduction to Diversity and Stratification (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 335	Terrorism, Society and Justice (3 cr)
Soc 336	Comparative Criminal Justice Systems (3 cr)
Soc 340	Social Change & Globalization (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 450	Dynamics of Social Protest (3 cr)
Soc 498	Internship (1-6 cr, max arr)**

***Note: A maximum of 3 credits may be earned in Soc 315, Soc 367, and Soc 498, respectfully*

C. General Sociology

Any combination of additional sociology courses. 18 credits must be upper-division courses. (21 cr)**

***Note: A maximum of 3 credits may be earned in Soc 315, Soc 367, and Soc 498, respectfully*

Sociology and 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)

Justice Studies Minor

JS 101	Introduction to the Justice System (3 cr)
JS 425	Criminal Law (3 cr)
Soc 330	Juvenile Delinquency **or**
Soc 331	Criminology Theory (3 cr)
Soc 334	Police and Social Control (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)
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 424	Sociology of Gender (3 cr)
Soc 427	Racial and Ethnic Relations (3 cr)
Soc 439	Inequalities in the Justice System (3 cr)

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)

Sociology and Anthropology Undergraduate Academic Certificates Requirements

Archaeological Technician 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	Physical Geology (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)

** 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 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)

Credits to total 12 for this Academic Certificate

Global Justice Academic Certificate

For the curricular requirements of the academic certificate in global justice, see the Department of Philosophy section (Part 5).

Professional Ethics Academic Certificate

For the curricular requirements of the academic certificate in global justice, see the Department of Philosophy section (Part 5).

Sociology and Anthropology Graduate Degree Program

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Sociology and Anthropology. See the College of Graduate Studies section of Part 4 for the general requirements applicable to each M.A. degree.

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 M.A. core along with the expected undergraduate preparation (or courses taken as deficiencies as a graduate student) are designed for this purpose. The core of the M.A. program consists of Anth 420, Anth 510, Anth 511, Anth 521, and Anth 530. Students who have already received credit for 410, 411, 420 or 430 will substitute appropriate courses for 420, 510, 511, or 530 with approval from the student's advisor. The remaining credits will be distributed among courses in supporting fields (at least 6) and 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 thesis 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.

Bi-State Department of Statistical Science

Rick Edgeman, Dept. Chair (415A Carol Ryrie Brink Hall 83844-1104; phone 208/885-2929). Faculty: Zaid Abdo, Raymond Dacey, Brian C. Dennis, Raymond J. Dezzani, Rick L. Edgeman, Edward O. Garton, Ismail H. Genc, Timothy R. Johnson, Paul Joyce, John J. Lawrence, Stephen S. Lee, R. Ashley Lyman, Bahman Shafii, R. Kirk Steinhorst, Christopher J. Williams.

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 401 or equivalent. Additionally, students should have knowledge of at least one higher level programming language.

Faculty members in the Bi-State 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 415; phone 208/885-4410).

Courses

See Part 6 for courses in Statistics (Stat).

Statistical Science Academic Minor Requirements

Statistics Minor

Math 160	Survey of Calculus **or**
Math 170	Analytic Geometry and Calculus (4 cr)
Stat 251	Statistical Methods **or**
Stat 301	Probability and Statistics (3 cr)
Stat 401	Statistical Analysis (3 cr)
Stat 422	Sample Survey Methods (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 423	Beginning SAS Programming (1 cr)
Stat 424	Intermediate SAS Programming (1 cr)
Stat 425	Topics in SAS Programming (1 cr)
Stat 433	Econometrics (3 cr)
Stat 437	Statistics for Business Decisions (3 cr)
Stat 456	Quality Management (3 cr)
Stat 514	Nonparametric Statistics (3 cr)
Stat 519	Multivariate Analysis (3 cr)

Statistical Science Graduate Academic Certificates Requirements

Six Sigma Innovation and Design Academic Certificate

Note: A grade of 'B' or higher is required in all coursework for this academic certificate.

Bus 531	Design for Six Sigma and Lean Management (3 cr)
Stat 446	Six Sigma Innovation (3 cr)
Stat 507	Experimental Design (3 cr)

Electives (3 cr):

Bus 414	Entrepreneurship (3 cr)
Bus 456	Quality Management (3 cr)
ME 583	Reliability of Engineering Systems (3 cr)

Credits to total 12 for this Academic Certificate

Statistics Academic Certificate

Stat 401	Statistical Analysis (3 cr)

One of the following (3 cr)

Stat 433	Econometrics **or**
Stat 550	Regression (3 cr)
Stat 507	Experimental Design (3 cr)

Two or more of the following (6-9 cr):

Stat 422	Sample Survey Methods (3 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 520	Statistical Analysis of Qualitative Data (3 cr)
Stat 539	Time Series (3 cr)
Stat 555	Statistical Ecology (3 cr)
Stat 565	Computer Intensive Statistics (3 cr)
Stat 571	Reliability Theory (3 cr)

Credits to total 15 for this Academic 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 Bi-State Department of Statistical Science. See the College of Graduate Studies section of Part 4 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). Faculty: Anna Banks, Robert C. Caisley, Christopher Duval, David Lee-Painter, Stephanie S. Miller, Dean F. Panttaja, Kelly M. Quinnett, Cheri D. Vasek,

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.

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 Part 6 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 on page 49), (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 (8 cr)
The 105-106	Basics of Performance (6 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 Workshop (at least 1 cr in 4 different semesters) (4 cr)
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)

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 on page 49), (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, 104	Theatre Technology I, II (8 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)

Theatre Arts Minor

The 103, 104	Theatre Technology I, II (8 cr)
The 105, 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)

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 (6 cr). A minimum of 6 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 (214 Morrill Hall 83844-3002; phone 208/885-9694; water@uidaho.edu; http://www.water.uidaho.edu). Core Faculty: Barbara Cosens, Fritz R. Fiedler, Charles C. Harris, Gary Johnson, Brian P. Kennedy, Timothy E. Link, Jerrold A. Long, Michael O'Rourke, Barbara C. Williams, Patrick Wilson. Adjunct Faculty: Elena Aizen, Vladimir Aizen, Richard G. Allen, Erik Coats, Maxine Dakins, Angelique Eaglewoman, Levan Elbakidze, Jerry Fairley, Alex Fremier, Rodney Frey, Paul Gessler, Dale Goble, Peter Goodwin, Robert Heinse, Thomas F. Hess, Lorie Higgins, Steven J. Hollenhorst, Karen Humes, Jodi Johnson-Maynard, Kathleen Kavanagh, Jim Liou, Paul McDaniel, William McLaughlin, Gregory Möller, Matt Morra, Darek Nalle, Howard Neibling, Jay O'Laughlin, John Lawrence, James Osiensky, Russel Qualls, Richard Seamon, Manoj Shrestha, Alistair Smith, Robert Smith, Eva Strand, Daniel Strawn, Daniele Tonina, John Tracy, Margrit von Braun, Von Walden, Philip Watson, Frank Wilhelm, Scott Wood, J.D. Wulfhorst, Elowyn Yager. General Faculty: James Ding Johnson, Gary Machlis, Robert L. Mahler, John Marshall, Garth Taylor.

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: A 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 39 credits of course work beyond the bachelor's degree and completion of a dissertation, equivalent to a minimum of 39 credits of Research and Dissertation, for a total of 78 credits (note for transfers: A Ph.D. student must complete at least 45 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 include an 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, and all chapters shall be integrated into a coherent whole. Each student shall evaluate the interdisciplinarity of their thesis by completing the Interdisciplinary Thesis/Dissertation Approval Form prior to the defense.

Committee Requirements. Each committee shall be composed of members from more than one discipline. All committee members must approve the interdisciplinary component(s) of the thesis/dissertation proposal by signing the Interdisciplinary Thesis/Dissertation Proposal Approval Form. All committee members must approve 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 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. Common courses consist of three integrated water resources courses (7 cr for M.S. and Ph.D.), and 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

BAE 551	Advanced Hydrology (3 cr)

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 458	Open Channel Hydraulics (3 cr)
BAE 558	Fluid Mechanics of Porous Media (3 cr)
BAE 565	Surface Hydrologic Processes and Modeling **or**
Biol 515	Plant Environmental Biophysics **and**
Biol 436	Plant Environmental Biophysics Lab (1 cr) (3 cr)
CE 421	Engineering Hydrology (3 cr)
Hydr 509	Quantitative Hydrogeology (3 cr)

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 (http://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):

BAE 450	Environmental Hydrology or
For 462	Watershed Science and Management (3 cr)
BAE 565	Surface Hydrologic Processes and Modeling **or**
Biol 515	Plant Environmental Biophysics **and**
Biol 436	Plant Environmental Biophysics Lab (1 cr) (3 cr)
Fish 415	Limnology (4 cr)
GeoE 428	Geostatistics **or**
Stat 401	Statistical Analysis (3 cr)
Hydr 509	Quantitative Hydrogeology (3 cr)

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 (http://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. M.S. students are required to take 6 credits, and Ph.D. students 9 credits from the following (6 or 9 cr):

AgEc 504	Special Topics (3 cr)
CSS 510	Applications of Communication Theory in Natural Resource (3 cr)
CSS 573	Planning & Decision Making for Watershed Management (3 cr)
Law 907	Administrative Law (3 cr)
Law 942	Water Law (1 cr)
Law 946	Water Policy Seminar (3 cr)
Law 947	Environmental Law I (3 cr)
Law 951	Environmental Law II – Seminar (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 (http://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.

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 12 credits from Law are allowed toward the M.S. degree and no more than 12 credits toward the Ph.D. degree from the following list:

Law 901	Seminar (3 cr)
Law 906	Seminar, Natural Resources Law and Policy (3 cr)
Law 907	Administrative Law (3 cr)
Law 937	Natural Resources Law and Legal History (3 cr)
Law 938	International Environmental and Water Law (3 cr)
Law 939	Law and Science (3 cr)
Law 942	Water Law (1 cr)
Law 946	Water Policy Seminar (3 cr)
Law 947	Environmental Law I (3 cr)
Law 948	Public Land Law (3 cr)
Law 949	Native American Law (3 cr)
Law 951	Environmental Law II – Seminar (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 (208/885-9694) or to the College of Law (208/885-6423).

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 http://www.students.uidaho.edu/gradadmissions or contact the Graduate Admissions Office, University of Idaho, P.O. Box 444266, Moscow, ID 83844-4266.

Program in Women's Studies

Sandra Reineke, Program Coordinator (sreineke@uidaho.edu); Affiliated Faculty: Katherine G. Aiken, Janice Capel Anderson, Anna Banks, Ian Chambers, Mary Clearman Blew, Laurel J. Branen, Traci Craig, Janice W. Fletcher, Annette Folwell, Stephan P. Flores, H. Lynne Haagensen, Walter A. Hesford, Eric L. Jensen, Georgia Johnson, Ellen E. Kittell, , Guadalupe Perez-Anzaldo, Sean Quinlan, Sandra Reineke, Debbie Storrs, 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. Women's Studies attract students of both sexes because it endeavors to expose unexamined attitudes about cultural variables including gender, race and ethnicity, class, age, sexual identity, etc. 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 Part 6 for courses in Women's Studies (WmSt).

Women's Studies Academic Minor Requirements

Women's 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 or	Women's Literature
FLEN 481	(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)
H&S 311	Acquaintance Rape (3 cr)
Hist 357	Women in Pre-Modern European History (3 cr)
Hist 385	History of Sexuality (3 cr)
Hist 420	History of Women in American Society (3 cr)
Phil 425	Philosophy and Feminism (3 cr)
PolS 423 or	Politics, Policy and Gender (3 cr)
PolS 523	
Psyc 315	Psychology of Women (3 cr)
Psyc 320	Introduction to Social Psychology (3 cr)
Soc 325	Sociology of the Family (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)

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 Studies minor. No more than 3 credits may count toward both the student's major and minor.

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 in part 3 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.

LC - cooperative course with Lewis-Clark State College offered at the LCSC and available to University of Idaho students. For complete description, consult the LCSC catalog.

ID - cooperative course with Washington State University or Lewis-Clark State College offered at the University of Idaho and available to WSU or LCSC students.

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.

WS - cooperative course with Washington State University offered at WSU and available to University of Idaho students. For complete description, consult the WSU catalog.

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 0 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.

Parenthetical Course Numbers

Course numbers that appear in parentheses after the course credits are former numbers and appear for one edition only.

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

Accounting Courses

Marla Kraut, Dept. Head, Dept. of Accounting (125A J. A. Albertson Bldg. 83844-3161; phone 208/885-7116).

Note: 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.

Prerequisite: Enrollment in 300- and 400-level accounting courses is restricted to students who have completed at least 58 credits. In addition, CBE students must have earned at least a 2.35 GPA in the CBE predictor courses. Students who have not completed the prerequisite to a course for which they are otherwise eligible may register for the course with the instructor's approval.

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)

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 310 Accounting for Business Decisions I (2 cr)
May only be repeated once. Student may petition to repeat a second time in consultation with the college dean and course instructor. Accounting concepts and theories with emphasis on the role of accounting information in decision making within and about business; effect of accounting information on behavior; recognition and valuation issues and analysis of financial statements; and use of cost management accounting systems to support product and process planning. May include evening exams.
Coreq: *Bus 340*

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 315*

Acct J430/J530 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. Additional class meetings, projects, and/or assignments required for graduate credit. May include evening exams.
Prereq: *Acct 315*

Acct 440 Fraud Examination (3 cr)
Fraud prevention, detection, investigation, and resolution. May include evening exams.
Prereq: *Acct 201 and Acct 310*

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 J485/J585 Estate Planning (3 cr)
Gift and estate tax consequences on property transfer during life and at death, tax research, and estate planning and personal financial planning. Additional class meetings, projects, and/or assignments reqd for grad cr. May include evening exams. Recommended Preparation: Acct 484/584. (Spring only)
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 497 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: *Permission*

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)
See Acct J430/J530.

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 Planning (3 cr)
See Acct J485/J585.

Acct 586 Accounting for Management Decision Making and Control (3 cr)
See Acct J486/J586.

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; includes statistical and other sampling methods and EDP auditing techniques. (Spring only)
Prereq: Acct 492 and 570

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 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

Charles W. Gagel, Dept. Chair, Dept. of Adult, Career, and Technology Education (11A ITED Bldg. 83844-4021; phone 208/885-6492; ACTE@uidaho.edu; www.uidaho.edu/ed/ACTE). Martha C. Yopp, Coordinator of Adult and Organizational Learning (UI Boise Center, 800 Park Blvd., Suite 200, Boise, ID 83712; phone 208/364-9918).

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 Education and Work for Sustainability (3 cr) (PTTE 507)
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 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 Workforce Education (3 cr)
Same as CTE 570. 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 of Sustainable Leadership (3 cr)
Analysis and study of leadership of the human resource in organizations; theories, styles, and methods of sustainable 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

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

AOLL 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. Recommended Preparation: foundations and/or introduction to research.
Prereq: Enrollment to a doctoral program

AOLL 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

Aerospace Studies Courses

Matthew J. Dorschel, Dept. Head (Washington State University Kruegel Hall, phone 509/335-5598; http://www.det905.com).

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.
Coreq: Aero 101 or 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.
Coreq: Aero 201 or 202

Aero 291 Four-Week Field Training Course (2 cr)
Intensive study of military education, experience in leadership, and management at an active Air Force installation.
Prereq: Aero 101-102, 201-202, and perm of dept (by interview)

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.
Coreq: Aero 311 or 312

Aero ID391 Private Pilot Ground School (2 cr) WSU Aero 391
All aspects of preparation for the FAA Private Pilot Written Test. Additional fees will be required.

Aero ID392 Instrument Pilot Ground School (2 cr) WSU Aero 392
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.

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.
Coreq: *Aero 411 or 412*

Aero 499 (s) Directed Study (cr arr)

Agricultural Economics Courses

Larry W. Van Tassell, Dept. Head, Dept. of Agricultural Economics and Rural Sociology (39A Iddings Wing, Ag. Sc. Bldg. 83844-2334; phone 208/885-6264; larryv@uidaho.edu).

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.

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 Agricultural Economics I (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 272; and Math 143 with a grade of 'C' or better*

AgEc 302 Agricultural Economics II (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 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 335 Conflict Management (1 cr)
Collaborative processes and facilitation techniques designed to bring community and natural resource decision makers together for focused problem solving. Five week course. Three hours of lec per week. (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 202.

AgEc ID361 Farm and Natural Resource Appraisal (3 cr) WSU EconS 361
Same as For 361. Methods; factors affecting the value of land and related resources; valuations for loans, sale, assessment, condemnation, and other purposes; procedures used by governmental and commercial agencies. One 1-day field trip. Recommended Preparation: AgEc 278 or Econ 202.

AgEc 383 Economics for Natural Resource Managers (3 cr)
See For 383.

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 416 Agricultural and Natural Resource Project Evaluation (1 cr)
Application of benefit-cost analysis to natural resource and agricultural investments. The ability to use spreadsheets is essential for students enrolling. Five week course. Three hours of lec per week. (Spring only)
Prereq: *Math 143 and AgEc 278*

AgEc 417 Risk Management in Agriculture (1 cr)
Identification of risks facing agricultural based firms. Assessment of risk management tools and strategies (e.g. agriculture insurance programs and enterprise diversification) as applied to decision making. Five week course. Three hours of lec per week. (Spring only)
Prereq: *AgEc 278; and AgEc 301 or AgEc 302*

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 J427/ID&WS-J527 Mathematics for Economists (3 cr) WSU EconS 527
Same as Econ J427/J527. Applications of linear algebra and calculus to market, macroeconomic, and firm models for comparative static equilibrium and constrained optimization analysis. (Fall only)

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, Core 106, or PolS 364; or Permission*

AgEc 478 Advanced Agribusiness Management (3 cr)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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 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 272*

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 ID&WS525 Master's Econometrics (3 cr) WSU EconS 525
Sampling techniques, linear regression and analysis of variance with economic applications.
Prereq: *3 cr in statistics*

AgEc ID&WS526 Master's Microeconomics Analysis (3 cr) WSU EconS 526
See Econ 526.

AgEc ID&WS527 Mathematics for Economists (3 cr) WSU EconS 527
See AgEc J427/J527.

AgEc ID&WS529 Research Methods (1-2 cr) WSU EconS 529
Social science Master's thesis as a research journey toward craftsmanship including elements of imagination, modeling, mindfulness, guidelines, and mentor experiences.
Prereq: *Graduate standing and Permission*

AgEc WS531 Economic Analysis of Environmental Policies (3 cr) WSU EconS 531
Prereq: *Econ 352 or Permission*

AgEc ID&WS532 Natural Resource Economics and Policy (3 cr) WSU EconS 532
Economic principles and models applied to natural resource problems, issues, and policies. (Spring only)
Prereq: *Econ 352 or Permission*

AgEc ID&WS533 International Trade and Policy (3 cr) WSU EconS 533
International trade theories and policies and research issues related to world trade, with emphasis on agricultural commodity markets. (Fall only)
Prereq: *Econ 446, AgEc 481, or Permission*

AgEc ID&WS534 Production Economics (3 cr) WSU EconS 534
Production economics theory and methods applied to problems of production response, economic optimization, technology, policy, risk and dynamics. (Spring only)
Prereq: *AgEc 525*

AgEc ID535 Applied Industrial Organization (3 cr) WSU EconS 535
Economic and strategic management theories and their relevance to agribusiness decision-making, including empirical applications. (Fall only)

AgEc WS536 Economics of Marketing (3 cr) WSU EconS 536
Prereq: *AgEc 525*

AgEc 577 Law, Ethics, and the Environment (3 cr)
See AgEc J477/J577.

AgEc 586 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. Recommended Preparation: Introductory Microeconomics and Macroeconomics or Introduction to Bioregional Planning. (Spring only)

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. (Fall only)
Prereq: *AgEc 586 or Permission*

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 and Extension Education (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 and Extension Education (2 cr)
Overview of the goals, mission, and purpose agricultural and extension education programs within society. Course content will include topics related to career opportunities in Agricultural and Extension Education, key issues facing agricultural education programs in high school and extension education programs at the local, state, and national levels; the importance of agricultural education to society; and the role of the agricultural educator or extension educator in schools and communities. (Fall only)

AgEd 250 Developing State FFA Officers (1-2 cr, max 3)
This course emphasizes the development of practical skills in leadership and communications that will help students better serve the Idaho FFA Association as well as their own future. Practicum component required.
Prereq: *Permission*

AgEd 253 Parliamentary Procedure (1 cr)
Basic knowledge and skills related to parliamentary procedure and the orderly conduct of business in meetings.

AgEd 299 (s) Directed Study (cr arr)

AgEd 351 Principles and Philosophy of Professional-Technical Education (3 cr)
See CTE 351.

AgEd 358 Supervising FFA and SAE Programs (2 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: *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 J446/J546 Youth Education in Agriculture (2 cr)
Theories, principles and practices associated with effective teaching and learning for youth in non-formal settings such as 4-H meetings, conferences, and conventions. Practicum element required. Additional assignments required for graduate credit. (Spring, alt/yrs)

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 a 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 (2 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 (3 cr)
Procedures of identifying and selecting instructional methods and materials, planning, and student evaluation criteria to effectively teach agriculture. (Fall only)
Prereq: *Admission to Teacher Education Program, or Permission of department*

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. (Spring only)
Prereq: *Admission to Teacher Education Program, or Permission of department*

AgEd 454 Facilities Organization and Management (2 cr)
Applications of efficient planning, organizing, and teaching skills reqd in management of lab and shop facilities. (Spring only)
Prereq: *Admission to Teacher Education Program, or Permission of department*

AgEd 460 Practicum: Secondary School Teaching in Agriculture (10 cr)
Ten wks of practical experience student teaching in secondary agriculture program; in addition each student will be expected to complete one wk of early field-based experience at his or her student teaching center, to be completed the first wk of school after Jan. 1. (Spring only)
Prereq: *Admission to the Teacher Education Program, and perm of dept*

AgEd 461 Student Teaching Portfolio (2 cr)
Summary of the 10-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 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 546 Youth Education in Agriculture (2 cr)
See AgEd J446/J546.

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 557 Problems in Teaching Agriculture (1-3 cr, max 9)
Methods and new developments.
Prereq: Permission

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)

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).

Prerequisite: Enrollment in courses in this subject field requires permission of the department.

Ag WS101 Organic Gardening and Farming (3 cr) WSU Soils 101

Ag 210 Living on the Land (3 cr)
The course is designed to provide adults with information and skills to implement Best Stewardship Practices on small acreages in the Treasure Valley. After attending this course, participants will have basic knowledge and skills to: implement an inventory of the resources on their small acreage; understand soils, soil interactions and do basic soil testing; understand water, water interactions and do basic water testing; understand plants, plant interactions and do basic forage testing; understand whole farm and/or ranch systems thinking and understand human-animal-soil-plant-water interactions. Participants will also be able to share information about stewardship for small acreages with others in their community.

Ag 212 Junior Master Gardener Teacher Preparation (3 cr)
This course is primarily presented as a non-formal Extension education program for learners who will be teaching in the Junior Master Gardener Program. After attending this course, participants will have basic knowledge and resources to provide leadership and instruction for the Idaho Junior Master Gardener Program. Participants will also be able to share information about horticulture, community gardening, youth development, youth recognition, and JMG activities with others in their community.

Ag 299 (s) Directed Study (cr arr)

Ag 398 (s) Internship (1-6 cr, max 6)
Graded P/F.
Prereq: Permission

Ag 400 (s) Seminar (cr arr)

Ag 404 (s) Special Topics (cr arr)

Ag ID417 NxLevel's Agricultural Entrepreneurship - Tilling the Soil of Opportunity (3 cr) WSU AFS 417
Assessing potential of small farm enterprises; marketing strategies, finances, feasibility, legal issues, resource evaluation and writing a business plan. One three hour class per wk.

Ag 495 (s) Agricultural Ambassadors (cr arr)
Graded A/P/F.

Ag 499 (s) Directed Study (cr arr)

Agricultural Systems Management Courses

Jon H. Van Gerpen, 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.

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 ID&WS305 GPS and Precision Agriculture (3 cr) WSU AgTM 305
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.

ASM ID306 Agricultural Structures and Environmental Systems (3 cr) WSU AgTM 306
Planning farm buildings, construction materials, beam and column design, insulation and ventilation for environmental control. Two lec and one 3-hr lab a wk.

ASM ID&WS315 Irrigation Systems and Water Management (3 cr) WSU AgTM 315
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.
Prereq: Soil 205, Math 108, 143, 160 or 170 or Permission

ASM ID&WS331 Electric Power Systems for Agriculture (3 cr) WSU AgTM 330
Basic circuits; wiring and the code; motors and controls; heating, lighting, and power. Two lec and one 3-hr lab a wk.

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 ID409 Agricultural Tractors, Power Units and Machinery Management (3 cr) WSU AgTM 409
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 WS413 Human and Machinery Risk Management (3 cr) WSU AgTM 412

ASM 430 Water and Wastewater Operations Management (3 cr)
Concepts for drinking water operations, including basic chemistry, sampling, basic water treatment methods such as softening, taste and odor control, etc. Some demonstrations, review of math. Concepts of waste water treatment, including basic treatment plant components, sampling, disinfection, chemical and biological processes. Introduction to State certification process. (Spring Only)
Prereq: Chem 101 or Chem 111; and Math 143 or Math 160

ASM ID&WS433 Agricultural Processing Systems (3 cr) WSU AgTM and FSHN 433
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.

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; http://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 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 208/885-6013); Co-Coordinators: Walter A. Hesford Sheila O'Brien.

AmSt 201 Introduction to Ethnic Studies (3 cr)
May be used as core credit in J-3-d. Surveys major themes and topics in ethnic studies with a comparative emphasis on experiences of Native Americans, African Americans, Latinos/Hispanics, and Asian Americans; a multidisciplinary course that encourages participation facilitating student-to-student dialogue and allowing students to collaborate in creating a learning environment in which knowledge and experience is share; assists students in becoming more aware of their own locations in the context of race and ethnic structures in the U.S.

AmSt 301 Studies in American Culture (3 cr)
May be used as core credit in J-3-d. 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

Carl W. Hunt, Dept. Head, Dept. of Animal and Veterinary Science (213 Ag. Sc. Bldg. 83844-2330; phone 208/885-6345; angelac@uidaho.edu).

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 ID&WS109 The Science of Animals that Serve Humanity (4 cr) WSU A S 101
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.

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.

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 ID&WS218 Artificial Insemination and Pregnancy Detection (2 cr) WSU A S 454
Anatomy and physiology of pregnant and nonpregnant reproductive systems; artificial insemination; male reproduction; pregnancy detection

in domestic livestock. Two 2-hr lec-labs a wk. Enrollment limited to 20 students. Preregistration required; consult dept administrator. Recommendexd Preparation: AVS 222.

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 ID&WS263 Live Animal and Carcass Evaluation (3 cr) WSU A S 260
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.

AVS 271 Anatomy and Physiology (4 cr)
Structure and function of tissues and organ systems of domestic and wild animals. Three lec and one 2-hr lab a wk.
Prereq: *Biol 115 or MMBB 250*

AVS ID274 Beef Feedlot Systems (2 cr) WSU AS 274
Overview of feeding management, feed milling and batching, animal health, and economics of the commercial cattle feeding business. One 1-day field trip.

AVS 299 (s) Directed Study (1-6 cr, max 6)
Graded P/F.
Prereq: *Permission of department*

AVS ID&WS305 Animal Nutrition (4 cr) WSU A S 314
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.

AVS ID&WS306 Feeds and Ration Formulation (4 cr) WSU A S 313
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.

AVS ID&WS330 Genetics of Livestock Improvement (3 cr) WSU A S 330
Same as Gene 320. Genetic principles applied to breeding of farm animals.
Prereq: *Gene 314, Stat 251, and AVS 222*

AVS 363 Animal Products for Human Consumption (3 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 lec and one 2-hr lab a wk. Recommended Preparation: 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 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 ID&WS-J451/ID&WS-J551 Endocrine Physiology (3 cr) WSU A S 451/551
Same as Biol J417/J517. 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 202 and MMBB 380.

AVS ID&WS452 Physiology of Reproduction (4 cr) WSU A S 350
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.

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 required for graduate credit.

AVS ID466 Horse Science and Management (3 cr) WSU A S 466
Principles of managing, feeding, and breeding, horses. Course divided into three subject matter sections: Management, Nutrition, Reproduction and Health.
Prereq: *Junior standing and AVS 222, 271 and 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, 271 and 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 ID&WS472 Dairy Cattle Management (3 cr) WSU A S 472
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.

AVS ID&WS474 Beef Cattle Science (3 cr) WSU A S 474
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.

AVS ID&WS475 Advanced Dairy Management (3 cr) WSU A S 473
Application of concepts of dairy cattle management to practical situations. One lec and 1-2 hrs of lab a wk. Recommended Preparation: AVS 472.

AVS ID476 Sheep Science (3 cr) WSU A S 476
Application of principles of genetics, reproduction, nutrition, health, and marketing to the management of commercial and purebred sheep; new developments related to sheep industry; production, evaluation, and use of wool. Two lec and one 2-hr lab a wk; one 1-day field trip or equiv time. Recommended Preparation: AVS 222 or equiv.

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)
See AVS J409/J509.

AVS 511 Ruminant Nutrition (3 cr)
See AVS J411/J511.

AVS WS516 Mineral and Vitamin Metabolism (4 cr) WSU A S 513

AVS ID&WS520 Seminar in Animal Physiology (1 cr, max arr) WSU A S 540
Current topics in animal physiology.

AVS ID&WS526 Advanced Reproduction (4 cr) WSU A S 550
(Alt/yrs)

AVS ID&WS551 Endocrine Physiology (3 cr)
See AVS J451/J551

AVS 563 Growth and Lactation (3 cr)
See AVS J463/J563

AVS 598 (s) Internship (cr arr)

AVS 600 Doctoral Research and Dissertation (cr arr)

Anthropology Courses

Donald E. Tyler, Dept. Chair, Dept. of Sociology and Anthropology (101 Phinney Hall 83844-1110; phone 208/885-6751).

Prerequisite: Ordinarily three credits in lower-division courses in anthropology are required for registration in upper-division courses in this field; other exceptions by permission.

Anth 100 Introduction to Anthropology (3 cr)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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 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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. Origins, physical types, languages, and cultures of North American Indians.

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 and Stat 251*

Anth ID&WS-J411/ID&WS-J511 Human Evolution (3 cr) WSU Anth 465/565
Human origins in light of the fossil record and evolutionary theory. Additional projects/assignments reqd for grad cr. Recommended Preparation: Anth 100.

Anth ID&WS-J412/ID&WS-J512 Human Races (3 cr) WSU Anth 463/563
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 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 ID-J422/ID-J522 Plateau Indians (3 cr) WSU Anth 428/528
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 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/ID-J531 Historical Archaeology (3 cr) WSU Anth 545
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.
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 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 441 Introduction to the Study of Language (3 cr)
See Engl 441.

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 WS-J450/WS-J550 Descriptive Linguistics (3 cr) WSU Anth 450/550

Anth ID&WS-J451/ID&WS-J551 Forensic Anthropology (3 cr) WSU Anth 466/566
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 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 only: *May be used as core credit in J-3-d.* 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 ID&WS511 Human Evolution (3 cr)
See Anth J411/J511.

Anth ID&WS512 Human Races (3 cr)
See Anth J412/J512.

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 ID522 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 ID531 Historical Archaeology (3 cr)
See Anth J431/J531.

Anth 532 Historical Artifact Analysis (3 cr)
See Anth J432/J532.

Anth WS535 Cultural Resource Management (3 cr) WSU Anth 535

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 WS550 Descriptive Linguistics (3 cr)
See Anth J450/J550.

Anth ID&WS551 Forensic Anthropology (3 cr)
See Anth J451/J551.

Anth 562 Human Issues in International Development (3 cr)
See Anth J462/J562.

Anth WS573 Zooarchaeology (4 cr) WSU Anth 573

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

Diane E. Armpriest, Coordinator of Architecture and Interior Design (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

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 366 Building Technology I (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

Arch 385 History of Architecture I: Pre-Modern (3 cr)
A survey of Western and non-Western architecture from prehistory through the seventeenth century in Africa, Asia, Europe, and the Americas. The course addresses architecture within its diverse social, cultural, and physical contexts. Recommended Preparation: Arch 151.

Arch 386 History of Architecture II: Modern (3 cr)
A history of 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 ID412 Environment and Aging (3 cr) WSU Aging 412
Exploration of the relationship between the processes of aging and the physical environment within an environment and behavior perspective.

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 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 465 Building Technology II (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 366 and ForP 365

Arch 466 Building Technology III (2 cr)
Lateral and dynamic loads on architectural structures, principles of design for wind and seismic resistance, high-rise structural systems.
Prereq: Arch 356 and ForP 365

Arch 467 Wellness and Design (2 cr)
Principles and exploration of the designed environment's impact on our sense of wellness. Special focus on how light, air, views and exercise can be promoted or degraded through design. Recommended preparation: Arch 463-464 and Architecture Site Design. (Fall only)

Arch J475/J575 Professional Practice (3 cr) (ID 478)
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.

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: 9 graduate credits

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 515 Environment and Behavior (3 cr)
A study of the relationship between architecture, planning and human behavior. (Fall only)

Arch 520 Architectural Research Methods (3 cr)
Philosophy of research in architecture, research design, data gathering and interpretation, and thesis preparation.

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 Vital Signs (2 cr)
Methods for assessing performance of actual and planned 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. (Fall only)

Arch 574 Building Performance Simulation for Integrated Design (3 cr)
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. (Spring only)

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 Morphology (2-3 cr)
Seminar style course that explores the theory, research, documentation and interpretive practices of urban morphology (study of urban form). Through 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. Additional projects/assignments required for the 3 credit option. 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

William P. Woolston, Coordinator of 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)
May be used as core credit in J-3-d. 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 Visual Communication (2 cr)
The principles and elements of two and three-dimensional design with application and analysis of these elements in our visual world.

Art 111 Drawing I (2 cr)
Freehand drawing; emphasis on expressive use of materials. Two 2-hour studios a wk.

Art 112 Drawing II (3 cr)
Freehand drawing; emphasis on expressive use of materials. Two 3-hour studios a wk.
Prereq: *Art 111*

Art 121 Design Process I (2 cr)
Introduction to design process; 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-hr studios a wk and assigned work; attendance at outside events (lecs, symposiums, Prichard and Univ 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 202 Early Modern Art and Aesthetics (3 cr)
May be used as core credit in J-3-d. A survey of the major artistic movements and theoretical developments in European art and aesthetics from c. 1750-1880. The close study of the principal artists of the period will include the examination of concomitant historical, philosophical, political, and cultural developments that informed the theoretical and artistic advancements in 18th century and 19th Century art. Special consideration is given to the philosophical, theoretical, and political groundings of European Neoclassicism, Romanticism, Realism, and Impressionism.

Art 204 (s) Special Topics (cr arr)

Art 205 Visual Culture (3 cr)
May be used as core credit in J-3-d. 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. *May be used as core credit in J-3-d.* 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)
May be used as core credit in J-3-d. 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 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.

Art 271 Interaction Design I (3 cr)
Introduction to technical and aesthetic concepts of interaction design, including user based interaction design methodologies and standards-based practices for the Web and other interactive media. Preparation of basic media assets (graphics, video, animation and sound) for interactive delivery. Introduction to basic design methodologies; structured versus unstructured projects, project brief, personas, scenarios, flowcharting, storyboarding and development and production project workflows.

Art 272 Interaction Design II (3 cr)
Intermediate interaction design. Self-initiated interactive design projects using industry standard methodologies and practices, to include pre-design project analysis and description, design development and production. Introduction to information design concepts and practices and to various technologies for providing user based interaction; scripting, Flash, and databases, etc. Readings in current design issues and industry trends.
Prereq: Art 271 or Permission

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)
May be used as core credit in J-3-d. A 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, Neoimpressionism, Symbolism, Fauvism, German Expressionism, Futurism, Cubism, Dada, and Surrealism, among others.

Art 303 Contemporary Art and Theory (3 cr)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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 Advanced Interaction Design (3 cr, max 9)
Advanced interaction design projects. Individual and small team design projects. Emphasis on team dynamics, project analysis and description, development and production. Focus on interactive information design projects, project management and production. Readings and assigned writings focus on current design industry issues, practices, trends and methodologies.
Prereq: Art 271-272 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.

Art 382 History of Photography (3 cr)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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 J409/J509 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. Additional projects/assignments reqd for grad cr. 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*

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)
May be used as core credit in J-3-d. Open only to BFA studio art 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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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) Critical Theory and Continental Aesthetics (3 cr)
Same as Phil 508. Introduction, examination, and analysis of principal texts and strategies of critical theory and continental aesthetics from Kant to Zizek. Topics to be studied include German aesthetics, phenomenology and hermeneutics, psychoanalysis, feminism, the Frankfurt School, structuralism, poststructuralism, deconstruction, postcolonialism, science studies, and media aesthetics. Open to all graduate students, and to undergraduates with instructor's approval.

Art 509 Visual Studies (3 cr)
See Art J409/J509.

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 511 Readings in Art Education (3 cr)
Online course open to MAT students only. Assigned readings in current issues in art education pedagogy and contemporary art with weekly online meetings and a final paper. (Spring, alt/yrs)

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*

Bioinformatics and Computational Biology Courses

Christopher J. Williams, Program Director (414 Brink.. 83844-1104; phone 208/885-2802; bcb@uidaho.edu; www.bcb.uidaho.edu).

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 in Part 5 for a complete list of classes.

BCB WS-J478/WS-J578 Introduction to Bioinformatics (3 cr) WSU MBioS 478/578.

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 516 (s) Biological Sciences Supplement (cr arr)
Supplemental material to a course taught in the biological or biochemical sciences. Supplements cover material specific to bioinformatics and computation biology that complement material taught in courses from other departments.
Prereq: Permission

BCB 517 (s) Computational Sciences Supplement (cr arr)
Supplemental material to a course taught in the computational sciences. Supplements cover material specific to bioinformatics and computation biology that complement material taught in courses from other departments.
Prereq: Permission

BCB 518 (s) Mathematics or Statistics Supplement (cr arr)
Supplemental material to a course taught in mathematics or statistics. Supplements cover material specific to bioinformatics and computation biology that complement material taught in courses from other departments.
Prereq: Permission

BCB WS578 Introduction to Bioinformatics (3 cr)
See BCB J478/J578.

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

Jon H. Van Gerpen, 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).

Note: All 300, 400, and 500-level biological and agricultural engineering courses require a working knowledge of computers, structured programming, electronic spreadsheets, and word processing.

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.

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 356 Hydrologic Measurement Techniques (1 cr)
See CE 326.

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 ID-J432/ID-J532 Bioreactor Theory and Design for Waste Treatment (3 cr)
BAE 532 same as EnvE 544. Theory of biological waste treatment as applied to wastewaters, including reaction kinetics, reactor theory and design, reaction stoichiometry, microbiology, gas transfer theory, suspended growth and attached growth process theory and design, and separation of biological solids. Graduate credit requires additional design project. One field trip.
Prereq: Chem 112, Math 310, and Biol 115 or MMBB 250, 255

BAE J433/J533 Bioremediation (3 cr)
BAE 533 same as EnvE 533. 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 ID&WS-J441/ID&WS-J541 Instrumentation and Measurements (3 cr) WSU BSysE 541
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.

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 ID&WS-J452/ID&WS-J552 Environmental Water Quality (3 cr) WSU BSysE 452
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 MMBB 250, and BAE 355 or BAE 450

BAE 458 Open Channel Hydraulics (3 cr)
Same as CE 428. Hydraulics of uniform and varied flow in open channels with fixed and movable beds. Recommended Preparation: CE 322.

BAE ID&WS459 Irrigation System Design (3 cr) WSU BSysE 453
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 ID&WS461 Bioprocess Engineering (3 cr) WSU BSysE 461
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 ID&WS462 Electric Power and Controls (3 cr) WSU BSysE 380
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 WS-J465/WS-J565 Surface Hydrologic Processes and Modeling (3 cr) WSU BSysE 456/556

BAE 478 Engineering Design I (3 cr)
May be used as core credit in J-3-d. Intro to design process, CAD/CAM facility, product liability, and project scheduling; formulation of a design problem.
Prereq: Senior standing or Permission

BAE 479 Engineering Design II (3 cr)
May be used as core credit in J-3-d. Individual or team design of an agricultural related problem; incl synthesis, analysis, construction, and testing; final report reqd. Two 3-hr labs a wk. Recommended Preparation: BAE 478.

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 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 ID532 Bioreactor Theory and Design for Waste Treatment (3 cr)
See BAE J432/J532.

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 ID&WS541 Instrumentation and Measurements (3 cr)
See BAE J441/J541.

BAE 550 Natural Channel Flow (3 cr)
Same as CE 529. Hydraulics of nonuniform flow in irregular channels, unsteady flow, and flow routing.

BAE ID551 Advanced Hydrology (3 cr) WSU BSysE 550
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, groundwater outflow and base flow, stream flow generation, and elements of frequency analysis in hydrology.
Prereq: BAE 335; or BAE 450 and Math 310; or Permission

BAE ID&WS552 Environmental Water Quality (3 cr)
See BAE J452/J552.

BAE ID558 Fluid Mechanics of Porous Materials (3 cr) WSU BSysE 558
Statics and dynamics of multiflow systems in porous materials; properties of porous materials; steady and unsteady flow.

BAE WS565 Surface Hydrologic Processes and Modeling (3 cr) WSU BSysE 556
See BAE J465/J565.

BAE WS582 Food Process Engineering Design (3 cr) WSU BSysE 582 or FSHN 582
See FS J482/J582.

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

Joseph G. Cloud, 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. Graded P/F.

Biol 102 Biology and Society (4 cr)
May be used as core credit in J-3-b. 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)
May be used as core credit in J-3-b. The cell, heredity and evolutionary processes. Three lec and one 3-hr lab a wk.
Coreq: Chem 101 or 111

Biol 116 Organisms and Environments (4 cr)
May be used as core credit in J-3-b . 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 210 Genetics (4 cr)
Genetic mechanisms in animals, plants, and microorganisms. Three lec and one 3-hr lab a wk. (Fall only)
Prereq: Biol 115 or MMBB 250

Biol 212 Molecular and Cellular Biology (4 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 3-hr lab a wk. (Fall only)
Prereq: Biol 115.

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 and 116

Biol 299 (s) Directed Study (cr arr)

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 116; and Math 143, 160, or 170. Biol 210 recommended

Biol WS324 Comparative Vertebrate Anatomy (4 cr) WSU Biol 324
General vertebrate anatomy and evolutionary changes in organ systems. Two lec and two 3-hr labs a wk.
Prereq: Biol 115 and 116

Biol 354 Experimental Approaches in the Biological Sciences (3 cr)
Experimental analysis of biological systems. (Fall only)

Prereq: Biol 210, 212, and 213, or Permission

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

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, 116, 210, 212, 213, or 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 210, 212, 213, 314, and Sr standing

Biol ID&WS-J417/ID&WS-J517 Endocrine Physiology (3 cr)
See AVS J451/J551.

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 (4 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, 116, 210, 212, 213, and 314

Biol WS435 Limnology and Aquatic Ecosystem Management (3 cr) WSU ES/RP 411 and Zool 411
Prereq: Biol 115 and Chem 111

Biol WS436 Plant Environmental Biophysics Lab (1 cr) WSU ES/RP and SoilS 415

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 only)
Prereq: Biol 116 and 210; or MMBB 250

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 ID450 Comparative Vertebrate Reproduction (3 cr) WSU Biol 451/551
Physiology of major events in reproductive cycles of vertebrates. (Spring, Alt/yrs)
Prereq: Biol 116 and 213

Biol ID461 Neurobiology (3 cr) WSU Neuro 461
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 277. (Fall, Alt/yrs)
Prereq: Biol 213

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 116 or Biol 212

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 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 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 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 WS509 Development and Plasticity of the Nervous System (3 cr) WSU Biol 553
A comparative approach to neural development and repair in invertebrates and vertebrates.
Prereq: Biol 210; and MMBB 300 or 380; and Biol 423 or a 400-level neurobiology course

Biol WS515 Plant Environmental Biophysics (2 cr)

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 525 Readings in Ecological and Evolutionary Genetics (1 cr)
Seminars and discussion of current research in genetics as it applies to ecology and evolution. (Fall only)

Biol WS529 Cellular and Molecular Neurobiology (4 cr) WSU Neuro/V Ph 529

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 210

Biol ID&WS548 Evolutionary Ecology (3 cr)

Biol ID&WS551 Seminar on Reproductive Biology (1 cr) WSU AS 582
Current topics in reproductive biology.
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 ID558 Reproductive Biology of Fishes (2 cr) WSU Biol 511
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. (Spring only, Alt/yrs)

Biol WS559 Molecular and Cellular Reproduction (3 cr) WSU MBioS 528
Prereq: AVS 452 or Biol 450/550

Biol 563 Mathematical Genetics (3 cr)
See Math 563.

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 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 530 Planning Theory and Professional Ethics (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. Optional third credit for professional planning exam and speaker series. Two-credits are appropriate for graduate students from multiple disciplines. (Spring only)

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 involved 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

Douglas C. Haines, Dept. Chair of Business (301F J. A. Albertson Bldg. 83844-3161; phone 208/885-7146; dhaines@uidaho.edu).

Note: 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.

Note: Before enrolling in upper division College of Business and Economics courses, a CBE student must apply and be accepted into the college's junior or senior level curriculum.

Prerequisite: Enrollment in 300- and 400-level business courses is restricted to students who have completed at least 58 credits. In addition, CBE students must have earned at least a 2.35 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.

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 or 342. 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 Professional 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 150 Professional 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 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 Professional 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 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 261 Real Estate (3 cr)
Listing, selling, leasing, financing, and brokerage; fundamentals of valuation and listing property management. This course has been certified by the Idaho Real Estate Commission.

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: Bus 261 or 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: Bus 261 or a course in essentials of real estate; BLaw 265.

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 Management (3 cr)
Cannot be taken for credit by CBE Majors either concurrently or after completion of Bus 340-345. Policies and practices involved in acquisition, control, and allocation of financial resources in business organizations. May involve evening exams.
Prereq: *Acct 201 and Acct 202; and Stat 251 or Stat 271; and Econ 202 or Econ 272*

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; or Bus 340-342 and Econ 340*
Prereq or Coreq: *Bus 343-345*

Bus 311 Introduction to Management (3 cr)
Cannot be taken for credit by CBE Majors either concurrently or after completion of Bus 340-345. 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)
Cannot be taken for credit by CBE Majors either concurrently or after completion of Bus 340-345. Marketing institutions and relationships with economic, political, legal, and social environment; principles, functions, concepts, and issues of marketing within a firm and the relationship of marketing to other business disciplines. May involve evening exams.

Bus 324 Buyer Behavior (3 cr)
Behavioral science theories, concepts, and methods applied to the understanding and prediction of consumer behavior; emphasis on structuring marketing policy to fulfill consumer requirements. May involve evening exams.
Prereq: *Bus 321; OR* ***Prereq or Coreq:*** *Bus 343*

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: *Bus 340, Bus 341, Bus 342, and Econ 340*

Bus 340 Team Building and Group Dynamics (2 cr)
May only be repeated once. Student may petition to repeat a second time in consultation with the Dean and course faculty team. Open only to undergraduate CBE majors. Issues in the formation, development, and management of work groups and teams; problems and characteristics common to group situations and strategies for improving team productivity; specific topics include increasing self-awareness, clarifying and managing team-member roles, understanding intercultural communication, capitalizing on the potential of diverse work groups, problem-solving and decision-making, project planning, and identifying the role of leadership in teams. May involve evening exams.
Coreq: *Bus 339, Bus 341, Bus 342, and Econ 340*

Bus 341 Business Systems (4 cr)
May only be repeated once. Student may petition to repeat a second time in consultation with the Dean and course faculty team. Open only to undergraduate CBE majors. Introduction to business as a general system; consideration of external environmental issues using an economy-industry-company framework of analysis and its extension to global scanning; discussion of socio-political forces, domestic and foreign financial markets, the role of technology in organizations; discussion of valuation models and legal issues facing organizations; examination of organizational subsystems including those responsible for generating revenues, producing the product or service, and providing support; a comprehensive integrative case is used to illustrate these ideas. May involve evening exams.
Coreq: *Bus 340 and 342*

Bus 342 Product and Process Planning (3 cr)
May only be repeated once. Student may petition to repeat a second time in consultation with the Dean and course faculty team. Open only to undergraduate CBE majors. An overview of the marketing, engineering, financial, and production decisions involved in developing new products and determining the product mix; examination of the theory, tools, and approaches that can be used to assist managers in making effective new product and process decisions; specific topics include consumer behavior, business research, optimization techniques, capital budgeting, and product and process design using Total Quality Management; a comprehensive integrative case is used to illustrate these ideas. May involve evening exams.
Coreq: *Bus 340 and Bus 341*

Bus 343 Planning and Decision Making in Organizations (2 cr)
May only be repeated once. Student may petition to repeat a second time in consultation with the Dean and course faculty team. Open only to undergraduate CBE majors. An overview of the managerial planning process with a focus on business decision making through the collection and analysis of data; decision-making models and approaches, sources of information, value of information, pro-forma financial analysis, and forecasting; a comprehensive integrative case is used to illustrate these ideas. May involve evening exams.
Prereq: *Bus 339, Bus 340-342 and Econ 340*
Prereq or Coreq: *Engl 207, Engl 208, Engl 209, Engl 313 or Engl 317*
Coreq: *Acct 310, Bus 344, and Bus 345*

Bus 344 Managing the Firm's Resources (3 cr)
May only be repeated once. Student may petition to repeat a second time in consultation with the Dean and course faculty team. Open only to undergraduate CBE majors. An overview of the decisions necessary for the effective management of the firm's financial, human, and information resources; topics include: management of the firm's financial structure, dividend policy, and working capital; attracting, maintaining, and developing the work force; systems planning, requirements analysis, and data design; a comprehensive integrative case is used to illustrate these ideas. May involve evening exams.
Prereq: *Bus 339, Bus 340-342 and Econ 340.*
Prereq or Coreq: *Engl 207, Engl 208, Engl 209, Engl 313 or Engl 317*
Coreq: *Acct 310, Bus 343, and Bus 345*

Bus 345 Business Operating Decisions (3 cr)
May only be repeated once. Student may petition to repeat a second time in consultation with the Dean and course faculty team. Open only to undergraduate CBE majors. An overview of the business operating decisions associated with creating demand for the firm's products and services as well as producing the system outputs; a systems approach is used to illustrate how the various business functions and support staff

interact in executing these decisions; examination of the use of information technology to facilitate integration; a comprehensive integrative case is used to illustrate these ideas. May involve evening exams.
Prereq: *Bus 339, Bus 340-342 and Econ 340*
Prereq or Coreq: *Engl 207, Engl 208, Engl 209, Engl 313 or Engl 317*
Coreq: *Acct 310, Bus 343, and Bus 344*

Bus 350 Management Information Systems (3 cr)
Cannot be taken for credit by CBE Majors either concurrently or after completion of Bus 340-345. Data processing applications for business; intro to information systems; data base concepts; analysis, design, and implementation of computer-based information systems and consideration of associated problems. May involve evening exams.

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 352 Modern Information Technology (3 cr)
Introduction to IT hardware and software including computers, storage devices, telecommunications equipment, and system software. May involve evening exams.
Prereq: *Bus 250*

Bus 353 Data and Information Management (3 cr)
An examination of data and information management in business organizations. Applications across functional business areas using database management systems are stressed.
Prereq: *Junior Standing*

Bus 355 Systems Analysis and Design (3 cr)
Introduction to analysis and design of modern information systems. May involve evening exams.
Prereq: *Junior standing*

Bus 362 Real Property Appraisal (3 cr)
Theories and principles in estimating value of natural resources and any attached improvements. This course has been certified by the Idaho Real Estate Commission.
Prereq: *Bus 261, Econ 202 or Permission*

Bus 364 Insurance (3 cr)
Major branches of insurance; principles and practices.

Bus 370 Introduction to Operations Management (3 cr)
Cannot be taken for credit by CBE Majors either concurrently or after completion of Bus 340-345. Introduction to operations management, including overviews of product and process design, forecasting, inventory management, total quality management, project management, master scheduling, material and capacity requirements planning, theory of constraints, production activity control, and lean manufacturing. May involve evening exams.
Prereq: *Stat 251 or 271 or 301*

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 385 Professional 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 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)
Management and regulation of commercial and nonmonetary financial institutions including savings and loan institutions. May involve evening exams.
Prereq: *Acct 310, Bus 302, Bus 340-345, and Econ 340*

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: *Acct 310, Bus 302, Bus 340-345 and Econ 340*

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: *Acct 310, Bus 302, Bus 340-345 and Econ 340*

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 311; OR* ***Prereq or Coreq:*** *Bus 343*

Bus 413 Leadership and Organizational Behavior (3 cr)
Micro oriented treatment of areas including communication, motivation, group process, conflict, leadership style.
Prereq: *AgEc 278 or Bus 311; or* ***Prereq or Coreq:*** *Bus 343-345*

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 Staffing and Compensation (3 cr)
Specialized human resource management topics including selection, placement, and career development of employees; development and administration of monetary-nonmonetary reward programs, job evaluation systems, and wage incentive plans.
Prereq: *Bus 412*

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 311; OR* ***Prereq or Coreq:*** *Bus 343*

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; OR* ***Prereq or Coreq:*** *Bus 343*

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 271, and Bus 321; OR* ***Prereq or Coreq:*** *Bus 343*

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; OR* ***Prereq or Coreq:*** *Bus 343*

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 or 345, and Econ 202 or 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; OR* ***Prereq or Coreq:*** *Bus 343*

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 or Bus 340-345*

Bus ID427 Services Marketing (3 cr) WSU Mktg 327
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; OR* ***Prereq or Coreq:*** *Bus 343*

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: *Acct 310, Econ 340, and Bus 340-345 or Bus 370; or Permission*

Bus 441 Labor Relations (3 cr)
Evolution, structure, and procedures of contemporary labor-management relations; unionization, other concerted activity and employment at will.
Prereq: *Bus 311 or 340-345*

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 351 or Bus 353 or Bus 355 or Computer Science major with senior standing*

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 351 or Bus 353 or Bus 355 or Computer Science major with senior standing*

Bus 454 (s) Current Issues in Information Systems (3 cr, max arr)
Discussion of major topics of current importance in information systems
Prereq: *Bus 343-345 and Permission*

Bus 455 IS Project (3 cr)
Development of information systems and management of IS projects. May involve evening exams.
Prereq: *Bus 343-345, Bus 352, Bus 355 and Bus 453*

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, Stat 271, 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: *Acct 310, Bus 340-345 and Econ 340; or Graduate standing in the College of Business and Economics*

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: *Acct 310, Bus 340-345 and Econ 340*

Bus 464 Derivatives and Financial Engineering (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: *Acct 310, Acct 311, Bus 302, Bus 340-345, and Econ 340*

Bus 465 Introduction to Market Trading (3 cr)
The course 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 202 or 272; and Stat 251. (Fall only)
Prereq: *Permission*

Bus 466 Market Trading Strategies (3 cr)
Continuation of BUS 465. The course 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*

Bus 467 Barker Capital Management Group (1 cr, max 4)
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 Advanced Trading Seminar (1 cr, max 6)
Graded Pass/Fail. This course is the third in a sequence of courses focused on trading securities. 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 202, or 272 or equivalent.
Prereq: *Bus 465, Bus 466 and Permission*

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: *Acct 310 and Econ 340; and Bus 370 or Bus 340-345*

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 or 340-345*

Bus 481 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: *Acct 310, Bus 302, Bus 340-345 and Econ 340; or Bus 301 and Econ 446*

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; OR* ***Prereq or Coreq:*** *Bus 343.*

Bus 490 Strategic Management (3 cr)
May be used as core credit in J-3-d. Capstone, integrative course; formulation and implementation of competitive strategies; both written and oral reports and case analysis. May involve evening exams.
Prereq: *Engl 207, Engl 208, Engl 209, Engl 313 or Engl 317; and Bus 301, Bus 311, Bus 321, or Bus 340-345; and Acct 310 and Econ 340; and Sr standing.*

Bus 495 Product and Process Development and Commercialization (3 cr)
See ForP 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 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: *Permission*

Business Law Courses

Marla Kraut, Dept. Chair, Dept. of Accounting (127 J. A. Albertson Bldg. 83844-3161; phone 208/885-7116; marlam@uidaho.edu).

Note: 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.

Prerequisite: Enrollment in 400-level business law courses is restricted to students who have completed at least 58 credits. In addition, CBE students must have earned at least a 2.35 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.

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*

Career and Technical Education Courses

Charles W. Gagel, Dept. Chair, Dept. of Adult, Career, and Technology Education (11A ITED Bldg. 83844-4021; phone 208/885-6492). James A. Gregson, Coordinator of Professional-Technical and Technology Education – Moscow, ID (15H ITED Bldg. 83844-4021; phone 208/885-6492); Lee Ostrom, Coordinator of Professional-Technical and Technology Education – Idaho Falls, ID (1776 Science Center Dr., Suite 306, Idaho Falls, ID 83402; phone 208/282-7861)

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 drafting theory, Computer Aided Drafting, and CNC manufacturing. Students may have to spend time in the CAD lab outside of class time to complete the required work. 3 hours of lecture per week.

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 post-secondary 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 351 Principles and Philosophy of Professional-Technical Education (3 cr)
Same as AgEd 351. 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.

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) (PTTE 252)
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.

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 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 PTTE Student Organizations (1 cr)
Supervising PTTE Student Organizations involves active participation in Professional-Technical Student Organization's post-secondary competitive events program, as well as assisting in the administration and supervision of secondary regional and state Professional-Technical Student Organization conferences.

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 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 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 or Bus 352.

CTE 481 Computer Integrated Manufacturing and Robotics (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 Professional-Technical and Technology 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: *CTE 455*

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 Techonology Management and Procedures (3 cr)
Administrative procedures and generic policies in technological business environments are studied and practiced. Relevant knowledge, skills, and dispositions are addressed.

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 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 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.

CTE 570 Introduction to Research in Workforce Education (3 cr)
See AOLL 570.

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.
Coreq: Math 143

ChE 204 (s) Special Topics (cr arr)

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 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. 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. Two lec and one 3-hr lab a wk. 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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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/ID&WS-J560 Biochemical Engineering (3 cr) WSU Ch E 560
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 ID&WS-J475/ID&WS-J575 Air Pollution Control (2-3 cr) WSU C E 408/508
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 ID-J480/ID-J580 Engineering Risk Assessment for Hazardous Waste Evaluations (3 cr) WSU ES/RP 473/573
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)

ChE ID&WS515 Transport Phenomena (3 cr) WSU Ch E 510
Same as ME 515. Advanced treatment of momentum, energy, and mass transport processes; solution techniques.
Prereq: B.S.Ch.E. and Equivalent of ChE 340, 341 or Permission

ChE ID&WS527 Thermodynamics (3 cr) WSU Ch E 527
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.
Prereq: B.S.Ch.E. and Equivalent of ChE 326 or Permission

ChE ID&WS529 Chemical Engineering Kinetics (3 cr) WSU Ch E 529
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.
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.
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 ID&WS560 Biochemical Engineering (3 cr)
See ChE J460/J560.

ChE 570 Hazardous Waste Management (3 cr)
See ChE J470/J570.

ChE ID571 Advanced Plant Design (3 cr) WSU Ch E 571
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 ID&WS575 Air Pollution Control (2-3 cr)
See ChE J475/J575.

ChE ID580 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).

Note: Students may not register for a course lower in number than that required by their major. When a change in degree requirements forces a student to take a higher number course after completing a lower number course, a maximum of two credits (earned in Chem 299) will be awarded for the higher number course. Students should check the curricular requirements for their major to be sure they are registered for the correct chemistry class.

Related Fields: See microbiology, molecular biology and biochemistry.

Vertically-related courses in this subject field are: Chem 111-112-253; 101-275.

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)
May be used as core credit in J-3-b. Full credit may be earned in only one of the following: Chem 101, or 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)
May be used as core credit in J-3-b. Full credit may be earned in only one of the following: Chem 101, or 111. 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 Math 143, 160, or 170; or Permission*

Chem 112 Principles of Chemistry II (5 cr)
May be used as core credit in J-3-b. 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 (5 cr)
Fundamental principles and techniques of chemical analysis; intro to sampling, standardization, data evaluation, gravimetric/volumetric methods, and instrumental techniques. Three lec and two 3-hr labs a wk. (Fall only)
Prereq: *Chem 112*

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, 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 213*

Chem 306 Physical Chemistry (3 cr)
Kinetic theory, thermodynamics, quantum mechanics, and spectroscopy.
Prereq: *Chem 112, and Math 275 (Spring only)*
Prereq or Coreq: *Phys 212 or 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 ony)
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, and Chem 275 or 277, or 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 and 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: *Chem 306 and 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/ID-J564 Inorganic Chemistry (3 cr) WSU Chem 507
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 468 Organometallic Chemistry (2-3 cr, max 3)
Structure, bonding, and reaction chemistry of organotransition metal compounds; applications to homogeneous catalysis. (Alt/yrs)
Prereq: *Chem 305-306*
Prereq or Coreq: *Chem 463 or 466 or 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: *Chem 306 and 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 Thermodynamics and Kinetics (3 cr)
(Fall only)
Prereq: *Chem 306 or Equivalent*

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 496.
Prereq: *Chem 306 and 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)

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 535 Principles of Chemical Instrumentation (2-4 cr, max 4)
Practical theory and application of modern analog/digital electronics and small computers to chemical measurement and control systems. Registration for Chem 535 requires completion of an additional term paper or other assignment. One hr of lec and one 3-hr lab a wk. (Fall only)
Prereq: *Chem 253 or 454, Phys 212, or Permission*

Chem WS540 Physical Organic Chemistry (3 cr) WSU Chem 540
See WSU Catalog.

Chem 542 Biochemistry and Molecular Biology (3 cr)
See MMBB J442/J542.

Chem WS545 Synthetic Organic Chemistry (3 cr) WSU Chem 545
See WSU Catalog.

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*

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 552 Analytical Vibrational Spectrometry (2-3 cr, max 3)
Introduction to vibrational transitions, optical properties of materials, and laws of radiation absorption and emission (including why they are not always obeyed in practice); detailed discussion of instrumentation used for mid-infrared, near infrared, and Raman spectrometry; illustration of transmission spectrometry with examples including microscopy and spectral imaging, open-path monitoring, and spectroscopy of aqueous solutions and hyphenated techniques; introduction of time- and phase-resolved measurements; detailed coverage of specular reflection, reflection-absorption of thin films, diffuse reflection, attenuated total reflection spectrometry, and remote measurements through optical fibers; discussion of application of near infrared spectroscopy to agricultural commodity analysis and process monitoring. (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 561 Advanced Inorganic Chemistry (3 cr)
Theoretical approach to the underlying principles of inorganic chemistry; integration of theory and descriptive chemistry. (Alt/yrs)
Prereq: *Chem 306, 463, 466, or Permission*

Chem ID564 Inorganic Chemistry (3 cr)
See Chem J464/J564.

Chem ID565 (s) Topics in Inorganic Chemistry (1-9 cr, max 9) WSU Chem 508
Coordination compounds; halogens; less familiar elements; clathrate, interstitial, nonstoichiometric compounds; chemical bonding; inorganic reaction mechanisms.
Prereq: *Chem 463, 466, or Permission*

Chem 567 Inorganic Spectroscopy (2-3 cr, max 3)
Applications of spectroscopic methods to investigation of inorganic and organometallic compounds; topics include multinuclear and multidimensional NMR, IR and Raman, EPR, mass spectroscopy, Mossbauer spectroscopy, and x-ray crystallography. Additional projects/assignments reqd for grad cr. (Alt/yrs)
Prereq: *Chem 306 and 454*

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)

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 (2 cr)
Introduction to engineering design process and analysis techniques including problem solving skills, development of software use skills, graphical analysis, data analysis, and oral and written communication skills.
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 170 or 175, and Engr 105

CE 215 Civil Engineering Analysis and Design (2 cr)
Application of modern basic science, mathematics, and fundamental engineering principles to solution of civil engineering design problems by analytic and numeric methods; use of structured programming concepts in designing applications.
Prereq: CE 115, Engr 105, and Math 170
Coreq: Phys 211

CE 299 (s) Directed Study (cr arr)

CE 315 Introduction to Numerical Methods for Civil Engineering (2 cr)
Numerical Methods with applications in Civil Engineering, including roots of equations, systems of linear equations, numerical differentiation and integration, and ordinary differential equations. Requires programming and/or the use of software to implement the methods covered in class. One 50 min. lecture and one 75 min. computational laboratory per week. Recommended Preparation: Ability to write computer programs for engineering analysis.
Prereq: CE 215
Coreq: Math 310

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, Engr 220 and 335

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

CE 326 Hydrologic Measurement Techniques (1 cr)
Same as BAE 356 and For 463. The objective of this course is for students to gain practical experience in field and laboratory measurement of various hydrologic processes including basic climatology, precipitation, infiltration, soil moisture, evaporation, and stream flow. Data analysis methods also covered. Laboratory reports required. This course is intended to complement CE 325.
Coreq: CE 325/BAE 355, BAE 450 or For 462

CE 330 Fundamentals of Environmental Engineering (4 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

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, 310, and Phys 211

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
Coreq: Stat 301

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

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
Coreq: Engl 317

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

CE ID&WS-J422/ID-J522 Hydraulic Structures Analysis and Design (3 cr) WSU C E 450
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.
Prereq: CE 322 or Equivalent, Engr 360, or Permission

CE ID&WS428 Open Channel Hydraulics (3 cr) WSU C E 451
See BAE 458.

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, 330, or Permission

CE ID&WS-J432/ID&WS-J532 Design of Water and Wastewater Systems II (3 cr) WSU C E 544
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.
Prereq: CE 431

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 WS435 Hazardous Waste Engineering (3 cr) WSU C E 418

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

CE WS442 Prestressed Concrete Design (3 cr) WSU C E 434/534

CE WS443 Design of Timber Structures (3 cr) WSU C E 436

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

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

CE 460 Geotechnical Engineering Design (3 cr)
Applications of soil mechanics in design of earth retaining structures, shallow and deep foundations, embankments, slopes, excavations, and soil exploration programs.
Prereq: CE 360

CE 473 Highway Design (3 cr)
Planning, horizontal and vertical alignments, field data collection, location and design of highway systems. Demonstrated competence in the operation of electronic total stations and land development software required for permission. Two lec and one 3-hr lab a wk.
Prereq: CE 211 and Permission
Coreq: CE 372

CE ID474 Traffic Systems Design (3 cr) WSU C E 474
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.
Prereq: CE 372 or Permission

CE ID475 Pavement Design and Evaluation (3 cr) WSU C E 473
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

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, 301, or Equivalent, and Senior standing or Permission

CE ID484 Engineering Law and Contracts (2 cr) WSU C E 462
Contract law and application to engineering services agreements and construction contracts; specifications, agency, torts, professional liability, and alternate dispute resolution.
Prereq: Senior standing in Engineering

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 493 Senior Design Project (1-3 cr, max 4 cr)
May be used as core credit in J-3-d. One or two semester 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 494 Senior Design Project (1-3 cr, max 4 cr)
May be used as core credit in J-3-d. One or two semester 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 ID&WS510 Advanced Mechanics of Materials (3 cr) WSU C E 514
See ME 539.

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

CE 520 Fluid Dynamics (3 cr)
See ME J420/J520.

CE ID&WS521 Sedimentation Engineering (3 cr) WSU CE 517
Intro to river morphology and channel responses; fluvial processes of erosion, entrainment, transportation, and deposition of sediment.
Prereq: CE 428 or Permission

CE ID522 Hydraulic Structures Analysis and Design (3 cr)
See CE J422/J522.

CE ID&WS523 Water Resources Systems (3 cr) WSU C E 561
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

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

CE 529 Natural Channel Flow (3 cr)
See BAE 550.

CE ID&WS531 Environmental Engineering Unit Operations (3 cr) WSU C E 541
Analysis and design of physical and chemical operations of water and waste treatment; flow models, sedimentation, flocculation, filtration, and water conditioning.
Prereq: Permission

CE ID&WS532 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 ID&WS534 Environmental Engineering Unit Processes (3 cr) WSU C E 542
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.
Prereq: CE 431 or Permission

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

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

CE ID&WS541 Reliability of Engineering Systems (3 cr) WSU C E 531
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 applications in component and system design throughout the semester.
Prereq: Permission

CE ID&WS542 Advanced Design of Steel Structures (3 cr) WSU C E 530
Composite action, hybrid sections, plate girders, curved girders, fatigue design, splices and connections, loads, load combinations, load distribution, computer modeling and analysis. One 1-day field trip.
Prereq: CE 444 or Permission

CE ID&WS543 Dynamics of Structures (3 cr) WSU C E 512
Behavior of structures under impact, impulse, and seismic loads. (Alt/yrs)
Prereq: CE 441, CE 444, or CE 445; and Math 310

CE 545 Matrix Structural Analysis (3 cr)
See CE J445/J545.

CE ID&WS546 Finite Element Analysis (3 cr) WSU C E 532
Same as ME 549. Formulation of theory from basic consideration of mechanics; applications to structural engineering, solid mechanics, soil and rock mechanics; fluid flow.
Prereq: ME 341 or CE 342

CE ID&WS547 Advanced Reinforced Concrete (3 cr) WSU C E 533
Composite design; slab design; limit state design; footings; retaining walls; deep beams; brackets and corbels; torsion; seismic design; shear walls.
Prereq: CE 441

CE ID&WS556 Properties of Pavement Materials (3 cr) WSU CE 567
Design of asphalt and portland cement concrete mixes; physical and mechanical properties; characterization methods; effects of aggregate and binder constituents; modification and upgrading techniques; laboratory and in-situ evaluation methods; applications of highway and airport materials. Three 1-hr lec a wk and variable number of lab hrs for demonstration.
Prereq: CE 357 or Equivalent, or Permission

CE ID561 Engineering Properties of Soils (3 cr) WSU C E 527
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.
Prereq: CE 360

CE ID562 Advanced Foundation Engineering (3 cr) WSU C E 528
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.
Prereq: CE 360 or Permission

CE ID563 Seepage and Slope Stability (3 cr) WSU C E 507
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. (Alt/even yrs, Spring only)
Prereq: CE 360 or GeoE 436; or Permission

CE WS564 Numerical Modeling of Geomaterials (3 cr) WSU C E 509

CE ID&WS566 Earthquake Engineering (3 cr) WSU C E 524
Review of geological and seismological factors that influence design; seismic wave propagation; earthquake parameters; probabilistic hazard assessment; dynamic soil properties; response spectra; computer applications; earthquake resistant designs.
Prereq: CE 360 or Equivalent, or Permission

CE WS567 Soil and Site Improvement (3 cr) WSU C E 425/525

CE WS568 Advanced Geomaterial Characterization (3 cr) WSU C E 510

CE ID&WS571 Traffic Flow Theory (3 cr) WSU C E 501
Introduction to elements of traffic flow theory including principles of traffic stream characteristics, capacity, queueing theory, and shock waves; application of traffic flow theory to freeway and arterial traffic flow problems. (Alt/yrs)
Prereq: Permission

CE ID&WS572 Intersection Traffic Operations (3 cr) WSU C E 501
Application of traffic simulation models to the design and operations of traffic facilities, including intersection, arterials; assessment and design of traffic signal timing strategies. (Alt/yrs)
Prereq: Permission

CE ID&WS573 Transportation Planning (3 cr) WSU C E 501
Concepts and methods of transportation planning, including network modeling, travel demand forecasting, and systems evaluation of multi-modal transportation systems. (Alt/yrs)
Prereq: Permission

CE ID&WS574 Public Transportation (3 cr) WSU C E 501
Concepts and principles of planning and operations of public transportation systems, including bus transit, rail transit, and paratransit modes. (Alt/yrs)
Prereq: Permission

CE ID&WS575 Advanced Pavement Design and Analysis (3 cr) WSU C E 572
Design of new and rehabilitated asphalt and Portland Cement concrete pavements, mechanistic-empirical design procedures, performance models, deflection-based structural analysis, remaining life analysis and overlay design, environmental effect, long-term pavement performance (LTPP), and introduction to research topics in pavement engineering.
Prereq: CE 475 or Equivalent, or Permission

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 ID&WS577 Pavement Management and Rehabilitation (3 cr) WSU C E 566
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.
Prereq: CE J475/J575 or Equivalent, or Permission

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

Kenneth D. Locke, 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)
May be used as core credit in J-3-a. 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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. Survey of current theories and research on intercultural communication; development of critical thinking skills in regard to intercultural interaction and communication styles.

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) (Comm 331)
May be used as core credit in J-3-d. 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.
Prereq: Comm 111

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)
Prereq: Comm 233

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 434 Advanced Dispute Management (3 cr)
Examination of third party roles, responsibilities, and processes in conflict management and survey of alternative dispute resolution techniques; focuses on theory and practices of facilitation, mediation and negotiation; involves demonstrations and simulations of facilitation, mediation, and negotiation. Can be counted toward certification by Idaho Mediation Association. (Spring only)
Prereq: Comm 410 or Permission

Comm 436 Conflict Mediation (3 cr)
Basic theories, research and practical application of mediation in business, government, education, community and interpersonal disputes. Readings, discussion, simulations and field observations. Credit may be applied toward certification through the Idaho Mediation Association.
Coreq: Comm 410

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 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, Acting 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)
May be used as core credit in J-3-c. 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 recitation 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)
May be used as core credit in J-3-c. May not be taken for credit after CS 120. 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 solves problems using C++.
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)
Carries 2 credits after CS 112. 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 ID&WS324 Computer Graphics (3 cr) WSU Cpt S 442
Use of the computer to define, store, manipulate, and display 2-D and 3-D objects; 2-D curvefitting and 3-D surface development.
Prereq: *CS 213 or CS 121, and Math 330*

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 I (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, 240 and 270 or Permission*

CS 384 Software Engineering II (3 cr)
Continuation of CS 383, Current topics in development of software systems; software detailed design, coding and implementation, unit and integration testing, documentation, software release and support, software engineering measurement, software project management, legal and ethical issues in software product development. Projects are developed to demonstrate application of concepts. (Spring only)
Prereq: *CS 383*

CS 385 Theory of Computation (3 cr)
See Math 385.

CS 386 Derivational Programming (3 cr)
Introduction of a practical approach based on methodically developing programs from their specifications; focus on developing reliable programs with attention to real issues.
Prereq: *CS 210*

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

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 424 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. (Spring only)
Prereq: CS 324, Math 175

CS J428/J528 Games and Virtual Environments (3 cr)
Software design and programming issues involved in constructing computer games and multi-user virtual environments. Additional projects and assignments are required for graduate credit.
Prereq: CS 210 and CS 324

CS ID-J438/ID-J538 Network Security (3 cr) WSU Cpt S 425
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++.
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 J441/J541 Advanced Operating Systems (3 cr)
Principles of contemporary operating systems for network and distributed computer systems; sequential processes, scheduling, process synchronization, device management, file systems, memory management, and protection and security. Additional work required for graduate credit.
Prereq: CS 240

CS 443 Embedded Systems (3 cr)
Interfacing to an embedded system processor. Development of the processor's hardware-software interface. Application software development. Use of C and assembly language in device driver design, monitor-debugger, and real-time kernel. Regular laboratory assignments. (Fall only)
Prereq: CS 383

CS ID&WS445 Compiler Design (4 cr) WSU Cpt S 452
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 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 481 Senior Capstone Design (4 cr)
Application of formal design techniques to development of a large computer science project performed by students working in teams. Significant lab work reqd.
Prereq: CS 384 and Engl 317

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)

CS 507 Fundamentals of Research (3 cr)
See For 510.

CS ID&WS510 Programming Language Theory (3 cr) WSU Cpt S 518
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.
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 528 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 541 Advanced Operating Systems (3 cr)
See CS J441/J541.

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 570 Artificial Intelligence (3 cr)
See CS J470/J570.

CS 572 Evolutionary Computation (3 cr)
See CS J472/J572.

CS 573 Stochastic Optimization for Industrial and Laboratory Applications (3 cr)
The course examines industrial and research applications of stochastic optimization techniques. It explores the difficulties of these optimizations through a series of case studies.
Prereq: *CS 472 or CS 572; or Permission*

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, 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

Lawrence A. Young, Dept. Head, Dept. of Conservation Social Sciences (19 CNR Bldg. 83844-1139; phone 208/885-7911; css@uidaho.edu; www.cnrhome.uidaho.edu/css).

CSS WS181 Introduction to Hospitality Services Industries (3 cr) WSU HBM 131

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 WS381 Hospitality Management and Organization (3 cr)
See Rec 382.

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

CSS 386 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 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 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 491 Wilderness Leadership for Personal Growth (3 cr)
Diverse approaches used in wilderness experience programs, theoretical bases for different approaches, and hands-on experience with soft skills approaches to wilderness experience. Three field trips.

CSS 493 International Land Preservation and Conservation Systems (3 cr)
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 497 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

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 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 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 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 565 Advanced Instructional Strategies in Environmental Education (3 cr)
Expand on student knowledge of the components of lesson planning (thematic statements, goals, performance objectives, assessment, and state standards) and take lesson planning to a more sophisticated level, to introduce forms of authentic assessment, to increase student familiarity of the variety and quality of Env. Ed. curricula, and to explore various theories on learning and student development, to understand how they relate to lesson planning and teaching students. (Spring 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 582 Natural Resource Policy (3 cr)
See Pols 562.

CSS 583 Nature-Based Tourism (3 cr)
Current methods and approaches to natural resource tourism and its social, economic, and resource impacts, organizations involved, and management styles used by travel and tourism industry. (Spring, alt/yrs)

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 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 Courses

Jean Henscheid, Director of Core (231 Teaching Learning Center 83844-2436; phone 885-6300; jeanh@uidaho.edu).

Note: See regulation J-3 for core curriculum requirements and the list of courses that may be used for core credit.

CORE 103-149 Core Discovery (4 cr)
May be used as core credit in J-3-d. Open to freshmen only. First semester of a year-long 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. Includes evening events, field trips, service-learning, and/or other activities to total 45 hours in addition to lectures. See www.webs.uidaho.edu/core for specific course titles and descriptions.

CORE 153-199 Core Discovery (3 cr)
May be used as core credit in J-3-d. Open to freshmen and sophomores. Second semester of a year-long 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. May include evening events, field trips, service-learning, and other activities. See www.webs.uidaho.edu/core for specific course titles and descriptions.

Core Science Courses

Jean Henscheid, Core Coordinator (231 Teaching Learning Center 83844-2339; phone 885-8935; jeanh@uidaho.edu).

CORS 205-297 Integrated Science (3 cr)
May be used as core credit in J-3-b. 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.webs.uidaho.edu/core for specific course titles and descriptions.

Counseling and School Psychology Courses

Russel A. Joki, Dept. Chair, Dept. of Counseling and School Psychology, Special Education and Educational Leadership (UI Boise Center,322 East Front Street, Suite 440, Boise, ID 83702; rjoki@uidaho.edu; phone 208/364-4099). Jerry Fischer, Coordinator of Counseling and School Psychology (207 Educ. Bldg. 83843-3083; phone 208/885-5947; jfischer@uidaho.edu).

CASP 200 (s) Seminar (cr arr)

CASP 203 (s) Workshop (cr arr)

CASP 204 (s) Special Topics (cr arr)

CASP 299 (s) Directed Study (cr arr)

CASP 400 (s) Seminar (cr arr)

CASP 403 (s) Workshop (cr arr)

CASP 404 (s) Special Topics (cr arr)

CASP 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.

CASP 499 (s) Directed Study (cr arr)

CASP 500 Master's Research and Thesis (cr arr)

CASP 501 (s) Seminar (cr arr)

CASP 502 (s) Directed Study (cr arr)

CASP 503 (s) Workshop (cr arr)

CASP 504 (s) Special Topics (cr arr)

CASP 505 (s) Professional Development (cr arr)
See CASP J405/J505.

CASP 507 Introduction to Counseling and School Psychology (2 cr)
Exploratory/introductory course for students considering entering counseling or school psychology. Focus is on the role and function of counselors and school psychologists, their values, and responses to contemporary issues. Students are also introduced to each profession (e.g. history, professional preparation, credentialing). Successful completion of the course is one of the criteria for final admission to the masters and/or education specialist degree programs.
Prereq: *Permission*

CASP 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: CASP 509 and 510.

CASP 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.

CASP 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: *CASP 509 or Equivalent and Permission*

CASP 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: *CASP 510 and Permission*

CASP 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*

CASP 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*

CASP 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*

CASP 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: *CASP 515*

CASP 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: *CASP 512 and 513, or CASP 512 and Permission*
Coreq: *CASP 518*

CASP 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: *CASP 512 and 513, or CASP 512 and Permission*

CASP 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.

CASP 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: *CASP 512, 513, 517, and 519*

CASP 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.

CASP 529 Psychopharmacology (2 cr)
Examination of medications that are commonly prescribed for psychiatric disabilities; descriptions of medication effects, interaction, and side effects.

CASP 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.

CASP 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.

CASP 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.

CASP 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.

CASP 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.

CASP 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: *CASP 533 or Permission*

CASP 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.

CASP 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.

CASP 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)

CASP 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: *CASP 510 and Permission*

CASP 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: *CASP 597*

CASP 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)

CASP 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: *CASP 510, 512, CTE 464, and Permission*

CASP 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*

CASP 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: *Permission*

CASP 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, 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 102 Inquiry Project: Teacher Education (1-2 cr)
Students research topics related to careers in general education.
Prereq: *Be at least 16 years of age or have approval signature from a parent/guardian; have a GPA of at least 3.0; have signed permission from parent/guardian.*

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 Foundations of Literacy Development (4 cr)
Research-based principles and techniques for teaching literacy; emphasis on content, methods, and materials.
Prereq: *ED 201 or FCS 210*

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 and EDCI 320; or Permission*
Coreq: *Dan 360, EDCI 322, 325, 409, and The 411; or Permission*

EDCI 322 Integrated Language and Literacy (3 cr)
Specific methods, research, curricula, and technology in teaching elementary language arts for diverse populations. Facilitating of understanding content, curriculum and methods in an integrated setting
Prereq: *EDCI 302 and EDCI 320; or Permission*
Coreq: *Dan 360, EDCI 321, 325, 409, and The 411; 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 and EDCI 320; or Permission*
Coreq: *Dan 360, EDCI 321, 322, 409, and The 411; or Permission*

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, 329, 408 and PEP 350; 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, 329, 408 and PEP 350; 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, 328, 408 and PEP 350; or Permission*

EDCI 381 Elementary School Music Methods for Nonmajors (3 cr)
See MusT 381.

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, ED 430, ED 431, CTE 484, AgEd 460, FCS 471, or MusT 432; 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, 328, 329 and PEP 350; 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 321, 322, 325 Dan 360 and The 411; or 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 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*

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 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*

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 (7-15 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 (7-15 cr)
Guided observation, supervised instruction, and comprehensive team and independent teaching in school settings.
Prereq: *Permission of division and EDCI 483*
Coreq: *EDCI 401*

EDCI 485 (s) Secondary Internship (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 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 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 528 Seminar in Middle School/High School I (2 cr)
This course will develop the students knowledge of the organizational structure, history, research and philosophy of the American Middle School and High School.
Coreq: *EDCI 485*

EDCI 529 Seminar in Middle School/High School II (2 cr)
This course will further develop the students knowledge, dispositions and performances of the teacher in the Middle School and High School setting.
Prereq: *EDCI 528*
Coreq: *EDCI 485*

EDCI 530 Science Education (3 cr)
Students will examine relevant research and practical knowledge shared by the science education community. Includes the examination of history, theoretical perspectives, student learning, and pedagogy.
Prereq: *EDCI 524 or 572; 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 532 Social Studies Education (3 cr)
Students will examine relevant research and practical knowledge shared by the social studies education community. Includes the examination of history, theoretical perspectives, student learning, and pedagogy. (Summer Only)

EDCI 551 Children's Literature and Literacy Strategies Across the Curriculum (3 cr)
The course will examine various genres of literature appropriate for children and methods of increasing literacy skills through the use of these books. Identification and integration of tradebooks in content areas with multiple strategies to increase reading comprehension will be a focus of the course.
Prereq: *EDCI 320*

EDCI 552 Idaho Comprehensive Literacy Course (3 cr)
The three core literacy standards required under Idaho law for teachers and administrators K-8 certification: language learning and literacy development, reading comprehension, instruction, reading assessment, and instructional intervention.

EDCI ID&WS558 Writing Institute: NW Inland Writing Project (6 cr) WSU Engl 592-593
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 560 Reading with a Second Language Learner (3 cr)
Participants examine the specific needs of second language learners in relation to reading instruction. A general foundation of L2 acquisition will be included in the course.
Prereq: *EDCI 322 or Equivalent*

EDCI 562 Orchestrating the Classroom Literacy Program (3 cr)
Course examines the basis for establishing and operating classroom literacy programs (reading, writing, spelling, listening and speaking). Numerous organizational models are presented and critiqued.

EDCI 563 Literacy Methods for Content Learning (3 cr)
See EDCI J463/J563.

EDCI 564 Advanced Children's Literature (3 cr)
Contemporary issues in children's literature; theoretical and research bases for current practice; reading children's literature from multiple perspectives; advanced study of genres, resources, strategies, and critical thinking for using books to better understand our multicultural society.
Prereq: EDCI 321 or Permission

EDCI 565 Linguistics, Literacy, and Brain Function (3 cr)
Course examines the psycholinguistic processes of literacy acquisition and learning in conjunction with recent physiological brain research.
Prereq: EDCI 320 and 466; or Permission

EDCI 566 Analysis and Correction of Reading Difficulties (3 cr)
Course examines causes of reading and writing difficulties and various methods for remediating those difficulties. Students administer a variety of literacy assessments, norm referenced, criterion referenced and informal. The emphasis is on learning to administer and interpret the results from these assessments in order to plan and then implement an effective intervention program for students having difficulty learning to read and write fluently.

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

Kathy Browder, Dept. Chair, Dept of Health, Physical Education, Recreation and Dance (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

Dan 100 Dance in Society (3 cr)
May be used as core credit in J-3-d. 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 J321/J511 Dance Pedagogy (3 cr)
Learning styles, teaching styles, and behaviors as they affect teaching and learning in dance; science of dance training. Additional projects/assignments required for graduate credit include observation and analysis of dance teacher behavior in a minimum of two genres and two skills levels; demonstrated ability to integrate pedagogical principles in teaching a minimum of two 50-minute technique classes on the university level. (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 J385/J585 Dance Composition II (2 cr)
Advanced exploration of choreographic procedures and performance. Additional projects/assignments for graduate students include research and analysis of two major choreographic works from two different contemporary choreographers. (1 lec cr; 1 lab cr) (Spring, Alt/yrs)
Prereq: Dan 384

Dan 400 (s) Seminar (cr arr)

Dan 403 (s) Workshop (cr arr)

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 J412/J512 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. Additional projects for graduate credit include a research paper and oral presentation of a choreographic analysis of a minimum of two works by major choreographers in the appropriate genre; demonstrated evidence of a personal choreographic voice; demonstrated ability to integrate choreographic principles at an advance level.
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)
Prereq: Dan 100 or Permission

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 511 Dance Pedagogy (3 cr)
See Dan J321/J511.

Dan 512 Dance Theatre Choreography (1 cr, max 6)
See Dan J412/J512.

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.

Dan 585 Dance Composition II (2 cr)
See Dan J385/J585.

Economics Courses

Douglas C. Haines, Dept. Chair of Business (301F J. A. Albertson Bldg. 83844-3161; phone 208/885-7146; dhaines@uidaho.edu).

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, 202, and 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 Economics (3 cr)
May be used as core credit in J-3-d. Econ 201 and 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 202 carry only two cr after 272. May involve some evening exams.

Econ 202 Principles of Economics (3 cr)
May be used as core credit in J-3-d. Econ 201 and 202 may be taken in either order. Microeconomic principles governing production, price relationships, and income distribution. Econ 201 or 202 carry only two cr after 272. May involve some evening exams.

Econ 204 (s) Special Topics (cr arr)

Econ 272 Foundations of Economic Analysis (4 cr)
May be used as core credit in J-3-d. 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 202; carries 3 credits after either Econ 201 or 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 202 for 2 credits.

Econ 299 (s) Directed Study (cr arr)

Econ 340 Managerial Economics (2 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.
Coreq: *Bus 340*

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 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 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 202, or Econ 272 or Permission*

Econ 353 Quantitative Economics and Forecasting (3 cr)
Quantitative economic analysis including data collection, modeling, regression analysis, forecasting methods, and time series analysis; computer applications.
Prereq: *Econ 201 and 202, or Econ 272; and Stat 251, 271, or 301*

Econ 385 Environmental Economics (3 cr)
Theory of externalities and public goods, and application of economic principles to environmental issues.
Prereq: *Econ 202 or 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 202, or Econ 272*

Econ 415 Market Structure and Governmental Policy (3 cr)
Analysis of economic behavior under different market structures, e.g., competition, monopoly, oligopoly, monopsony, oligopsony, bilateral monopoly and cartels; theory of contestable markets; antitrust; regulation; selected case studies.
Prereq: *Econ 202 or 272 or Permission*

Econ J427/ID-J527 Mathematics for Economists (3 cr) WSU EconS 527
See AgEc J427/J527.

Econ ID430 Regional/Urban Economics (3 cr) WSU Econ 475
Location of economic activity, transportation problems, resource and product distribution methods, urban structure and growth, and related policy issues.
Prereq: *Econ 201 and 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 202, or Econ 272*

Econ 446 International Economics (3 cr)
May be used as core credit in J-3-d. 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 202, or Econ 272*

Econ 447 International Development Economics (3 cr)
Same as AgEc 447. *May be used as core credit in J-3-d.* Characteristics of development; historical perspective; macroeconomic theories and policies: models of growth, poverty, inequality, trade, aid and debt; microeconomic theories and 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. Use of quantitative techniques to analyze and test economic theories.
Prereq: *Stat 251, Stat 271 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 353; or Econ 453 or Permission*

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 ID&WS526 Master Microeconomics Analysis(3 cr) WSU EconS 526
Same as AgEc 526. Master-level, calculus-based producer and consumer theory with selected managerial economics topics. (Fall only)
Prereq or Coreq: *AgEc 427 or Econ 427 or Permission*

Econ ID527 Mathematics for Economists (3 cr) WSU EconS 527
See Econ J427/J527.

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 WS572 Educational Statistics (3 cr) WSU EDPsy 508

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 572, and 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, wording 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 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, completion and continuation of the research project, defense of the dissertation, and ultimately publication of the study. Students will read , critique, and respond to other candidates work.
Prereq: Enrollment to a doctoral program

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

Russel A. Joki, Dept. Chair, Dept. of Counseling and School Psychology and Educational Leadership (UI Boise Center, 322 East Front Street, Suite 440, Boise, ID 83702; phone 208/364-4099; rjoki@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 ID&WS509 Educational Policy and Politics for Educational Leaders (2-3 cr) WSU Ed Ad 580
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 521 Higher Education Administration and Governance (3 cr)
Administration in colleges and universities; history, basic systems of governance in different states, internal organizational structure, finance, student services, faculty, academic programs, affirmative action, and university relations.

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 526 Student Services in Higher Education (3 cr)
Overview of administration of, and issues within, student affairs divisions of colleges and universities; includes organizational structures, philosophical underpinnings, history, relationship to missions of universities and colleges, and relationship to other divisions within universities and colleges.

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 ID&WS535 School Finance (3 cr) WSU Ed Ad 585
Theory and application of financing schools; application to Idaho schools.
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. 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

Brian K. Johnson, 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.
Coreq: Math 310 and Phys 212

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

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
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
Coreq: ECE 212

ECE 240 Digital Logic (3 cr)
Number systems, truth tables, logic gates, flip-flops, combinational and synchronous sequential circuits using SSI, MSI, and programmable devices; intro to digital systems and basic microprocessor architecture; certification exam not reqd.
Prereq: Phys 212
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
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.

ECE 310 Fundamentals of Electronics (3 cr)
Operational amplifier fundamentals and applications, introduction to electronic devices such as diodes, bipolar junction and field effect transistors, 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, 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 Fundamentals of Electronics 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
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, 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, 310, and Phys 212
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, 310; Phys 212
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. Continuous and discrete linear time invariant systems. Sampling. Differential and difference equations. Convolution integrals and sums. Fourier and Laplace transforms. Discrete time Fourier transforms and Z transforms. State variables. 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 Advanced Electronics (3 cr)
Introduction to analog integrated circuit 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 amplifiers.
Prereq: ECE 310 and 311

ECE 411 Advanced Electronics Laboratory (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 Communication Circuits (3 cr)
Impedance transforms and matching networks, small-signal high frequency amplifiers, distortion in amplifiers, noise calculations and considerations, sinewave oscillators, mixers and frequency translators, phase-locked loops, and power amplifiers. Additional projects/assignments reqd for grad cr.
Prereq: ECE 410 or Permission

ECE J415/J515 Analog Integrated Circuit Design (3 cr)
Analog integrated circuit analysis, design, simulation, and layout, advanced biasing techniques, voltage references, operational amplifiers, compensation techniques, and comparators. 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 Pulse and Digital Circuits (3 cr)
Electronic switching, timing, and pulse-shaping techniques; logic functions, realization with diodes, transistors, and FETs. Additional projects/assignments reqd for grad cr.
Prereq: ECE 310 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 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.
Prereq: ECE 320 and ECE 321

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 425 Power Electronics Lab (1 cr)
Measurement of operating characteristics of power semiconductors; experiments include testing of typical power converter circuits with emphasis on control, gating, protection requirements, and measurement techniques.

ECE ID&WS427 Power Electronics (3 cr) WSU E E 486
Characteristics, limitations, and application of solid state power devices; practical aspects of power electronic converter design, including rectifiers and inverters; choppers, AC phase control, and device gating techniques.
Prereq: ECE 420

ECE WS428 Protection of Power Systems I (3 cr) WSU E E 493
Prereq: ECE 420

ECE WS429 Protective Relay Labs (2 cr) WSU E E 494
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 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 J449/J549 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, DFT algorithm, signal flow graphs, state space analysis, and modeling of electromechanical 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 ID&WS452 Communication Systems (3 cr) WSU EE 451
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.
Prereq: ECE 450 (Alt/yrs)

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 471 Digital Control Systems (3 cr)
Design of digital control systems; sampling, A/D, and D/A conversion issues; time domain, frequency domain, and state space design methods; use of computer-aided design tools. Three lec a wk and approximately three 3-hr labs.
Prereq: ECE 450, 470 or 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, 241, 310, 311, 320, 321, 340, 341, 350, 351 and Stat 301, or Permission

ECE 481 EE Senior Design II (3 cr)
May be used as core credit in J-3-d. 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 330, 331 and 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)
May be used as core credit in J-3-d. 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 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 Communication Circuits (3 cr)
See ECE J413/J513.

ECE 515 Analog Integrated Circuit Design (3 cr)
See ECE J415/J515.

ECE 517 Pulse and Digital Circuits (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)
Voltage transients; overvoltages during faults; recovery voltage characteristics; arc restrikes, switching surges, ferroresonance, and nonlinear phenomena.
Prereq: ECE 422

ECE 525 Power System Protection and Relaying (3 cr)
Power system faults and applicable relay systems; review of symmetrical components as applied to fault current and consideration of lightning and voltage surge protection.
Prereq: ECE 422 or Permission

ECE ID&WS526 Protection of Power Systems II (3 cr) WSU E E 511
Protection of electrical equipment as related to electric power systems with emphasis on digital algorithms.
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 ID&WS530 Advanced Electromagnetic Theory I (3 cr) WSU E E 518
Maxwell's equations, potential theory, wave propagation and scattering, canonical problems, guided wave theory, antenna concepts, boundary value problems.
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 ID&WS533 Antenna Theory (3 cr) WSU E E 527
Maxwell's equations, reciprocity, equivalence theorems; wire antennas, antenna arrays, aperture antennas; analysis and design techniques; hardware considerations.
Prereq: ECE 432 or Permission

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 ID540 Asynchronous Circuit Design (3 cr) WSU E E 554
Design and analysis of asynchronous digital circuits and systems; topics include: delays and hazards, state encoding, speed-independent and delay-insensitive circuits, micropipelines, and signal transition graphs.
Prereq: ECE 440 or Permission

ECE 541 Advanced Computer Architecture (3 cr)
See ECE J441/J541.

ECE 542 Digital Systems Testing (3 cr)
Fundamentals of testing and design for testability of digital electronic systems at both the module and board level; topics include circuit simulation, fault modeling and simulation, test pattern generation, design for testability, and built-in self-test.
Prereq: ECE 440 or Equivalent

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 549 Fault-Tolerant Systems (3 cr)
See CS J449/J549.

ECE 551 Electroacoustic Sensors and Systems (3 cr)
See ECE J451/J551.

ECE 554 Theory of Error Correcting Codes (3 cr)
Introduction to error control coding; finite field mathematics; polynomial fields; general theory of block codes; syndrome decoding; cyclic codes; encoders and decoders for cyclic codes; generator polynomials; BCH and Reed-Solomon codes; convolutional codes; the Viterbi algorithm; convolutional encoders and decoders; Trellis coded modulation.
Prereq: ECE 455 or Permission

ECE 555 Information Theory (3 cr)
Introduction to Shannon Theory; entropy, relative entropy, and mutual information; asymptotic equipartition; entropy rates of stochastic processes; data compression; channel capacity, differential entropy; the Gaussian channel, Lempel-Ziv coding, rate distortion theory.
Prereq: ECE 455 or ECE 554 or Permission

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 559 Advanced Topics in Communication Systems (1-3 cr, max arr)
A selection of advanced topics from new research areas in communication systems; a representative selection of topics includes: recent developments in coding and information theory, image compression, cellular and mobile communication systems, magnetic recording, satellite communication systems, spread-spectrum modulation, set-membership theory, clock and carrier recovery methods, and communication channel modeling.
Prereq: ECE 452 or Permission

ECE 562 Semiconductor Theory (3 cr)
See ECE J462/J562.

ECE 565 Introduction to Microelectronics Fabrication (3 cr)
See ECE J465/J565.

ECE ID&WS570 Random Signals (3 cr) WSU E E 507
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.
Prereq: ECE 350, and Stat 301 or 451, or Permission

ECE ID&WS571 Estimation Theory for Signal Processing, Communications, and Control (3 cr) WSU E E 508
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.
Prereq: ECE 570 or Permission

ECE ID&WS572 Linear System Theory (3 cr) WSU E E 501
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.
Prereq: ECE 470 or Equivalent

ECE ID&WS574 Optimal Control Theory (3 cr) WSU E E 502
Intro to optimization, parameter optimization, optimization of dynamic systems, optimization of dynamic systems with path constraints, optimal feedback control and dynamic programming, linear quadratic regulators, second variation methods, singular control problems, differential games.
Prereq: ECE 572 or Permission

ECE ID&WS576 Digital Signal Processing (3 cr) WSU E E 530
Characteristics of discrete time signals; design of digital filters with applications; advanced digital signal processing algorithms; discrete time spectral analysis; introduction to 2D processing.
Prereq: ECE 476 or Permission

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 ID579 Engineering Acoustics (3 cr)
See ME J413/ID-J513.

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

Donald M. Blackketter, Dean (125 Janssen Engr. Bldg.; 208/885-2651); Howard S. Peavy, Associate Dean.

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 ID&WS105 Engineering Graphics (2 cr) WSU M E 103
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.

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 ID&WS210 Engineering Statics (3 cr) WSU C E 211
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.
Prereq: *Math 170*

Engr ID&WS220 Engineering Dynamics (3 cr) WSU M E 212
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.
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*

Engr ID&WS320 Engineering Thermodynamics and Heat Transfer (3 cr) WSU M E 301
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.

Engr ID&WS335 Engineering Fluid Mechanics (3 cr) WSU M E 303
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.
Prereq: *Engr 210, Math 275*

Engr ID&WS350 Engineering Mechanics of Materials (3 cr) WSU C E 215
Elasticity, strength, and modes of failure of engineering materials; theory of stresses and strains for ties, shafts, beams, and columns.
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. This is a class that 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

Larry A. Stauffer, Director, Engineering Management Program, 125 Janssen Engr. Bldg.; 208/885-6479). stauffer@uidaho.edu; http://www.engboi.uidaho.edu/em

EM J484/J584 Writing Winning Proposals (3 cr)
Practical course to define the process for developing and submitting proposals. Topics include RFP identification, budgeting, scheduling, proposal writing, proposal reviews, and other topics in the proposal writing process. Guest lecturers will discuss their successful experiences. Students will produce one submission-ready proposal for review of technical writing skills. Additional projects reqd for grad cr.

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 Management Fundamentals (3 cr)
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 511 Legal Process for Engineers (3 cr)
Designed to acquaint engineering management students with the legal process in general and the role of the judiciary in issues encountered by engineering managers. The course is intended to prepare professionals and managers for legal problems and potential liabilities they may encounter in their work as managers. Course employs the Socratic process to explore business organizations, employment law, contract law and other related topics.

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 584 Writing Winning Proposals (3 cr)

See EM J484/J584.

EM 587 Quality Engineering (3 cr)
See ME 587.

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, Interim Dept. Chair, Dept. of English (200 Carol Ryrie Brink Hall 83844-1102; phone 208/885-6156).

Prerequisites: Students may enroll for a second-semester course in English without having had the first-semester course, unless it is a stated prerequisite to the second-semester course. Engl 101 and 102 are prerequisite to all upper-division courses. A transfer student who lacks Engl 101 or 102, or both, may take either or both for credit even though he or she has already taken a literature course for which Engl 101 or 102 is prerequisite at UI. For English majors in the Creative Writing and Literature Emphases Engl 215 or permission of instructor is a prerequisite or corequisite to all literature courses numbered 300 and above; for English majors in the Professional and Teaching emphases Engl 175 or 210 or permission of the instructor is a prerequisite or co-requisite to all literature courses numbered 300 or above.

Vertically-related courses in this subject field are: Eng 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 students for the demands of college writing, focusing on reading critically and incorporating source material. Graded P (pass)/N (repeat)/F (fail).
Prereq: Engl 090 or Equivalent

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 175 Introduction to Literary Genres (3 cr)
May be used as core credit in J-3-d. 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 204 (s) Special Topics (cr arr)

Engl 207 (s) Persuasive Writing (3 cr)
May be used as core credit in J-3-a. 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)
May be used as core credit in J-3-a. 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 209 (s) Inquiry-Based Writing (3 cr)
May be used as core credit in J-3-a. Intermediate course in the uses of writing to explore and stake out intellectual positions; special emphasis on the nature of evidence used to develop and support knowledge claims in specific fields.
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: Engl 102

Engl 257 Literature of Western Civilization (3 cr)
May be used as core credit in J-3-d. Masterpieces reflecting development of Western thought and culture. Classical Greece to the Renaissance.

Engl 258 Literature of Western Civilization (3 cr)
May be used as core credit in J-3-d. 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 215

Engl 313 Business Writing (3 cr)
May be used as core credit in J-3-a. 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)
May be used as core credit in J-3-a. 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)
May be used as core credit in J-3-a. 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 341 Survey of British Literature (3 cr)
Medieval, Renaissance, 17th Century, Restoration, and 18th Century Literature

Engl 342 Survey of British Literature (3 cr)
May be used as core credit in J-3-d. Romantic, Victorian, Modern, and Contemporary literature

Engl 343 Survey of American Literature (3 cr)
Indigenous beginnings to the American Civil War.

Engl 344 Survey of American Literature (3 cr)
May be used as core credit in J-3-d. Post-Civil War to contemporary writers.

Engl 345 Shakespeare (3 cr)
May be used as core credit in J-3-d. Introductory course; background and study of selected plays representative of Shakespeare's achievement.

Engl 375 The Bible as Literature (3 cr)
Same as RelS 375. *May be used as core credit in J-3-d.* Literary qualities of the Bible.

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.

Engl 391 Intermediate Poetry Writing (3 cr)
Intermediate poetry writing workshop; emphasis on workshop approach, development of portfolio, continued reading in poetry.
Prereq: *Engl 291 or Permission*

Engl 392 Intermediate Fiction Writing (3 cr)
Intermediate fiction writing workshop; emphasis on workshop approach, development of portfolio, continued reading in fiction.
Prereq: *Engl 292 or Permission*

Engl 393 Intermediate Nonfiction Writing (3 cr)
Intermediate creative nonfiction; emphasis on workshop approach.
Prereq: *Engl 293 or Permission*

Engl 400 (s) Seminar (cr arr)

Engl 401 Writing Workshop for Teachers (3 cr)
Enrollment limited to juniors or seniors majoring or minoring in English or in secondary or elementary education programs. Develops students' writing abilities in a workshop setting adaptable to K-12 classrooms and includes theory and practice of teaching writing in elementary and secondary schools.

Engl 402 Internship in Tutoring Writing (3 cr)
Theoretical and practical issues involved in tutoring writing; directed experience tutoring students across the disciplines. Graded P/F.
Prereq: *Engl 102 or Equivalent and Permission*

Engl 404 (s) Special Topics (cr arr)

Engl J413/J513 ESL Methods I: Basic Oral/Aural Skills (3 cr)
Survey of most widely used classroom techniques for developing speaking and listening skills in a second language; alternative innovative approaches. Additional projects/assignments reqd for grad credit. (Fall, Alt/yrs)
Prereq: *Engl 441 or Permission*

Engl J414/J514 ESL Methods II: Reading, Writing, and Special Purpose English (3 cr)
Survey of most widely used classroom techniques for developing- reading and writing skills in a second language and teaching techniques to specialized professional programs. Additional projects required for grad credit. (Spring, Alt/yrs)
Prereq: *Engl 441 or Permission*

Engl 421 The English Novel (3 cr)
Offered in period survey, themes, or major authors.

Engl 425 Irish Literature (3 cr)
Studies in major Irish literary periods and authors.

Engl 426 Modern Poetry (3 cr)

Engl 427 Modern Fiction, 1900-1945 (3 cr)
Offered with emphasis on British and/or American writers.

Engl 429 Contemporary Fiction (3 cr)
Fiction since 1945; offered with emphasis on British and/or American writers.

Engl 431 Contemporary Poetry (3 cr)
Important poets from the latter part of the 20th century to the present. The instructor may survey the works of numerous poets, or may focus on as few as six. Recommended preparation: Engl 102 and Engl 175 or 210.

Engl 433 Chaucer (3 cr)
Intro to Chaucer's poetical works.

Engl 434 Medieval Literature (3 cr)
Offered in period survey, themes, or major authors.

Engl 437 English Drama (3 cr)
Offered in period survey, themes, or major authors.

Engl 440 (s) Reading, Writing, and Rhetoric (3 cr)
Selected Topics in rhetoric related to literary practices. (Spring)
Prereq: *Engl 102*

Engl 441 Introduction to the Study of Language (3 cr)
Same as Anth 441. 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 442 Introduction to English Syntax (3 cr)
Structure and processes of English syntax; syntax as component of style. (Alt/yrs)
Prereq or Coreq: *Engl 441 or Permission*

Engl 443 Language Variation (3 cr)
Geographic and social dialects (e.g., Black English), levels of formality and their linguistic consequences; literary use of language variation (as in Dickens and Hardy, Twain and Faulkner); occupational dialects and jargons. (Alt/yrs)
Prereq or Coreq: *Engl 441 or Permission*

Engl 445 Literature for Adolescents (3 cr)
Theory and practice of literature study in secondary schools, and appraisal of literature appropriate to the needs, interests, and abilities of adolescents.
Prereq: *Enrollment in a program leading to certification in Secondary English or Elementary Education (Elementary Education majors must have completed 6 cr of literature and EDCI 321; students in secondary ed programs must have completed 9 cr of literature); or Permission*

Engl 448 Psycholinguistics (3 cr)
Same as Psyc 448. Survey of cognitive processes of language comprehension, language/speech production, and language acquisition. Recommended Preparation: Engl or Anth 441, Psyc 101.

Engl 451 Renaissance and 17th Century Literature (3 cr)
Normally offered in period survey, themes, or major authors.

Engl 456 Restoration and Eighteenth Century (3 cr)
Offered in period survey, themes, or major authors.

Engl 465 Romanticism (3 cr)
Offered in themes, genre studies, or major authors.

Engl 466 The Victorian Period (3 cr)
Offered in themes, genre studies, or major authors.

Engl 471 (s) Studies in American Literature before 1900 (3 cr)
Themes, issues, movements, and major authors of American literature before 1900.

Engl 473 (s) American Regional Literature (3 cr)
Studies in the distinctive qualities of literature from various U.S. regions, such as the West, the Northwest, the South, the Midwest, and New England.

Engl 475 (s) Studies in Literary Genres (3 cr)
Specific focus on developments within poetry, fiction, non-fiction, drama and film.

Prereq: *Engl 102*

Engl 480 Ethnic and Minority Literature (3 cr)
Texts by ethnic and minority writers, primarily but not exclusively American; e.g., Black, Native American, Chicano, Asian American, Black South African. (Alt/yrs)

Engl 481 Women's Literature (3 cr)
Same as FLEN 481. *May be used as core credit in J-3-d.* Literature by women; genres, nationalities, and historical periods may vary from semester to semester. (Alt/yrs)

Engl 482 (s) Major Authors (3 cr, max arr)
Comprehensive study of the works of a single author. See the *Class Schedule* for author.

Engl 483 African American Literature (3 cr)
Major themes and traditions in African American texts.

Engl 484 American Indian Literature (3 cr)
May be used as core credit in J-3-d. Major themes and traditions in American Indian texts.

Engl 485 Global Literatures in English (3 cr)
Recent developments in international literature, with emphasis on literature from postcolonial Anglophone cultures and diasporic communities. Recommended preparation: Engl 215 and 258.

Engl 490 Senior Seminar (3 cr)
A capstone course in which students pursue individual projects that situate their areas of concentration within an interdisciplinary and practical/professional context. Required of English majors in literature, creative writing, and professional emphasis.
Prereq: *Senior standing or 24 credits of English courses*

Engl 491 Advanced Poetry Writing (3 cr, max arr)
Continuation of Engl 391.
Prereq: *Engl 391 or Permission*

Engl 492 Advanced Fiction Writing (3 cr, max arr)
Continuation of Engl 392.
Prereq: *Engl 392 or Permission*

Engl 493 Advanced Nonfiction Writing (3 cr, max arr)
Advanced creative nonfiction; emphasis on workshop approach.
Prereq: *Engl 393 or Permission*

Engl 495 Literary Criticism (3 cr)
Historical developments in literary criticism.

Engl 496 History of the English Language (3 cr)
Evolution of the language from Proto-Germanic to American English. Recommended Preparation: Engl 441. (Fall only)

Engl 497 Practicum (1-3 cr, max 6)
Supervised experience in assisting in the teaching of an English course. Graded P/F. ***Prereq:*** *upper-class standing and permission of instructor and director of undergraduate studies.*

Engl J498/J598 (s) Internship (1-3 cr, max 6)
Graded P/F. Supervised experience in professional uses of English. Additional projects/assignments reqd for grad cr. With advisor's approval, up to 3 credits of Engl 498 may be counted toward the undergraduate English major.
Prereq: *Permission of Director of Graduate Studies or Director of Undergrad Studies, Department of English*

Engl 499 (s) Directed Study (1-3 cr, max 3)

Engl 500 Master's Research and Thesis (cr arr)
Graded P/F.

Engl 501 (s) Seminar (cr arr)

Engl 502 (s) Directed Study (1-3 cr, max 3)
Normally offered in English and American literature and in linguistics; may not duplicate course offerings. Graded P/F.
Prereq: *Permission*

Engl 503 (s) Workshop in Creative Writing (cr arr)
Workshop for advanced writers; analysis of theory, composition, and techniques with the goal of extending technical skills of the student writer through study of professional writers' work. All applicants must submit typed manuscripts of their work at least 10 days before registration.
Prereq: *Permission*

Engl 504 (s) Special Topics (cr arr)

Engl 505 Composition Pedagogy and Practice (3 cr)
May be graded P/F. Introduction to composition theory with emphasis on pedagogical concepts and practices essential to teaching college-level writing.
Prereq: *Permission*

Engl 506 Composition Theory (3 cr)
Critical examination of theory, pedagogy, and research in composition studies.

Engl 507 Phonetics and Phonology (3 cr)
Study of the physiology of speech-sound production and hearing, including their description, transcription, production, and discernment, and of the psychology of speakers of a language as they make systematic use of the speech-sounds available to them; diagnosis of errors of non-native speakers.
Prereq: *Engl 517*

Engl 508 MAT Project (3 cr)
Graded P/F.

Engl ID510 (s) Studies in Linguistics (3 cr, max 12) WSU Engl 541
Topics such as phonology, morphology, syntax, linguistic history, or the application of linguistics to the teaching of English literature or composition.
Prereq: *6 credits in the following, Engl 441, 442, 443, 496, 506, or Permission*

Engl 511 (s) Studies in Literary Criticism (3 cr, max 12)
History of criticism; various schools of literary criticism. (Alt/yrs)
Prereq: *Engl 495 or Permission*

Engl 513 ESL Methods I: Basic Oral/Aural Skills (3 cr)
See Engl J413/J513.

Engl 514 ESL Methods II: Reading, Writing, and Special Purpose English (3 cr)
See Engl J414/J514.

Engl ID515 ESL Teaching Practicum (3 cr) WSU Engl 544
Organization and teaching of an ESL course under direction of practicum instructor. Graded P/F. (Spring, Alt/yrs)
Prereq: *Engl 514 or Permission*

Engl ID516 Intercultural Communication (3 cr) WSU Engl 544
In-depth examination of major issues related to communication across cultures: communication theory, linguistic relativity, ethnography of speech, crosscultural rhetoric, and nonverbal communication. (Alt/yrs)
Prereq: *Engl 441 or Permission*

Engl 517 Introduction to Applied Linguistics (3 cr)
Theory and practice of comparing and contrasting linguistic systems as basis for preparing instructional materials. (Alt/yrs)
Prereq: *Engl 441 or Permission*

Engl 518 Advanced English Grammar (3 cr)
In-depth linguistic analysis of English grammar, giving special emphasis to morphology and syntax. (Alt/yrs)
Prereq: *Engl 517 or Permission*

Engl 520 (s) Studies in Medieval Literature (3 cr, max 12)
Normally offered in period survey, genre studies, and major author(s). (Alt/yrs)

Engl 521 MA-TESL Comprehensive Exam (1 cr, max 2)
Registration for this course admits the student to weekly review sessions in preparation for the MA-TESL comprehensive exam and culminates with the two-part exam (linguistics and language pedagogy) given late in the semester. Graded P (pass)/F (fail). Recommended preparation: ENGL 507, 510, 513, 517, and 518.

Engl 530 (s) Studies in Renaissance and 17th-Century British Literature (3 cr, max 12)
Normally offered in period survey, genre studies, and major author(s).

Engl 540 (s) Studies in Restoration and 18th Century British Literature (3 cr, max 12)
Normally offered in period survey, genre studies, and major author(s).

Engl WS543 Topics in English Linguistics (3 cr, max 6) WSU Engl 543

Engl WS546 Topics in Teaching English as a Second Language (3 cr) WSU Engl 546

Engl 550 (s) Studies in 19th-Century British Literature (3 cr, max 12)
Normally offered in survey of Romantic literature, survey of Victorian literature, genre studies, and major author(s).

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.

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.

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.

Engl 591 MFA Poetry Workshop (3 cr, max arr)
Advanced poetry writing workshop.
Prereq: Graduate level only; Permission by manuscript screening

Engl 592 MFA Fiction Workshop (3 cr, max arr)
Advanced fiction writing workshop.
Prereq: Graduate level only; Permission by manuscript screening

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: Graduate level only; permission by manuscript screening

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

Sanford D. Eigenbrode, Division Chair, Entomology (242 Iddings Wing, Ag. Sc. Bldg. 83844-2339; phone 208/885-2972; sandforde@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 WS362 Fundamentals of Beekeeping (1 cr) WSU Entom 362
Applied beekeeping practices including safety, equipment, colony installation, manipulation for pollination and honey production, honey bee diseases and pests.

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 ID438 Pesticides in the Environment (3 cr) WSU IPM 452
See Soil 438.

Ent ID440 Insect Identification (4 cr) WSU Entom 439
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. (Alt/yrs)
Prereq: Ent 322 or Permission

Ent ID-J441/ID-J541 Insect Ecology (3 cr) WSU Entom 541
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.
Prereq: Ent 322 or Permission

Ent ID-J446/ID-J546 Host Plant Resistance to Insects and Pathogens (3 cr) WSU Entom 446/546
Principles and methodologies for developing pest-resistant crop varieties. Requirements for graduate credit include preparation of grant proposal, classroom presentation. Field trips. (Alt/yrs)
Prereq: Ent 322 or Permission

Ent ID-J447/ID-J547 Fundamentals of Biological Control (3 cr) WSU Entom 447/547
Intro to history and development of biological control and biological and ecological factors involved; emphasis on entomophagous and phytophagous insects. For graduate credit, students present a paper or "grant proposal" for critique. Recommended Preparation: general ecology. (Alt/yrs)

Ent ID-J472/ID-J572 Aquatic Entomology (3 cr) WSU Entom 472
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. (Spring, alt/yrs)

Ent J484/ID-J584 Insect Anatomy and Physiology (3 cr) WSU Entom 550
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. (Alt/yrs)
Prereq: Permission

Ent ID-J491/J591 Principles of Insect Pest Management (3 cr) WSU IPM 201
Quantitative analyses, ecological theory, and pest control tactics required to design and conduct integrated pest management programs for insects. Two written papers and one classroom seminar reqd for grad cr. Recommended Preparation: one course in statistics. (Alt/yrs)

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 ID541 Advanced Insect Ecology (3 cr)
See Ent J441/J541.

Ent ID546 Host Plant Resistance to Insects and Pathogens (3 cr)
See Ent J446/J546.

Ent ID547 Fundamentals of Biological Control (3 cr)
See Ent J447/J547.

Ent ID549 Insect-Plant Interactions (3 cr) WSU Entom 445/545
Ecology, evolution, and mechanisms of the interactions between insects and plants. Requirements for graduate credit include formal report of field study, term paper. (Alt/yrs)
Prereq: Ent 322 or Permission

Ent ID&WS551 Applied Biological Control: Weeds (1 cr) WSU Entom 551
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. (Alt/yrs)

Ent ID572 Aquatic Entomology (3 cr)
See Ent J472/J572.

Ent ID584 Insect Anatomy and Physiology (4 cr) WSU Entom 550
See Ent J484/J584.

Ent 591 Principles of Integrated Pest Management (3 cr)
See Ent J491/J591.

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 in Part 5 for a complete list of courses.

EnvE WS419 Hazardous Waste Treatment (3 cr) WSU CE 419

EnvE 500 Master's Research and Thesis (cr arr)

EnvE 501 (s) Seminar (cr arr)

EnvE WS518 Hazardous Waste Engineering (3 or 4 cr) WSU CE 518

EnvE 533 Bioremediation (3 cr)
See BAE J433/J533.

EnvE 544 Bioreactor Theory and Design for Waste Treatment (3 cr)
See BAE J432/J532.

EnvE 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Environmental Science Courses

Stephen S. Mulkey, Program 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 in Part 5 for a complete list of classes.

EnvS 101 Introduction to Environmental Science (3 cr)
May be used with EnvS 102 *as core credit in J-3-b.* 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 core 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 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 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 WS-J445/WS-J545 Hazardous Waste Management (3 cr) WSU ES/RP 445/545
Environmental, technical, and political aspects of hazardous waste management; evaluative methods, risk methods, risk assessment, and current management requirements. (Fall only)

EnvS J446/J546 Drinking Water and Human Health (3 cr)
Same as Soil 546. 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 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 497 (s) Senior Research (3 cr)
May be used as core credit in J-3-d. 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. (Spring only)
Prereq: Senior standing
Prereq or Coreq: Engl 317 or Equivalent

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 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)
Monitoring system design, sampling procedures, RCRA/CERCLA sampling, quality assurance data quality objectives. (Fall only)

Prereq: Chem 112, Stat 301

EnvS WS545 Hazardous Waste Management (3 cr)
See EnvS J445/J545.

EnvS 546 Drinking Water and Human Health (3 cr)
See EnvS J446/J546

EnvS WS550 System Dynamics Models of Environmental Systems (3 cr) WSU ES/RP 550
(Spring only)

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 R580 Environmental Law and Regulation (3 cr)
Emphasis on cases, legislation, and policies behind environmental laws and regulations to enhance understanding of judicial construction and interpretation of environmental laws. (Spring only)
Prereq: *EnvS 479/579 or Permission*

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 588 Research Methods in Environmental Science (2 cr)
This is an interdisciplinary course in conducting research in the environmental field including methods from the physical, biological, and social sciences. It includes creating the research questions, developing methods, collecting and analyzing data, drawing conclusions, and publishing and presenting the results. (Alt/yrs, Spring only)
Prereq: *Stat 251 or Permission*

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

Douglas C. Haines, Dept. Chair of Business (301F J. A. Albertson Bldg. 83844-3161; phone 208/885-7146; dhaines@uidaho.edu).

EMBA 500 Master's Research and Thesis (1-10 cr, max 10)
Students enrolled in the EMBA program must take either EMBA 500 or 599 but are not required to take both.

EMBA 506 Research Seminar (cr arr)

EMBA 507 Internal and External Analysis (1 cr)
Integrative module providing an overview of the program with focus on environmental analysis of factors influencing leadership and firm performance.
Coreq: *EMBA 508 and EMBA 509*

EMBA 508 Decision-Making and Critical Thinking (1 cr)
Theory and practice of decision making in complex environments.
Coreq: *EMBA 507 and EMBA 509*

EMBA 509 Introduction to Group Dynamics (1 cr)
Design and development of work groups and teams; influences, issues, and problems affecting team productivity.
Coreq: *EMBA 507 and EMBA 508*

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.
Prereq: *EMBA 521, EMBA 523, EMBA 524 and EMBA 525*

EMBA 511 Evolution of Management Thought (1 cr)
Traces the cross-cultural evolution of management and leadership theory and practice from antiquity to the present.
Prereq: *EMBA 507, EMBA 508 and EMBA 509*
Coreq: *EMBA 512 and EMBA 514*

EMBA 512 Managing Complex Systems (2 cr)
Managing the firm as a complex adaptive system. Applied analysis of markets and environments for understanding social systems.
Prereq: *EMBA 507, EMBA 508 and EMBA 509*
Coreq: *EMBA 511 and EMBA 514*

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.
Prereq: *EMBA 507, EMBA 508 and EMBA 509*
Coreq: *EMBA 511 and EMBA 512*

EMBA 521 Strategy Formulation and Execution (2 cr)
Formulation and implementation of competitive strategies to identify, build and leverage core competencies in an uncertain, competitive, and ambiguous environment. Theory and practice of strategy implementation and execution. Emphasizes assessing the alignment of strategy with action throughout the organization as well as strengthening linkages through business process design and measurement.
Prereq: *EMBA 511, EMBA 512, and EMBA 514*
Coreq: *EMBA 523, EMBA 524, EMBA 525, and EMBA 526*

EMBA 523 Launching New Products and Businesses (2 cr)
Management of introducing new products and ventures. Examines marketing, engineering, finance, and production management decisions.
Prereq: *EMBA 511, EMBA 512, and EMBA 514*
Coreq: *EMBA 521, EMBA 524, EMBA 525, and EMBA 526*

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.
Prereq: *EMBA 511, EMBA 512, and EMBA 514*
Coreq: *EMBA 521, EMBA 523, EMBA 525, and EMBA 526*

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.
Prereq: *EMBA 511, EMBA 512, and EMBA 514*
Coreq: *EMBA 521, EMBA 523, EMBA 524, and EMBA 526*

EMBA 526 Social Responsibility and Ethical Leadership (1 cr)
Examines the foundations of business ethics, the role of private and public organizations in society, and the challenges of decision making and leadership in an environment of globalization, sustainability, and change.

Prereq: EMBA 507, EMBA 508, EMBA 509, EMBA 511, EMBA 512, and EMBA 514
Coreq: EMBA 521, EMBA 523, EMBA 524, and EMBA 525

EMBA 532 Entrepreneurship and Innovation (3 cr)
Strategic analysis of the structural and environmental factors related to adaptive change in learning organizations within the global environment.
Prereq: EMBA 510, EMBA 521, EMBA 523, EMBA 524, EMBA 525, and EMBA 526
Coreq: EMBA 534 and EMBA 535

EMBA 534 Managing and Leading Change (1 cr)
Concepts and approaches for managing environmental complexity and uncertainty, and leading adaptive and transformational change in organizations.
Prereq: EMBA 510, EMBA 521, EMBA 523, EMBA 524, EMBA 525, and EMBA 526
Coreq: EMBA 532 and EMBA 535

EMBA 535 Strategic Leadership of Relationships (3 cr)
Management of relationships internal and external to the organization. Facilitation of stakeholders' needs through topics such: as strategic communication, technological advances, social network analysis and supply chain management.
Prereq: EMBA 510, EMBA 521, EMBA 523, EMBA 524 and EMBA 525
Coreq: EMBA 532 and 534

EMBA 541 Designing for the Future (1 cr)
Technological, economic, and political factors that influence future product and organizational design.
Prereq: EMBA 532, EMBA 534 and EMBA 535
Coreq: EMBA 542, EMBA 543 and EMBA 544

EMBA 542 Negotiation and Conflict Management (2 cr)
Theory and practice of negotiation and dispute resolution.
Prereq: EMBA 532, EMBA 534 and EMBA 535
Coreq: EMBA 541, EMBA 543 and EMBA 544

EMBA 543 Assessing to Improve Firm Performance (3 cr)
Evaluation of organizational performance from multiple perspectives using quantitative and qualitative methods.
Prereq: EMBA 532, EMBA 534 and EMBA 535
Coreq: EMBA 541, EMBA 542 and EMBA 544

EMBA 544 Risk Management (3 cr)
Review of the history, tools, and behavioral aspects of risk management.
Prereq: EMBA 532, EMBA 534 and EMBA 535
Coreq: EMBA 541, EMBA 542 and EMBA 543

EMBA 599 (s) Non-thesis Master's Research (1-5 cr, max 5)
Research not directly related to a thesis or dissertation. Student works with individual professor to design a research study, collect and analyze data, and prepare written report. Students must take either EMBA 500 or 599 but are not required to take both.

Family and Consumer Sciences Courses

Sandra Evenson, Interim 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 Fashion from Concept to Consumer (3 cr)
Introduction to the sewn product manufacturing and merchandising industry; focus on social-psychological, cultural, historic, aesthetic, design, business, and economic factors; emphasis on careers in the sewn products industry. (Fall only)

FCS 123 Textiles (3 cr)
Fiber, yarn, and fabric properties, color and finishes as they relate to performance, care, and consumer satisfaction. Two lec and one 2-hr lab a wk. (Fall only)

FCS 170 Introductory Foods (3 cr)
Basic concepts and techniques of food preparation; applied sensory evaluation of food. (Fall only)

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 223 Evaluation of Apparel and Textiles (3 cr)
Analysis of textile and apparel products relative to production methods, product performance, and consumer value. Three lec and 2 hrs of lab a wk; field trips. (Fall only)
Prereq: FCS 123 or Permission

FCS 224 Apparel Design I (3 cr)
Design conception, fabric characteristics, garment assembling, principles of fitting, quality control for the apparel industry. One lec and five hrs of lab a wk. (Spring only)
Prereq: CTD or FCS Education 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.
Prereq: FCS 234 or Permission (Fall only)

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

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

FCS 324 Apparel Design II (3 cr)
Methods and principles of flat pattern design; use of pattern making skills to create original designs; development and application of computer skills in designing apparel for the industry. One lec and five hrs of lab a wk. (Fall only)
Prereq: FCS 224 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)

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 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: 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, MMBB 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, MMBB 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 Quantity Food Production Lab (2 cr)
Lab to accompany FCS 384 for students accepted into CPD program only. 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)
Lab to accompany FCS 387 for students accepted into CPD program only. One 3-hour lab per wk. (Spring only)
Prereq: FCS 384
Coreq: FCS 387

FCS 390 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, FCS 305 and Stat 251

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 ID411 Global Nutrition (3 cr) WSU FSHN 411
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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 Core completed, Junior standing, or Permission

FCS 423 Sewn Product Industry Tour (1 cr, max 3 cr)
Field site tours of sewn product industry firms representing the design/manufacturing, merchandising, and auxiliary services arms of the industry. Forty-five hrs of instruction/field experience: five hours class lecture, planning, and discussion; forty hours visiting companies (five 8-hour days). Variable field trip fee depending on actual cost.
Prereq: CTD major or Permission

FCS 424 Aesthetics for the Apparel Professional (3 cr)
Pattern creation through draping method; application of computer skills in designing apparel for target groups. One lec and 5 hrs of lab a wk. (Spring only)
Prereq: FCS 119, 223, 224, or Permission

FCS ID428 Housing America's Families (3 cr) WSU H D 428
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 grand-parenting. 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.aee.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, or Permission*

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, 202, 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 ID-J462/J562 Eating Disorders (2 cr) WSU FSHN 405
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.

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 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*

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*

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 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 495 Introduction to Internship (1 cr)
Preparation for professional internship experience, including identifying opportunities, fine-tuning resumes, the application process, and analyzing the internship. (Fall only)
Prereq: *CTD major*

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: *CTD major and FCS 495.*

FCS 497 (s) Practicum (cr arr)
On- or off-campus supervised applied experience in family and consumer sciences major areas: child development and family relations; clothing, textiles, and home design; food and nutrition; consumer education; and cooperative extension.
Prereq: *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 ID540 Parent-Child Relationships (3 cr) WSU H D 558
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 ID&WS554 Program Development in Child, Family, and Consumer Studies (3 cr) WSU H D 535
Analysis and development of program delivery systems, curricula, and evaluation models.

FCS ID561 Sports Nutrition (3 cr) WSU FSHN 561
Macronutrient and selected micronutrient utilization during exercise and restoration after feeding, dietary surveys of athletes, dietary ergogenic aids, and discussion of the origins of dietary recommendations for athletes. (Spring, Alt/yrs)
Prereq: *Permission*

FCS 562 Eating Disorders (3 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 Resources (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 ID314 Fish Ecology (3 cr) WSU Biol 413
Examination of physical, chemical, and biological factors that affect fish populations and communities, with emphasis on environmental stressors. (Fall only)
Prereq: *For 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 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 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 or Biol 314*

Fish ID&WS418 Fisheries Management (4 cr) WSU NATRS and Biol 416
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. (Fall only)
Prereq: *Fish 314, Biol 481, Stat 251*

Fish ID422 Concepts in Aquaculture (3 cr) WSU NATRS 424 and 425
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) . (Fall only)
Prereq or Coreq: *Biol 481*

Fish ID424 Fish Health Management (4 cr) WSU NATRS 421
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. (Spring only)
Prereq: *MMBB 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 or Biol 314*

Fish WS469 Aquaculture Systems Design (2 cr) WSU AgTM 469
Aquaculture production system design, species adaptation to aquaculture, management of water flows, oxygen and nutrient consumption, system impacts and economics.
Prereq: *Permission of department*

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: *MMBB 250. (Fall, Alt/yrs)*
Prereq: *Seniorr 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 ID510 Advanced Fishery Management (3 cr) WSU Biol 523
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. (Spring, Alt/yrs)

Fish ID511 Fish Physiology (2 cr) WSU Biol 515
Principles and methods used to study vital organs, organ systems, growth, and reproduction of fishes; emphasis on osmoregulation, metabolism, endocrinology, and respiration.
Prereq: Fish 411 and Permission (Fall. Alt/yrs)

Fish ID514 Fish Population Ecology (2 cr) WSU Biol 510
Review of abiotic and biotic factors controlling or regulating fish population densities and critical review of relevant literature. (Fall. Alt/yrs)

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. (Fall, Alt/yrs)

Fish WS519 Fish Genetics (2 cr) WSU Biol 514

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

Barry G. Swanson, Interim 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 ID&WS110 Introduction to Food Science (3 cr) WSU FS 110
Introduction to 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.

FS ID&WS113 Introduction of Vines and Wines (3 cr) WSU FS 113
The importance of viticulture (grape growing) including world wine regions and enology (winemaking).

FS 204 (s) Special Topics (cr arr)

FS ID&WS220 Food Safety and Quality (3 cr) WSU FS 220
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.

FS 230 Food Chemical Safety (3 cr)
Examines the sources of chemical and microbiological risk which foods may pose and helps students discover how scientific principles have been used to ensure the safety of our food supply through testing and processing. (Fall, Alt/yrs)

FS 240 Introduction to Food Processing (3 cr)
Training in food processing and unit operations at the introductory level. After completing this course, the students will be able to recognize and identify basic food science concepts and terminology used by professionals in the nutrition, foods, foodservice and food science fields; understand the multiple technologies used in the preservation of food; understand the concepts related to unit operations; and understand basic processing flow for various commodities such as milk, meat, fats and oils, and cereal grains. (Spring, Alt/yrs)

FS ID&WS303 Food Processing (3 cr) WSU FS 303
Specialized techniques, concepts and practices of food processing. Field trip reqd. Two 1-hr lectures and one 3-hr lab a week. Recommended preparation: MMBB 250, Chem 275 and 276.
Prereq: FS 110 and FS 220

FS ID&WS304 Cereal Products (2 cr) WSU FS 304
Technical principles related to production and commercial processing of legume and cereal foods. Field trip required.
Prereq: Chem 275 and Chem 276

FS 363 Animal Products for Human Consumption (3 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.
Prereq: Permission of department.

FS 400 (s) Seminar (cr arr)

FS 404 (s) Special Topics (cr arr)

FS ID&WS-J406/ID&WS-J506 Evaluation of Dairy Products I (1 cr) WSU FS 406/506
Identifying defects in dairy products and relating these defects to their probable cause; remedies. Credit not granted for both FS 406 and 506. (Spring only)

FS ID&WS-J407/ID&WS-J507 Evaluation of Dairy Products II (1 cr) WSU FS 407/507
Identifying defects in dairy products and intense training for Collegiate Dairy Products Evaluation Competition. Credit not granted for both FS 407 and FS 507. (Fall only)
Prereq: *FS 406 or FS 506*

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.

FS ID&WS416 Food Microbiology (3 cr) WSU FS 416
Same as MMBB 416. 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.
Prereq: *MMBB 250 and MMBB 255*

FS ID&WS417 Food Microbiology Laboratory (2 cr) WSU FS 417
Same as MMBB 417. Methods for enumeration, detection, and identification of spoilage and pathogenic microorganisms in foods. Two 3-hr labs a wk.
Prereq or Coreq: *FS 416 or MMBB 416*

FS ID&WS418 Oral Seminar in Food Science (1 cr) WSU FS 418
Development of skills and communication tools and techniques for oral presentations of current food science research.

FS ID&WS-J422/ID&WS-J522 Sensory Evaluation of Food and Wine (3 cr) WSU FS 422/522
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.
Prereq: *FS 220, Stat 251 or Permission*

FS ID&WS423 Sensory Evaluation of Food and Wine Laboratory (1 cr) WSU FS 423
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

FS ID&WS-J429/ID&WS-J529 Dairy Products (3 cr) WSU FS 429/529
Dairy chemistry, microbiology, sanitation, product development and processing from cow to consumer.
Prereq: *MMBB 250 and MMBB 300*

FS ID&WS-J430/J530 Dairy Products Lab (1 cr) WSU FS 430
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.

FS ID&WS432 Food Engineering (3 cr) WSU FS 432
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.
Prereq: *FS 303*

FS IDWS433 Food Engineering Lab (1 cr) WSU FS 433
To enhance the learning experience of the students taking FS 432 through laboratories, problem sessions and group discussions.

FS J441/J541 Scanning Electron Microscopy (3 cr)
Theory and principles of scanning electron microscopy as investigative tool; includes operation and maintenance of electron microscope, specimen preparation, and photographic darkroom procedure. Students registering for FS 541 are required to complete an additional research paper.

FS ID&WS460 Food Chemistry (3 cr) WSU FS 460
Fundamentals of food chemistry; composition of foods and the changes that occur during processing.
Prereq: *Chem 275 and Chem 276; or Chem 277 and Chem 278, and MMBB 300 or MMBB 380*

FS ID&WS461 Food Chemistry Laboratory (1 cr) WSU FS 461
Experiments related to properties, reactions, and interactions of chemical components of foods.
Coreq: *FS 460*

FS ID&WS462 Food Analysis (4 cr) WSU FS 462
Introductory food analysis; methods common to many food commodities.
Prereq: *Chem 275, Chem 276, and MMBB 250*

FS ID&WS-J464/ID&WS-J564 Food Toxicology (3 cr) WSU FS 464/564
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.
Prereq: *MMBB 300 or MMBB 380*

FS ID&WS-J465/ID&WS-J565 Wine Microbiology and Processing (3 cr) WSU FS 465/565
Technical principles related to the processing and fermentation of wines with an emphasis on microbiology.
Prereq: *MMBB 250 and MMBB 300*

FS ID&WS466 Wine Microbiology and Processing Lab (1 cr) WSU FS 466
Hands-on winemaking; application of chemical microbiological methods for wine analysis. Field trip required.
Prereq or Coreq: *FS 465 or 565*

FS ID&WS-J470/ID&WS-J570 Advanced Food Technology (3 cr) WSU FS 470/570
Credit not granted for both FS 470 and 570. Physical principles of food preservation and recent advances in food technology. Additional projects/assignments required for graduate credit.
Prereq: *FS 303, FS 416 or Permission*

FS WS-J482/WS-J582 Food Process Engineering Design (3 cr) WSU BSysE 482/582 and FS 582
FS 582 same as BAE 582. Fundamentals for design of food processing systems; food properties; thermal and physical processes.

FS ID&WS489 Food Product Development (3 cr) WSU FS 489
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.
Prereq: *FS 303, FS 416, and 460, or Permission*

FS 499 (s) Directed Study (cr arr)

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)

FS 504 (s) Special Topics (cr arr)

FS ID&WS506 Evaluation of Dairy Products I (1 cr) WSU FS 506
See FS J406/J506.

FS ID&WS507 Evaluation of Dairy Products II (1 cr) WSU FS 507
See FS J407/J507.

FS 509 Principles of Environmental Toxicology (3 cr)
See FS J409/J509.

FS ID&WS510 Functional Foods and Health (3 cr) WSU FS 510
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.

FS ID&WS511 Food Lipids (3 cr) WSU FS 511
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.

FS WS512 Food Proteins and Enzymes (2 cr) WSU FS 512
Chemistry/biochemistry of proteins/enzymes applied to food research and industry; protein functionality/enzyme technology application to food industry.

FS ID&WS513 Food Carbohydrates (3 cr) (FS 519) WSU FS 519
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.

FS ID&WS516 Food Laws (1 cr) WSU FS 516
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.

FS ID&WS517 Writing Seminar (2 cr, max 4) WSU FS 517
Planning, writing, reporting, reviewing and evaluating current food-related research.

FS ID&WS518 Graduate Oral Seminar (1 cr) WSU FS 518
Development of skills and communication tools and techniques for oral presentations of current food science research. Additional projects/assignments required for graduate credit.

FS ID&WS522 Sensory Evaluation of Food and Wine (3 cr)
See FS J422/J522

FS 527 Transmission Electron Microscopy (3 cr)
Discussion and application of basic skills required in use of transmission electron microscope, including simple specimen preparation techniques and photographic darkroom skills.

FS ID&WS529 Dairy Products (3 cr)
See FS J429/J529.

FS 530 Dairy Products Lab (1 cr)
See FS J430/J530.

FS 540 Biological Electron Microscopy (4 cr)
Application of biological specimen preparation techniques in EM, including ultramicrotomy and use of specific stains.

FS 541 Scanning Electron Microscopy (3 cr)
See FS J441/J541.

FS ID&WS564 Food Toxicology (3 cr)
See FS J464/J564.

FS ID&WS565 Wine Microbiology and Processing (3 cr)
See FS J465/J565.

FS ID&WS570 Advanced Food Technology (3 cr)
See FS J470/J570.

FS WS582 Food Process Engineering Design (3 cr) WSU BSysE 582 and FS 582
See FS J482/J582.

FS ID&WS583 Advances in Cereal Science and Technology (2 cr) WSU FS 583
Chemistry and functionality of cereal grains as related to their processing and product quality
Prereq: 3 credits Food Chemistry, Biochem or Organic Chem.

FS 588 Food Science Teaching Practicum (1-3 cr)
Supervised teaching in a university setting.
Prereq: Admission to graduate program and Permission

FS 590 Food Science Research Seminar (1 cr, max arr)
Current topics and research in food science and related areas.
Prereq: Permission

FS 600 Doctoral Research and Dissertation (cr arr)

Foreign Languages and Literatures Courses

Bill L. Smith, Interim Dept. Chair, Dept. of Foreign Languages and Literatures (302 Admin. Bldg. 83844-3174; phone 208/885-6179; fax 208/885-5221; forlang@uidaho.edu).

Prerequisite: Each successive course in the vertical sequences of the elementary and intermediate language courses listed below has as prerequisite the successful completion of the previous course in the sequence with a grade of C or better. Prerequisite for upper-division language courses is the appropriate intermediate course with a grade of C or better or equivalent.

Vertically-related courses in this subject field are: Arbc 101-102; Chin 101-102-201-202; Fren 101-102 (or 104)-201-202; Germ 101-102-201-202; Grek 341-342-441-442; Ital 101-102-201-202; Japn 101-102-201-202; Latn 101-102; NezP 101-102-201-202; Russ 101-102-201-202; Span 101-102 (or 104)-201-202. Any one of the following courses may be considered the terminal course for the related vertical sequence above: Chin 306 or Chin 307 or Chin 308; Fren 301 or 302; Germ 301 or 302; Russ 307 or 308; Span 301 or 302. Any upper-division Latin literature course may be used to receive vertically related course credit for Latn 101-102. A maximum of 16 credits may be earned for vertical credit in any language, in the Department of Foreign Languages and Literatures.

Ancient Greek Courses

Grek 204 (s) Special Topics (cr arr)

Grek 299 (s) Directed Study (cr arr)

Grek ID341 Elementary Greek (4 cr) WSU Clas 341
Pronunciation, vocabulary, reading, and functional grammar.

Grek ID342 Elementary Greek (4 cr) WSU Clas 342
Pronunciation, vocabulary, reading, and functional grammar.

Grek 404 (s) Special Topics (cr arr)

Grek ID441 (s) Intermediate Greek (4 cr, max arr) WSU Clas 441
Readings in classical Greek prose and poetry.

Grek ID442 (s) Intermediate Greek (4 cr, max arr) WSU Clas 442
Readings in classical Greek prose and poetry.

Grek 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

Grek 499 (s) Directed Study (cr arr)

Arabic Courses

Arbc ID101 Elementary Modern Standard Arabic I (4 cr) WSU Arabc 101
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. (Fall only)

Arbc ID102 Elementary Modern Standard Arabic II (4 cr) WSU Arabc 102
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)

Chinese Courses

Chin WS101 Chinese First Semester (4 cr) WSU Chin 101

Chin WS102 Chinese Second Semester (4 cr) WSU Chin 102

Chin WS105 Elementary Conversation I (1 cr, max 2) WSU Chin 105
Graded P/F.

Chin WS120 Traditional Chinese Cultures (3 cr) WSU Chin 120
Cultural development of China from early times through the golden age of Chinese civilization. Taught in English.

Chin WS121 Modern Chinese Culture (3 cr) WSU Chin 121

Chin WS201 Chinese Third Semester (4 cr) WSU Chin 203
May be used as core credit in J-3-d.

Chin WS202 Chinese Fourth Semester (4 cr) WSU Chin 204
May be used as core credit in J-3-d.

Chin 204 (s) Special Topics (cr arr)

Chin WS205 Intermediate Conversation (1 cr, max 2) WSU Chin 205
Graded P/F.
Prereq: *Chin 102 or Equivalent*

Chin WS305 Intermediate Conversation II (1 cr, max 2) WSU Chin 305
Graded P/F.
Prereq: *Chin 202*

Chin WS306 Intermediate Reading and Translation (3 cr) WSU Chin 306
Vocabulary building, contrastive English-Chinese expressions, development of skills to increase reading speed and fluency.

Chin WS307 Intermediate Chinese (3 cr) WSU Chin 307
Prereq: *Chin 202*

Chin WS308 Intermediate Grammar and Writing (3 cr) WSU Chin 308
Writing practice in the language and active review of grammar. Not open to native speakers except with permission.

Chin WS311 Great Asian Directors (3 cr) WSU Chin 311
Focused study of two prominent Asian film directors. Taught in English.
Prereq: *Chin 111, 121 or 131*

Chin WS330 The Art of War (3 cr) WSU Chin 330
Study of the philosophy behind war, military strategy, its consequences, and its representations in literature and film from East Asia. Taught in English.
Prereq: *Chin 111, 121 or 131*

Chin WS361 Chinese for the Professions (3 cr) WSU Chin 361
Communication in Chinese for professional purposes; telephone and meeting role-plays, letter-writing, television, discussion of current events in the Chinese-speaking world. Not open to native-speakers.
Prereq: *Chin 202 with a grade of C or better, or Permission*

Chin WS363 Introduction to Literary Chinese (3 cr) WSU Chin 363
Fundamentals of literary Chinese. Open to native speakers. Taught in Chinese.

Chin WS364 Media Chinese (3 cr) WSU Chin 364
Study of Chinese for newspapers, television news, radio broadcasts, webcasts and other journalistic media. Taught in Chinese. Not open to native-speakers.
Prereq: *Chin 202 with a grade of C or better, or Permission*

Chin WS450 Seminar in Chinese Studies (3 cr) WSU Chin 450
Seminar on important themes in Chinese studies. Taught in Chinese.
Prereq: *Any two Chin 300-level courses, excluding Chin 305*

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 (2 cr)
Fundamental Latin and Greek words used in the humanities and natural science; emphasis on terminology of fields in which students are interested; 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)
May be used as core credit in J-3-d. 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 Modern French Literature in Translation (3 cr)
May be used as core credit in J-3-d. Major modern French authors in English translation; knowledge of French is not required.

FLEN 324 Topics in German Literature in Translation (3 cr, max 6)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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 450 (s) Topics in Classical Civilization (3 cr, max 9)
See Hist 450.

FLEN 481 Women's Literature (3 cr)
See Engl 481.

FLEN 499 (s) Directed Study (cr arr)

French Courses

Fren 101 Elementary French I (4 cr)
Credit not given for both Fren 101-102 and 104. 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.

Fren 102 Elementary French II (4 cr)
Credit not given for both Fren 101-102 and 104. Pronunciation, vocabulary, reading, spoken French, and functional grammar.

Fren 103 (s) French Language Lab (1 cr, max 4)
Practice in listening comprehension, pronunciation, and grammatical structures. Graded P/F.
Coreq: *Elementary or Intermediate French (Fren 101-102, 104, 201-202)*

Fren 201 Intermediate French I (4 cr)
May be used as core credit in J-3-d. Reading, grammar review, speaking, and writing. Recommended Preparation: Fren 102.

Fren 202 Intermediate French II (4 cr)
May be used as core credit in J-3-d. Reading, grammar review, speaking, and writing. Recommended Preparation: Fren 102.

Fren 204 (s) Special Topics (cr arr)

Fren 299 (s) Directed Study (cr arr)

Fren 301 Advanced French Grammar (3 cr)

Fren 302 Advanced French Writing Skills (3 cr)
Recommended for students who wish to continue in upper-division French courses.

Fren 304 Connecting French Language and Culture (4 cr)
Practice of linguistic proficiencies within simulated cultural frames.

Fren 305 Reading French Texts (3 cr)
Development and practice of reading skills and strategies.

Fren 307 French Phonetics (4 cr)
Contrastive analysis; acquisition and corrective practice of sounds and intonation patterns; phonetic description and transcription.

Fren 308 Advanced French Conversation (3 cr)

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 (s) Topics in French Literature (3 cr, max 9)

Fren 408 (s) Topics in French Culture and Institutions (3 cr, max 9)

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)

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)

German Courses

Germ 101 Elementary German I (4 cr)
Pronunciation, vocabulary, reading, spoken German, and functional grammar.

Germ 102 Elementary German II (4 cr)
Pronunciation, vocabulary, reading, spoken German, and functional grammar.

Germ 103 (s) German Language Lab (1 cr, max 2)
Practice in listening comprehension and conversational skills. Graded P/F.
Coreq: elementary German (Germ 101-102).

Germ 201 Intermediate German I (4 cr)
May be used as core credit in J-3-d. 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 202 Intermediate German II (4 cr)
May be used as core credit in J-3-d. 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. (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 ID&WS303 German for the Professions (3 cr) WSU Germ 361
Emphasis on practical language usage and skills appropriate to the professional workplace. Recommended Preparation: Germ 202, 301 or 302.

Germ ID&WS306 Introduction to German Literature (3 cr) WSU Germ 350
Introduction to the study of German literature; representative texts from various genres and periods. Recommended Preparation: Germ 202.

Germ WS310 German Film (3 cr) WSU Germ 310
Study of important German films. Taught in German. Recommended preparation: Germ 202.

Germ 404 (s) Special Topics (cr arr)

Germ ID&WS420 (s) Topics in German Culture and Literature - Themes (3 cr, max 6) WSU Germ 450
For advanced students; important themes in German cultural/literary studies. Recommended Preparation: Germ 301 or 302, and Germ 306. (Spring, Alt/yrs)

Germ ID&WS421 (s) Topics in German Culture and Literature - Authors (3 cr) WSU Germ 452
For advanced students; focus on important authors in German cultural/literary studies. Recommended preparation: Germ 301 or 302 and Germ 306.

Germ ID&WS422 (s) Topics in German Culture and Literature - Genres (3 cr) WSU Germ 422
For advanced students; focus on important genres in German studies. Recommended preparation: Germ 301 or 302 and Germ 306.

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)

Italian Courses

Ital WS101 Elementary Italian I (4 cr) WSU Ital 101

Ital WS102 Elementary Italian II (4 cr) WSU Ital 102

Ital WS105 Elementary Conversation (1 cr, max 2) WSU Ital 105

Ital WS201 Intermediate Italian I (4 cr) WSU Ital 203
May be used as core credit in J-3-d
Prereq: Ital 102 or Equivalent

Ital WS202 Intermediate Italian II (4 cr) WSU Ital 204
May be used as core credit in J-3-d.
Prereq: Ital 102 or Equivalent

Ital WS205 Intermediate Conversation (1 cr, max 2) WSU Ital 205
Prereq: Ital 102 or Equivalent

Ital 499 (s) Directed Study (cr arr)

Japanese Courses

Japn ID&WS101 Elementary Japanese I (4 cr) WSU Japn 101

Japn ID&WS102 Elementary Japanese II (4 cr) WSU Japn 102

Japn 103 (s) Japanese Language Lab (1 cr, max 4)
Practice in listening comprehension and conversational skills. Graded P/F.

Coreq: Japn 101, 102, 201, or 202

Japn WS120 Traditional Japanese Culture (3 cr) WSU JAPN 120
Provides an introduction to traditional Japanese society and culture from ancient times through the 19th century. Taught in English.

Japn ID&WS201 Intermediate Japanese I (4 cr) WSU Japn 203
May be used as core credit in J-3-d.

Japn ID&WS202 Intermediate Japanese II (4 cr) WSU Japn 204
May be used as core credit in J-3-d.

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 preapration: Japn 202 or equivalent.

Japn 404 (s) Special Topics (cr arr)

Japn 499 (s) Directed Study (cr arr)

Latin Courses

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 ID365 Survey of Latin Literature (3 cr) WSU Clas 365-366
From early Latin to the Middle Ages.

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 ID461 (s) Latin Literature of the Empire (3 cr, max 9) WSU Clas 461

Latn ID462 (s) Latin Literature of the Empire (3 cr, max 9) WSU Clas 462

Latn ID463 (s) Latin Literature of the Republic (3 cr, max 9) WSU Clas 463

Latn 499 (s) Directed Study (cr arr)

Nez Perce Courses

NezP ID&LC101 Elementary Nez Perce I (4 cr) LCSC NP 101 WSU NezP 101
Pronunciation, vocabulary, reading, spoken Nez Perce, and functional grammar.

NezP ID&LC102 Elementary Nez Perce II (4 cr) LCSC NP 102 WSU NezP 102
Pronunciation, vocabulary, reading, spoken Nez Perce, and functional grammar.
Prereq: NezP 101

NezP 200 (s) Seminar (cr arr)

NezP ID&LC201 Intermediate Nez Perce I (4 cr) LCSC NP 201 WSU NezP 201
Reading, grammar review, speaking, and writing.
Prereq: NezP 102

NezP ID&LC202 Intermediate Nez Perce II (4 cr) LCSC NP 202 WSU NezP 202
Reading, grammar review, speaking, and writing.
Prereq: NezP 201

Russian Courses

Russ WS101 First Semester Russian (4 cr) WSU Rus 101

Russ WS102 Second Semester Russian (4 cr) WSU Rus 102

Russ WS105 Elementary Conversation I (1 cr, max 2) WSU Rus 105
Graded P/F.

Russ WS121 Contemporary Russian Culture (3 cr) WSU Rus 121
Taught in English.

Russ WS130 Masterpieces of Russian Literature in Translation (3 cr) WSU Rus 130
Taught in English.

Russ WS201 Third Semester Russian (4 cr) WSU Rus 203
May be used as core credit in J-3-d.

Russ WS202 Fourth Semester Russian (4 cr) WSU Rus 204
May be used as core credit in J-3-d. Recommended Preparation: Russ 201.

Russ 204 (s) Special Topics (cr arr)

Russ WS205 Intermediate Conversation I (1 cr, max 2) WSU Rus 205
Graded P/F.
Prereq: Russ 102

Russ WS305 Intermediate Conversation II (1 cr, max 2) WSU Rus 305
Graded P/F. Recommended Preparation: Rus 202.

Russ WS307 Intermediate Speaking and Listening (3 cr) WSU Rus 307
Prereq: Rus 202

Russ WS308 Intermediate Grammar & Writing (3 cr) WSU Rus 308
Prereq: Russ 202

Russ WS410 Russian Film (3 cr) WSU Rus 410

Spanish Courses

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.

Span 102 Elementary Spanish II (4 cr)
Credit not given for Span 102 after 104. Pronunciation, vocabulary, reading, spoken Spanish, and functional grammar.

Span 103 (s) Spanish Language Lab (1 cr, max 4)
Practice in listening comprehension and conversational skills. Graded P/F.
Coreq: Elementary or Intermediate Spanish (Span 101-102 or 201-202)

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)
May be used as core credit in J-3-d. Reading, grammar review, speaking, and writing. Recommended Preparation: Span 102.

Span 202 Intermediate Spanish II (4 cr)
May be used as core credit in J-3-d. 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)
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 309 Spanish for Business (3 cr)
Emphasis on business Spanish. Recommended for students in Foreign Language Business Option.
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 311 Readings: Hispanic News Via Internet (3 cr)
Prereq: Span 302

Span 401 Readings: Spanish Literature (3 cr)
Prereq: Span 302 or Permission

Span 402 Readings: Spanish American Literature (3 cr)
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)

Forest Products Courses

Thomas M. Gorman, Dept. Head, Dept. of Forest Products (102 CNR Bldg. 83844-1132; phone 208/885-9663).

Prerequisite: Courses in this subject field that are numbered above 299 are not open to undergraduate students on academic probation.

ForP 100 Forest Products Issues and Technology (2 cr)
Critical issues facing the forest products industry, forest operation, lumber manufacturing, wood-composite manufacturing, and professional career opportunities. Technical writing assignments. One lec and one three-hour lab a wk. (Fall only).

ForP 203 (s) Workshop (cr arr)

ForP 204 (s) Special Topics (cr arr)

ForP 230 Field Measurement for Forest Operations (2 cr)
Evaluation and quantification of harvesting impacts on forest systems; public land surveying, land measurements, resource impact measurements and evaluation. Two lec and one 3-hr lab a wk for 10 wks. Recommended Preparation: Math 143 or Equivalent (Fall only)

ForP ID277 Wood Anatomy and Identification (3 cr) WSU NATRS 321
Physiology of woody plants, anatomy and nomenclature of wood, physical and chemical nature of wood, identification of commercial wood species. Two lec and 2-hr lab a wk. (Fall only)

ForP 299 (s) Directed Study (cr arr)

ForP 337 Physical and Mechanical Properties of Wood (3 cr)
Properties of wood as they relate to physical behavior and product application; other related topics include biodeterioration, machining and adhesive technology, and strength considerations. Recommended Preparation: ForP 277 or Permission (Spring only)

ForP 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)

ForP 400 (s) Seminar (cr arr)

ForP 403 (s) Workshop (cr arr)

ForP 404 (s) Special Topics (cr arr)

ForP 405 (s) Professional Development (cr arr)
Credit earned in this course will not be accepted toward grad degree programs.
Prereq: Permission

ForP 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.

ForP ID425 Forest Products Marketing (3 cr) WSU NATRS 420/520
Aspects of marketing from an industrial perspective; survey of domestic and international forest products marketing; marketing research in forest products; current issues and problems in marketing forest products. (Spring, Alt/yrs)

ForP ID430 Forest Engineering and Harvesting (3 cr) WSU NATRS 320
Survey of logging equipment capabilities; intro to cable logging systems, road layout, and design; cost analysis of logging systems; development of road and logging plans. Three days of field trips. Recommended Preparation: ForP 230. (Fall only)

ForP ID431 Forest Operations and Investment Analysis (3 cr) WSU NATRS 439
Intro to production planning and cost control in forest operations; development of cost equations for investment and operational analysis;

financial analysis of long term forestry decisions; cash flow in forest operations; breakeven analysis. (Alt/yrs, Spring only)
Prereq or Coreq: *ForP 430 or Permission*

ForP 432 Designing Forest Access (3 cr)
Classification of forest roads and trails; forest road and trail design; design for drainage that meets standards; construction techniques; costing, environmental considerations, design project. Three days of field trips. Recommended Preparation: ForP 430. (Spring, Alt/yrs)
Prereq or Coreq: *ForP 430 or Permission*

ForP ID434 Forest Tractor and Cable Systems (4 cr) WSU NATRS 434
Planning, layout and design for forest tractor and cable timber harvesting systems; analysis of mechanics and forces involved in equipment and movement of logs; determination of machine capabilities; production and cost estimation; layout and design project. Three 1-day field trips. (Spring, Alt/yrs)
Prereq: *Phys 111 or 211, and ForP 430 or Permission*
Coreq: *ForP 430*

ForP 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. Recommended Preparation: ForP 277. (Fall only)

ForP J438/J538 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. Additional projects and assignments reqd for grad cr. Two lec and one 3-hr lab a wk. Recommended Preparation: Chem 101, Chem 275, and ForP 277. (Spring only).

ForP 439 Operational Analysis in Timber Harvesting (3 cr)
Address contemporary issues associated with timber harvesting; harvesting production and cost analysis, soil compaction, residual stand damage, landslides related to road construction, optimization in forest transportation, forest biomass energy, and quality control in timber harvesting. Recommended Preparation: Work experience with public agencies and private companies. (Spring only, Alt/yrs)
Prereq: *ForP 430 or Permission*

ForP 444 Primary Wood Products Manufacturing (3 cr)
Raw materials, procurement, production methods, drying product specifications, and grading for primary wood products including lumber, plywood, poles, and cedar products; plant layout, machines, and systems analysis; plant tours. Two lec and one 5-hr lab a wk. Recommended Preparation: ForP 277. (Spring only)

ForP 450 Wood Deterioration and Preservation (2 cr)
Thermal, biotic, and abiotic agents that cause wood deterioration; biological control methods; design considerations; wood preservatives and preservative systems; treatability of wood; treatment mechanics; pollution control systems; preservative effectiveness; standards; environmental concerns and law. Recommended Preparation: ForP 277. (Fall, Alt/yrs).

ForP WS475 Estimating I (3 cr) WSU Cst M 470

ForP 480 Senior Project (2 cr)
Case studies involving analysis of forest industry problems and issues; open-ended projects involving wood design and construction; problems addressed individually or in project teams. Field trips.
Prereq: *Senior standing*

ForP 491 Biomaterial Product and Process Development Lab (2 cr)
Lab to accompany ForP 495. One 3-hr lab per week. (Spring only)
Prereq: *Econ 201 or Econ 202, and ForP 495*

ForP 495 Product and Process Development and Commercialization (3 cr)
Same as Bus 495. *May be used as core credit in J-3-d.* Principles of product planning, development and commercialization; concept testing; product-life cycle management; portfolio analysis; targeting and positioning; team management; and implementing product decisions. (Fall only)
Prereq: *Econ 201, 202 or 272*

ForP 498 Renewable Natural Resources Internship (cr arr)
Supervised field experience with an appropriate public agency or private company. Required for students in the Forest Products Business Management option and for cooperative education students. Graded P/F. (Summer only)
Prereq: *Permission of advisor*

ForP 499 (s) Directed Study (cr arr)
For the individual student; conferences, library, field, or lab work.
Prereq: *Senior standing, GPA 2.5, or Permission*

ForP 500 Master's Research and Thesis (cr arr)

ForP 501 (s) Seminar (cr arr)
Major philosophy, management, and research problems of forest products industries; presentation of individual studies on assigned topics.
Prereq: *Permission*

ForP 502 (s) Directed Study (cr arr)

ForP 503 (s) Workshop (cr arr)
Selected topics in the conservation and management of natural resources.
Prereq: *Permission*

ForP 504 (s) Special Topics (cr arr)

ForP 505 (s) Professional Development (cr arr)
Credit earned in this course will not be accepted toward graduate degree programs.
Prereq: *Permission*

ForP 510 Wood Properties, Processes, and Uses (1-2 cr)
See ForP J410/J510.

ForP 536 Biocomposites (3 cr)
See ForP J436/J536.

ForP 538 Lignocellulosic Biomass Chemistry (3 cr)
See ForP J438/J538.

ForP 597 (s) Practicum (cr arr)

ForP 598 (s) Internship (cr arr)

ForP 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: *Permission*

ForP 600 Doctoral Research and Dissertation (cr arr)
Prereq: *Admission to the doctoral program in "natural resources" and Permission of department*

Forest Resources Courses

Jo Ellen Force, Dept. Head, Dept. of Forest Resources (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, 115, 116, or PlSc 205; or Permission*

For 235 Society and Natural Resources (3 cr)
Same as CSS 235. *May be used as core credit in J-3-d.* 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 274 Forest Measurement and Inventory (4 cr)
Practical techniques for the design and execution of the measurement and inventory of forest resources. Three one-hr lec and one three-hr lab per week. (Fall only)
Coreq: Stat 251

For 299 (s) Directed Study (cr arr)

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: 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 330 Forest Ecosystem Processes (3 cr)
Chemical, physical, and physiological processes that determine how trees and forests function; emphasis on carbon budgets, productivity, process modeling of consequences of forest management, and global climate change. Average, two lec and one 2-hr lab a week, several field trips.
Prereq: Soil 205, and Math 143 or Math 160, and Phys 100 or Phys 111, and For 221 or REM 221

For 361 Farm and Natural Resource Appraisal (3 cr)
See AgEc 361.

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 383 Economics for Natural Resource Managers (3 cr)
Same as AgEc 383. Role of economic forces in resource analysis and conservation; planning of forest resource use by the firm and society.
Prereq: Econ 201 or 202, and Math 143 or 160 or 170, and For 235; or Permission

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 408 Community and Urban Forestry (2 cr)
Community or urban environment as affected by its included forest; forest components, benefits, liabilities, values, ordinances, and issues; management by selection, design, planting, care, and maintenance.

For 414 Plant Pathology (3 cr)
See PlSc 415.

For 423 Forest Community Ecology (1 cr)
Principles of synecology related to vegetation classification and interpretation of structural and compositional change in communities following disturbance; practice in plant association/habitat type delineation as applied in western U.S. Accelerated first nine wks; eight lec periods and four 8-hr field trips. Recommended Preparation: For 221. Graded P/F.

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 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 and in soils, as well as losses to the atmosphere and hydrosphere. Two 1-hr lectures and with a 3-hr lab.
Prereq: For 330 and Soil 205

For 426 Fire Ecology and Management (3 cr)
Integrated fire-related ecological effects of fire on vegetation, soils, and air quality; natural 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. One-day field trip. (Fall only)
Prereq: For 221 or REM 221

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, Senior standing, and Permission

For 429 Landscape Ecology (3 cr)
Same as REM 429. 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

For 433 Science-Based Fuels Management Planning (2 cr)
Potential, limitations, and application of recently developed tools for assessing fuels and ecological consequences of alternative approaches to fuels management. Critically review and synthesize relevant scientific literature. Students must develop a fuels management plan using the tools and insights from the course. Hands-on field exercises to enhance learning. This is an intensive short course following pre-work online. Students accomplish substantial parts of their learning online. Recommended preparation: This course assumes that you understand fuels and fire behavior, and that you have experience and are adept with Windows-based software for presentation, word processing, database management, and spreadsheets, and that you understand and can use maps and GIS data layers. You must have a working knowledge of fire ecology.

For 434 Assessing Fire Effects and Burn Severity (2 cr)
Terminology and methods for assessing fire effects and burn severity in the field and from airborne and satellite remote sensing. Quantitative analysis and interpretation of the ecological impacts of fires on plants and soils. Critically review and synthesize relevant scientific literature. Field trips. Recommended preparation: This course assumes that you understand fuels and fire behavior, and that you have experience and are adept with Windows-based software for presentation, word processing, database management, and spreadsheets, and that you understand and can use maps and GIS data layers. You must have a working knowledge of fire ecology.
Prereq: For 426

For 435 Remote Sensing of Active Fire and Post-fire Effects (3 cr)
Application, potential and limitations of methods for assessing active-fire behavior and post-fire effects (e.g., burn severity) in the field and from airborne and satellite remote sensing. Clarification of definitions of fire descriptors (fire intensity, fire severity, and burn severity) and relative merits of field and remote sensing tools for address them. Understanding of the ecological/physical impacts of fires on plants and soils and relation to field and remote measures. This course assumes that you understand fuels and fire behavior, and that you have experience and are adept with Windows-based software for presentation, word processing, database management, and spreadsheets, and that you understand and can use maps and GIS data layers. (Spring, alt/yrs)
Prereq: *NR 402 or REM 402; or Permission*

For 437 LANDFIRE: Concepts, Data, and Methods (1 cr)
Basic concepts of landscape ecology, scale and fire ecology relevant to the use of US-wide LANDFIRE databases for vegetation, fuels and environmental conditions. Basic use of LANDFIRE data with GIS software, and for describing and communicating local and regional conditions for fire and other natural resource management applications. Course is taught online.

For 438 Fuel Assessment Techniques Using LANDFIRE Data (2 cr)
Intermediate-level concepts of landscape ecology, scale and fire ecology relevant to assessments for fire and natural resource management. Strategic fuels and resource assessment using US-wide LANDFIRE databases for vegetation, fuels and environmental conditions to address common fire, fuels and land management issues at appropriate temporal and spatial scales. Common fire and natural resource assessment and planning applications are addressed in this intensive short-course.
Prereq: *For 437*

For 450 Fire Behavior (3 cr)
Understand the process of combustion in wildland fuels and how it is modeled in making fire behavior predictions; relate combustion, fire behavior and fuels to emissions. Lab sessions and field trips. (Spring only)
Prereq: *Phys 100 and REM 244*
Coreq: *For 451*

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. Field trips.
Prereq: *For 375, REM 244 and For 274 or REM 357*
Coreq: *For 450*

For 452 Quantification of Wildland Fire and Fuels Analysis (1 cr)
Methods for inventorying woody fuels and for characterizing tree stands for assessing potential fire behavior and fire effects. Sampling design, field methods, computer programs, and statistical analysis for describing and quantifying the amount and type of fuels. Intensive 5-day short course offered off-campus. Recommended preparation: Requires introductory knowledge of fire behavior, fuels, and fire weather, as well as basic computer skills including file management.

For 453 Fuels Analysis Techniques (1 cr)
Students learn the fire and fuels modeling necessary to conduct project level analysis for fire management on federal lands. Intensive 3-day, off-campus, short course follows reading and testing pre-work. Includes reading and discussion of scientific literature, critical assessment of methods, and problem-solving requiring synthesis, application, and interpretation of course material to a case study project. (Spring only).
Prereq: *For 452*

For 454 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.
Prereq: *For 426*

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. Two days of field trips. Recommended Preparation: Math 143 or 160, high school physics or Phys 100 or 111. (Fall only)

For 463 Hydrologic Measurement Techniques (1 cr)
See CE 326.

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 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. 1-hr. lecture, 1 2-hr. lab, 2 all-day field trips.
Prereq: *For 221*

For 472 Remote Sensing of the Environment (3-4 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 management. One additional two-hour lab per week for fourth credit. Recommended Preparation: Phys 100 or Phys 112.

For 474 Forest Inventory (3 cr)
Principles and practice of natural resources inventory, forest growth, LIDAR, inventory sampling method, and quantitative decision support. Two days of field trips. Two lectures/labs a week. Recommended Preparation: For 324 and 424.
Prereq: *For 274 and Stat 251*

For 475 Financial Aspects of Fire Management (3 cr)
Application of microeconomics to fire management, including price theory, budgeting and theory of the firm. Elements of financial analysis applied to fire management problems, including compounding, discounting, and time preference for money. Decision theory, optimization techniques and statistical analysis applied to various financial problems in fire management. Intensive off-campus short course with pre-work and homework. Course is only open to students enrolled in the US Technical Fire Management program. (Winter Intersession only)
Prereq: *For 325*

For 482 Technical Fire Management (3 cr)
Identification, quantitative analysis of alternative solutions, and recommendation to address a wildland fire management problem based upon synthesis of science and application of concepts and processes learned in previous courses. Writing and oral defense of thesis-quality paper before a review panel. Intensive off-campus short course with prework and homework. Course is only open to students enrolled in the US Technical Fire Management program. (Spring only)
Prereq: *For 488*

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 and 383.
Prereq: *Junior standing*

For 485 Ecology and Conservation Biology Senior Project (1-3 cr, max 3)
See WLF 485.

For 486 Fuels, Fuels Management and Fire Science (3 cr)
Basic principles and process fire spread as it is currently modeled and relationship of fire characteristics to fuel bed particles and other fuel bed characteristics. Analysis and forecasting of fuel type and amount from accretion, decay, and management activities. Structure and operation of the principal fire behavior models used in the US and implications for collection, analysis and application of fuels and weather data in fire behavior prediction and fire danger rating. Intensive off-campus short course with pre-work and homework. Course is only open to students

enrolled in the US Technical Fire Management program. (Winter Intersession only)
Prereq: For 475

For 487 Fire Effects and Landscape Ecology (3 cr)
Temporal and spatial distribution and extent of fire effects in landscapes throughout the US. Consequences of fire for ecosystem components, various remedial strategies to ameliorate these effects, and implications for restoration ecology. Intensive off-campus short course with pre-work and homework. Course is only open to students enrolled in the US Technical Fire Management program. (Spring only)
Prereq: For 486

For 488 Fire and Land Management (3 cr)
Principles of Geographic Information Systems and application to fire management planning. Use of the rational planning process for analyzing and comparing alternative system configurations on the basis of least cost plus loss; allowable resource loss; and social, legal and environmental constraints as these relate to specific land management directives. Intensive off-campus short course with pre-work and homework. Course is only open to students enrolled in the US Technical Fire Management program. (Spring only)
Prereq: For 487

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)

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 ID510 Fundamentals of Research (3 cr) WSU BSysE 510
Same as CS 507. The research process, the graduate program, and the graduate research project; objectives, techniques, and challenges; science and the scientific method; research literature; ethics; creativity; writing and speaking about research; preparation of a proposal for the graduate research project. Students should be in very early stages of planning their research.
Prereq: Permission

For WS511 Introduction to Population Genetics (3 cr) WSU Biol 519

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 527 Landscape Ecology of Forests and Rangelands (2-3 cr)
Ecological relationships of biotic communities in heterogeneous environments, spatial and temporal patterns, importance of landscapes in maintenance of ecosystem diversity and function. One 2-hr lecture/discussion a week based on extensive reading of current literature and case studies. In addition, those students taking 3 credits will meet an additional hour a week, focusing on quantitative landscape analysis, and they will participate in a 2-day field trip. (Spring only)
Prereq: Upper-Division plant or animal ecology

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 530 Fire Regime Condition Class (1 cr)
Value, challenges and limitations of the concepts, methods, and applications of methods used to evaluate ecological conditions related to departure from historical fire and vegetation conditions for managed landscapes. Students must complete some course content, quizzes and readings online in preparation for discussion and critique of science literature, applied quantitative and spatial analysis, and two all-day field trips. (Fall only)
Prereq: For 426 or REM 459; and Geog 385

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 540 Conservation Genetics (3 cr)
See WLF 540.

For ID&WS541 Stable Isotope Theory and Methods (3 cr) WSU Biol 540
Theory and practice of measuring stable isotope ratios of biologically important elements; training in the use of isotope mass spectrometers. (Fall Alt/yrs)

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 553 Current Literature in Genetics and Ecology (1 cr, max arr)
Review recent articles in genetics and ecology 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 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. One -hr seminar and one 2-hr lab a wk; two 1-day field trips. (Fall, alt/yrs)
Prereq: For 466 or Permission

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 ID&WS572 Spatial and Biophysical Modeling (3 cr) WSU SoilS 574
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 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 586 Social Ecology of Natural Resources (3 cr)
Social theory and methods relevant to resource management; interdisciplinary examination of specific natural resource issues such as fire management, wilderness, fisheries disputes, energy policy; emphasis on understanding social aspects of natural resources within an ecological perspective.

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*

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 ID&WS320 Genetics of Livestock Improvement (3 cr) WSU A S 330
See AVS 330.

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)

Gene WS505 Introduction to Population Genetics (3 cr) WSU Biol 519

Geography Courses

Harley Johansen, Dept. Chair, Dept. of Geography (203 McClure Bldg. 83844-3021; phone 208/885-6216; geog@uidaho.edu).

Geog 100 Physical Geography (4 cr)
May be used as core credit in J-3-b. 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)
May be used as core credit in J-3-d. 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 180 Geospatial Graphics (3 cr)
An introduction to cartography and some of the tools of map-making. The course includes instruction in the graphic language of maps, map reading and interpretation, map use, map use and new mapping technologies. Two lec and 1 hr of lab a wk.
Prereq: *Math 130 or Math 143 or higher*

Geog 200 World Regional Geography (3 cr)
May be used as core credit in J-3-d. 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, Phys 100, Phys 111, or Phys 211; and Math 143; or Permission*

Geog 310 Biogeography (2-3 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 or Permission*

Geog 330 Urban Geography (3-4 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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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 ID385 GIS Primer (3 cr) WSU ES/RP 385
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 Geographic Visualization (4 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 400 (s) Seminar (cr arr)

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 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: dendro-climatology, 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, Modeling in GIS, Model Builder, Weighing Layers. Applications in ArcGIS and Matlab. Additional assignments and exams required for graduate credit. (Spring only)
Prereq: *Geog 385*
Prereq or Coreq: *Geog 390, Math 143, Math 160 and Stat 251*

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 415 Scientific Data Analysis with Computer Programming (3 cr)
Manipulation, visualization, and analysis of geographic, biological, and environmental data. Analysis methods applicable in IDL, Matlab, or similar environments. Topics include: review of programming concepts relevant to scientific applications; mapping and remote sensing imagery analysis and display; uncertainty and sensitivity analysis; figure preparation.
Prereq: *Math 143*

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: Geog 385, For 462, BAE 355, CE 325 or Equivalent. (Fall only)

Geog J427/J526 Spatial Multicriteria Analysis and Optimization (3 cr)
Multiple criteria decision-making (MCDM); decision alternatives and constraints; spatial weighting schemes (criterion weighting techniques); collaborative spatial decision-making, MCDM and GIS; linear programming (simple versus multiple objective function); location analysis; location-allocation models integrated with GIS; gravity models. Additional projects/assignments required for graduate credit. (Alt/yrs)
Prereq for Geog 427: *Geog 385, Math 143 or higher; or Stat 251 or perm;*
Prereq for Geog 526: *Geog 475, Math 326 or Permission*

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 WS-J444/WS-J544 Environmental Assessment (4 cr) WSU ES/RP 444
(Spring only)

Geog 450 Global Environmental Change (3 cr)
Same as REM 450. 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*

Geog ID-J475/J575 Advanced GIS (3 cr) WSU ES/RP 575
Spatial analysis in raster- and vector-based systems; concepts, techniques, and applications of GIS technology using microcomputer and workstation platforms. Additional projects/assignments required for graduate credit.
Prereq: *Geog 385 and Stat 251*

Geog 476 Advanced GIS Lab (1 cr)
Advanced GIS Lab will provide extensive experience in the use of GIS techniques and applications through problem solving. ArcGIS, ArcInfo and related analytical software will be used to solve problems involving real-world data coupled to specific problems for solution. Statistical methods (e.g., regression methods, introductory spatial interpolation and autocorrelation) will be used coupled with GIS software to analyze geographic data.

Geog 479 GIS Programming (2 cr)
An introduction to the use of programming languages with standard ArcGIS concepts. An introduction to Python ArcObjects, AML, and Visual Basic.
Prereq: *Geog 475; and CS 112 or Geog 415*

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) (Geog 346)
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 (1-3 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. (Fall only)
Prereq: *Permission*

Geog 493 Senior Seminar in Applied 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 524 Hydrologic Applications of GIS and Remote Sensing (3 cr)
See Geog J424/J524.

Geog 526 Spatial Multicriteria Analysis and Optimization (3 cr)
See Geog J427/J526.

Geog 535 Climate Change Mitigation (3 cr)
See Geog J435/J535.

Geog 540 Business Location Decisions (3 cr)
See Geog J340/J540.

Geog 542 Spatial Statistics (3 cr)
Same as Stat 546. The course focuses on the basic theory and methods of spatial statistics including spatial dependence assessment and modeling. The course will cover basic spatial data analysis, point pattern analysis, spatial autocorrelation methods as well as the analysis of lattice structures. Geographically weighted regression, spatial auto regression and the analysis of geographically continuous data using kriging methods will also be covered. (Alt/yrs)
Prereq: Geog 475, Math 170, Math 330, and Stat 401 or permission

Geog WS544 Environmental Assessment (4 cr)
See Geog J444/J544.

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 570 Global Carbon Cycle (3 cr)
Patterns and processes of carbon cycling, an important component of global environmental change. Stocks and fluxes of carbon in the lithosphere, atmosphere, hydrosphere, and biosphere. Drivers of the global carbon cycle on time scales of minutes to millennia and spatial scales of microbes to the Earth. Human modifications and their impacts are emphasized.
Prereq: Geog 100, Geog 450, EnvS 101, or For 221; or Permission

Geog 575 Advanced GIS (3 cr)
See Geog J475/J575.

Geog 580 GIS Seminar (3 cr, max arr)
Advanced topics in GIS and GIS applications including macro programming, user interface design, and data integration. May be repeated for credit.
Prereq: Permission

Geog 583 Remote Sensing/GIS Integration (3 cr)
See Geog J483/J583.

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 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 behavior 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 ID428 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.

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 528 Advanced Topics in Geological Engineering (3 cr)
Advanced theory and applications, with emphasis on geostatistical simulations, soil and rock reinforcement, and computer modeling methods in geological engineering.
Prereq: GeoE 428 and 435

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 (4 cr)
May be used as core credit in J-3-b. 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 (4 cr)
May be used as core credit in J-3-b or J-3-d. 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 (4 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 or Geol 101, and Chem 111*

Geol WS285 Introduction to Astrobiology (3 cr) WSU Geol 285

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 or 111, and 102*

Geol 299 (s) Directed Study (cr arr)

Geol 308 Ground Water Geology (3 cr)
Geologic factors controlling the infiltration, accumulation and movement of ground water in igneous, metamorphic and sedimentary rock environments. (Spring only)
Prereq: *Geol 101 or 111, and Math 130 or 143*

Geol 309 Ground Water Hydrology (3 cr)
Occurrence, movement, and properties of subsurface water; intro to ground water geology and hydrology.
Prereq: *Geol 101 or 111, and Math 130 or 143*

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*

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*

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 or 102 or 111, or Geog 100, or Permission*

Geol ID344 Earthquakes and Seismic Hazards (3 cr) WSU Geol 444
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 paleo-earthquakes in the geologic record, and the assessment of seismic hazard and risk in active fault environments. One 3-day field trip.
Prereq: *Geol 101 or 111*

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: *One semester high-school trigonometry or Math 144, Geol 101 or 111, and Phys 111 or 211*

Geol 360 Geologic Hazards (3 cr)
Survey of natural geologic hazards, their controlling factors, recognition of hazard potential; emphasis on flash floods, earthquakes, landslides, volcanic hazards, subsidence. Three 1-day field trips.
Prereq: *Geol 101 or 111*

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 or 111*

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 or 102 or 111 or Geog 100*

Geol 390 Petroleum Geology (2 cr)
Petroleum technology for geologists. (Fall only)
Prereq: *Geol 101 or Geol 111*

Geol 400 (s) Seminar (1 cr, max arr)
Participation in departmental colloquium.

Geol ID-J407/ID-J507 Basin Analysis (3 cr) WSU Geol 406/506
Characteristics of sedimentary basins and methods for studying them. For 500-level credit an additional research project is required. One 2-day field trip. (Spring only)
Prereq: *Geol 324*

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 or Coreq: *Geol 309*

Geol J414/J514 Geologic Hazards Field Workshop (2 cr, max arr)
Field study of natural geologic hazards. Primarily for non-geology majors and/or in-service K-12 educators. Held in July at a different off-campus location each year. For 500-level credit an additional research project is required. (Summer only)

Geol 416 Advanced Field Methods in Geosciences (3 cr)
Application of field techniques to the recognition and solution of problems of applied and research interest; design and implementation of integrated geological, geochemical, and geophysical programs. Accident and health insurance required. Three week field trip.
Prereq: *Permission*

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: *Geol 212 or Permission*

Geol ID-J418/ID-J518 Geomicrobiology (3 cr) WSU Geol 418/518
The role of microorganisms in the formation and dissolution of rocks and minerals; microbial processes in ground and surface water environments,

extreme environments and the deep subsurface; early life on Earth and the possibility of life on other planetary bodies. Two additional research assignments and an additional question on two exams required for graduate credit.

Geol 422 Principles of Geophysics (3 cr)
Outline of geophysical methods for geological investigations. One 1-day field trip.

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 or 111, and Chem 112*

Geol J432/ID-J532 Geologic Development of North America (3 cr) WSU Geol 529
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 J441/ID&WS-J541 (s) Structural Analysis (3 cr, max arr) WSU Geol 541
Structural analysis of complexly deformed rocks in orogenic belts. Independent research projects will be required for graduate credit. Field trip required.

Geol J448/ID&WS-J548 Tectonics (3 cr) WSU Geol 540
Fundamentals of global plate tectonics, evolution of ocean basins, and the development of continental orogenic belts; focus on theoretical aspects of global tectonics, the salient physical constraints leading to the paradigm, and practical application of the model to regional geological problems. Graduate credit requires additional work including independent research, presentation of the research results in a class presentation, writing a research paper, and answering an additional question in examinations. Two lec and 2 hrs of lab a wk; one or two 1- to 2-day field trips.
Prereq: *Geol 345 or Permission*

Geol J464/J564 The Geochemistry of Natural Waters (3 cr)
Same as Hydr J464/J564. 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*

Geol J467/ID-J567 Volcanology (3 cr) WSU Geol 567
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 ID&WS490 Field Geology II (3 cr) WSU Geol 308
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. (Summer only)
Prereq: *Geol 290 and 345*

Geol 497 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: *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: *Senior standing and Permission*

Geol 499 (s) Directed Study (cr arr)

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 ID507 Basin Analysis (3 cr) WSU 506
See Geol J407/J507.

Geol 514 Geologic Hazards Field Workshop (2 cr, max arr)
See Geol J414/J514.

Geol ID517 Pre-Quaternary Paleoclimatology (1-3 cr) WSU Geol 516
This course will cover the sedimentological, paleontological, geochemical, and numerical methods used to study climate in the pre-Quaternary Phanerozoic geologic record. Assignments will include written and oral presentations, and the choice of projects will be partially tailored to the students' scholarly needs. Students may elect to take this for 1-3 credits, with assignments made accordingly. (Alt/yrs)

Geol ID518 Geomicrobiology (3 cr)
See Geol ID-J418/ID-J518.

Geol WS520 Advanced Topics in Sedimentary Rocks (3 cr) WSU Geol 520
(Alt/yrs)
Prereq: *Geol 324*

Geol WS528 Clastic Depositional Systems (3 cr) WSU Geol 521
(Alt/yrs)

Geol ID532 Geologic Development of North America (3 cr)
See Geol J432/J532.

Geol ID&WS538 Orogenic Systems (3 cr) WSU Geol 538
Field-based course examines tectonic processes active in orogenic systems. Course work includes 1.5 hr lec/wk, one 2-week field trip, final research paper and presentation.
Prereq: *Geol 345*

Geol ID&WS541 Structural Analysis (3 cr) WSU Geol 541
See Geol J441/J541.

Geol ID542 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.
Prereq: *Geol 345*

Geol ID&WS548 Tectonics (3 cr)
See Geol J448/J548.

Geol WS550 Advanced Mineralogy (3 cr) WSU Geol 550
(Alt/yrs)

Geol WS552 X-ray Analysis in Geology (3 cr) WSU Geol 552

Geol ID554 Physical Petrology (3 cr) WSU Geol 554
Applications of continuum mechanics and fluid dynamics to generation, rise, storage, and eruption of magmas.

Geol WS560 Advanced Igneous Petrology (3 cr) WSU Geol 560

Geol 564 The Geochemistry of Natural Waters (3 cr)
See Geol J464/J564.

Geol ID567 Volcanology (3 cr)
See Geol J467/J567.

Geol ID&WS583 Radiogenic Isotopes and Geochronology (3 cr) WSU Geol 583
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 WS586 Methods in Radiogenic Isotope Geochemistry (3 cr) WSU Geol 588

Geol WS592 Advanced Topics in Structural Geology (1-4 cr, max 6) WSU Geol 592

Geol ID593 (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)

Health and Safety Courses

Kathy Browder, Dept. Head, Dept. of Health, Physical Education, Recreation and Dance (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.

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 311 Acquaintance Rape (2-3 cr)
Overview of acquaintance sexual assault and rape, related research and statistics, impact on victims, socialization process of gender role stereotyping, exploration of myths and misconceptions, psychology of perpetrators, legal definitions, and avoidance strategies. Students give a set number of presentations to living groups. (Spring only)

H&S 316 Community & Global Health (2 cr)
Analysis of major public health problems and issues, including environmental health issues, as they affect communities locally, regionally, nationally, and globally. Introduction to agencies, facilities, programs, and careers in community health and health care. (Spring only)
Prereq: H&S 150

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 412 Emergency Response Instructorship (1 cr)
Develop skills and knowledge to train others in emergency response. Successful participants will receive emergency response instructor certification. (Fall only)
Prereq: H&S 150, H&S 288, and Permission

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 HPRD 201

H&S 431 Practicum: Student Teaching (7 or 14 cr)
Supervised student teaching at the intermediate and/or secondary levels (grades 6 through 12). Double majors select the 7-cr option; all other students select the 14-cr option. Graded P/F.
Prereq: Admission to teacher education, H&S 323, ED 312 and 314, cumulative GPA of 2.5, and Perm of department. (Submit application to director of clinical experiences in the College of Education by December 1 of the school year before enrolling.)

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: Junior standing and HPRD 350 or H&S 150; or Permission

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: HPRD 351 or Permission

H&S 455 Design & Analysis of Research in HPERD (3 cr)
Same as PEP 455 and Rec 455. This course is designed to survey the basic types of research methods often found in health, physical education, sport science, 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 health, physical education, recreation, and human performance 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

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 495 (s) Practicum (1 cr, max arr)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: *Permission*

H&S 498 Internship (1-9 cr)
Supervised field work.
Prereq: *Senior standing*

H&S 499 (s) Directed Study (cr arr)

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.

H&S 535 Principles of Behavior Change (3 cr)
Examines the major theories and models developed to explain health behavior, explore intervention strategies designed to bring about behavior change; examine ethical considerations inherent in efforts to change behavior, and evaluate research involving behavior change strategies.

Health, Physical Education, Recreation and Dance Courses

Kathy Browder, Dept. Head, Dept. of Health, Physical Education, Recreation and Dance (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

HPRD 200 (s) Seminar (cr arr)

HPRD 201 Physical Activity, Wellness & Behavior Change (3 cr)
Examines personal awareness and responsibility for maintenance of health, fitness, and well-being. Teaches skills necessary for individual physical activity program development and implementation to effect positive health-related behavior change for diverse populations.. 2 lec cr and 1 lab cr.
Prereq: *Major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation.*
Coreq: *HPRD 210*

HPRD 210 Meaning of Movement and Injury Prevention (2 cr)
Explores the meaning of movement and injury prevention through a phenomenological approach. Develops skills necessary to find meaning in movement across the lifespan. 1-2 lec cr and 1 lab cr.
Prereq: *Major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation*
Coreq: *HPRD 201*

HPRD 350 Practicum in Physical Activity Behavior Change (1 cr)
Students will apply the concepts learned in HPRD 201 and HPRD 210 to effect change in the personal behavior related to physical activity. 1 recitation and 2 outside hours per week.
Prereq: *HPRD 201, 210 and major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation*

HPRD 351 Social and Environmental Aspects of Physical Activity (1 cr)
This course will (a) examine the major social and environmental determinants of physical-activity behavior; and (b) explore intervention strategies designed to create social environments that facilitate and enhance physical activity among groups and communities. Emphasis will be placed on using theory and research to promote physical activity in various settings.
Prereq: *HPRD 350 and major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education, or Recreation.*
Coreq: *HPRD 429*

HPRD 429 Leadership, Pedagogy and Programming in Physical Activity (3 cr)
Examines the theories, methods, principles and styles of leadership, pedagogy and programming related to physical activity programs. Develops leadership, pedagogical and programming skills. 2 lec cr and 4 lab cr.
Prereq: *HPRD 350 and major in Athletic Training, Dance, Exercise Science and Health, Physical Education Teacher Education or Recreation.*
Coreq: *HPRD 351*

HPRD 486 Programming and Marketing for Healthy, Active Lifestyles (2 cr)
Marketing, implementation, and assessment of physical activity programs for individuals, groups, schools, and communities. 1 recitation and 2 outside hrs per week.
Prereq: *HPRD 351, 429 and major in Athletic Training, Dance, Exercise*

Science and Health, Physical Education Teacher Education or Recreation.

HPRD 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.

HPRD 580 Research: Writing and Dissemination (1 cr)
Professional writing of research not directly related to a thesis or dissertation. (Spring only)
Prereq: *HPRD 570*

HPRD 581 Research: Group Programming (1 cr)
Group professional service projects based on research, needs assessment and implementation strategies. (Spring only)
Prereq: *Rec 575*

HPRD 582 Research: Individual Programming (1 cr)
Individual professional service projects based on research, needs assessment and implementation strategies. (Spring only)
Prereq: *Rec 575*

History Courses

Richard B. Spence, 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)
May be used as core credit in J-3-d. Contributions to the modern world. Hist 101: to 1650.

Hist 102 History of Civilization (3 cr)
May be used as core credit in J-3-d. Contributions to the modern world. Hist 102: 1650 to present.

Hist 111 Introduction to U.S. History (3 cr)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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)
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 European Cultural History, 1600-1800 (3 cr)
History of thought, material culture, and "mentalities" in early modern Europe, including the Scientific Revolution and Enlightenment.

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 Intellectual and Cultural History of Modern Europe (3 cr)
Evolution of attitudes and values of European societies during the 19th and 20th centuries; influence of key events and ideas, including those of Marx, Darwin, Freud, Einstein, and Sartre.

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 385 History of Sexuality (3 cr)
Analysis of sexuality and gender in Europe and North America, primarily from 1750 to the present. Focus upon changing sexual behavior both inside and outside of marriage and the efforts to regulate, repress, or encourage sexual behavior and attitudes. (Alt/yrs)
Prereq: *Junior standing or Permission*

Hist 388 History of Mathematics (3 cr)
See Math 388.

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 J415/J515 Civil War and Reconstruction, 1828-1877 (3 cr)
Sectionalism, westward expansion, slavery, the Civil War and Reconstruction.

Hist J416/J516 Rise of Modern America, 1877-1900 (3 cr)
Industrial and economic development, political reform, populism.

Hist J417/J517 United States, 1900-1945 (3 cr)
Populism, Progressivism, World War I, the Twenties, the Depression, the New Deal, and World War II.

Hist J418/J518 Recent America, 1945-Present (3 cr)
America since 1945.

Hist J419/J519 Twentieth-Century American West (3 cr)
History of the 11 Rocky Mountain and Pacific states from 1900 to the present.

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 secondly, 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 J425/J525 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." Additional assignments required for graduate credit. Recommended preparation: Hist 111 and Hist 112. (Alt/yrs)

Hist J426/J526 Red Earth White Lies: American Indian History 1840-Present (3 cr)
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)
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 J435/J535 Latin America: The Colonial Era (3 cr)
Indian civilization, European colonization, Spanish Imperial System, wars of independence.

Hist J438/J538 Modern Mexico and the Americas (3 cr)
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)
Political, economic, social, and cultural development; search for stability; growth of nationalism.

Hist J440/J540 Social Revolution in Latin America (3 cr)
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 Comparative Slavery and Emancipation in the Atlantic World (3 cr)
Analysis of the way in which African slavery became the predominant labor force in the Americas.

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 445 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.

Hist J447/J547 The Renaissance (3 cr)
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 450 (s) Topics in Classical Civilization (3 cr, max 9)
Same as FLEN 450. Examines changing advanced topics in Greek and Rome Civilization, 2000 BC-500 AD. May be taken up to three times for credit. Recommended Preparation: FLEN 270 or Hist 270.

Hist J451/J551 French Revolution and Napoleonic Era (3 cr)
Conditions in pre-revolutionary and revolutionary France; the Napoleonic state and impact of French changes upon Europe.

Hist J452/J552 19th Century Europe (3 cr)
Nationalism and nation-building; Imperialism and the Great Powers; Capitalism and Socialism; tensions and rivalries leading to WWI.

Hist J455/J555 20th Century Europe (3 cr)
World Wars, revolutions, and totalitarianism; decline and fall of the European empires; rise of a New Europe.

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 J469/J569 Modern France, 1815-present (3 cr)
Cultural, social, and economic transformations in French society from 1815 to the present. Impact of industrialization, revolution, and war upon people's lives.

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 112. (Alt/yrs)

Hist J482/J582 Japan, 1600 to Present (3 cr)
Western impact on the political, cultural, and economic fabric of Japanese society.

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 485 Chinese Social and Cultural History (3 cr)
Survey of Chinese culture and traditions during the first millennium.

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 The American Revolution, 1763-1789 (3 cr)
See Hist J412/J512.

Hist 515 Civil War and Reconstruction, 1828-1877 (3 cr)
See Hist J415/J515.

Hist 516 Rise of Modern America, 1877-1900 (3 cr)
See Hist J416/J516.

Hist 517 United States, 1900-1945 (3 cr)
See Hist J417/J517.

Hist 518 Recent America, 1945-Present (3 cr)
See Hist J418/J518.

Hist 519 Twentieth-Century 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 525 Immigration and Ethnicity in the United States (3 cr)
See Hist J425/J525.

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 535 Latin America: The Colonial Era (3 cr)
See Hist J435/J535.

Hist 538 Modern Mexico and the Americas (3 cr)
See Hist J438/J538.

Hist 539 Modern Latin America (3 cr)
See Hist J439/J539.

Hist 540 Social Revolution in Latin America (3 cr)
See Hist J440/J540.

Hist 541 Comparative Slavery and Emancipation in the Atlantic World (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 547 The Renaissance (3 cr)
See Hist J447/J547.

Hist 548 The Reformation (3 cr)
See Hist J448/J548.

Hist 551 Age of the French Revolution (3 cr)
See Hist J451/J551.

Hist 552 19th Century Europe (3 cr)
See Hist J452/J552.

Hist 555 20th Century 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 569 Modern France (3 cr)
See Hist J469/J569.

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 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 J413/J513 Ground Water Resource Evaluation (3 cr)
Quantitative methods for the estimation of aquifer coefficients related to ground water resource evaluations. 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

Hydr J464/J564 The Geochemistry of Natural Waters (3 cr)
See Geol J464/J564.

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 513 Ground Water Resource Evaluation (3 cr)
See Hydr J413/J513.

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 WS571 (s) Advanced Topics in Hydrogeology (1-4 cr, max 9)
WSU Geol 570

Hydr ID576 Fundamentals of Modeling Hydrogeologic Systems (3 cr)
WSU Geol 576
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 and Hydr 563 (or equiv), 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

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) Freshman Transition Seminar (2 cr)
Open to freshmen; open to other students with permission. Credit not given for both Intr 101 and 102. Development of strategies for setting academic goals and coping with course work; includes study strategies, university orientation, learning styles, purpose of college, career options.

Intr 102 (s) Freshman Interest Group (2 cr)
Open to freshmen; open to other students with permission. Cr not given for both Intr 101 and 102. Each seminar is organized around a topic of mutual interest; students study the seminar topic as well as a variety of transition topics such as college study skills and campus resources.

Intr 103 Integrated Science for Elementary Education Majors (4 cr)
Scientific method, physics and chemistry of atoms and molecules, molecules of life, chemical energy and thermodynamics, cellular structure, electrical circuits, tissues and organs. Two 3-hr class meetings a wk. Recommended Preparation: Math 143.
Prereq: Elementary education major

Intr 200 (s) Seminar (cr arr)

Intr 201 Exploration and Skill Building for Majors and Careers (1 cr)
Explore majors and careers. Through career assessments, students increase self-knowledge, make career decisions, and set goals. Obtain education and career information, learn to communicate and network effectively, identify resume building opportunities. Gain skills and resources to search for internships, set educational and employment plans, and to make informed career decisions. (Spring only)

Intr 204 (s) Special Topics (cr arr)

Intr 299 (s) Directed Study (cr arr)

Intr 301 Career Preparation & Decision Making (1 cr)
Explore careers, set goals, make informed educational and career choices. Identify your strengths and weaknesses, and be able to compare/contrast your interests, abilities, and values with occupations, employers and possible career paths. Learn to effectively communicating your strengths, direct & transferrable skills, and the value you bring to an organization. (Fall only)

Intr 400 (s) Seminar (cr arr)

Intr 404 (s) Special Topics (cr arr)

Intr 450 University Interdisciplinary Colloquium (1 cr)
This course meets in conjunction with the University 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 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 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.
Prereq: Permission

Interior Design Courses

Diane E. Armpriest, Coordinator of Architecture and Interior Design (207 Art and Arch. South 83844-2451; phone 208/885-6781); Rula Z. Awwad-Rafferty, Program Coordinator, Interior Design (202 Art and Arch. Interior Design 83844-2451; phone 208/885-6832).

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.

ID 152 Interior Design I (2 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: Arch 154 and ID 151; or Permission

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 (5 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 (5 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 443 Universal Design (3 cr) (ID 343)
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 (5 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: VTD 244.
Prereq: ID 352

ID 452 Interior Design VI (5 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 451

ID 498 (s) Internship (cr arr)

ID 499 (s) Directed Study (cr arr)

International Studies Courses

Bill L. Smith, 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 325 (s) Topics in Islamic Studies (3 cr, max 6)
Focus on important issues in Islamic history, religion, culture, and international relations.

IS 326 (s) Topics in African Studies (3 cr, max 6)
Focus on important issues in African history, religion, culture, and international relations.

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 370 Africa's Calling: The Culture of Ghana (3 cr)
"Africa's Calling" is a three-week study abroad course with an emphasis on cultural and environmental awareness in Ghana. It devotes attention to drumming/dance, the country's history and geographical terrain. Through temporary residency and fieldtrips to the Volta Region and the Cape Coast, students will examine Ghana's position in the global community. Recommended Preparation: Four Spring orientation sessions, passport, visa, vaccination, and medication.

IS 400 (s) Seminar (cr arr)

IS 403 (s) Workshop (cr arr)

IS 404 (s) Special Topics (cr arr)

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)

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 in part 5 for eligibility requirements for registration in upper-division courses.

Prerequisite: The successful completion of JAMM 100 and JAMM 121 with a grade of C or better is required for enrollment in upper-division Journalism and Mass Media courses; exceptions by permission.

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

JAMM 201 Practicum (1 cr, max 3)
Graded P/F.

JAMM 225 Reporting (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 Principles of Public Relations (3 cr)
Overview of public relations: principles, strategies and practices. Multiple writing assignments address basic requirements of public relations professionals.
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.
Prereq: JAMM 225, 270 or Permission

JAMM 323 Broadcast Sports Reporting (3 cr)
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 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 121 and 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.

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.

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.

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 225 and JAMM 252

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 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 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.

JAMM 371 Broadcast Announcing (3 cr)
Principles of effective and responsible on-air media, including voice analysis and improvement; pronunciation and articulation; audio and video performance.

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 275

JAMM 376 Digital Animation in Mass Media (3 cr)
Creation and animation of both video and graphics in the digital realm for television, film, and interactive multi-media. Production fundamentals through individual projects will be emphasized as a means to help stimulate viewer attention and to improve the processing of information and content.
Prereq: JAMM 275

JAMM 377 Documentary (3 cr)
Theoretical examination of the documentary in the mass media; development and evolution of nonfiction film, television, radio; documentary style and form; documentary's power to communicate; issues raised by documentary.

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.

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.

JAMM 400 (s) Seminar (cr arr)

JAMM 401 (s) Practicum (1 cr, max 2)
Graded P/F.
Prereq: *Permission*

JAMM 403 (s) Workshop (cr arr)
May be graded P/F.
Prereq: *Permission*

JAMM 404 (s) Special Topics (cr arr)

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)

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 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 322*

JAMM 425 Feature Article Writing (3 cr)
Writing human interest stories, editorials, reviews, and columns. Recommended Preparation: JAMM 121.

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 225 or Permission*

JAMM 427 Public Affairs Reporting (3 cr)
Problems and practice in reporting the courts, government, politics, other public issues.
Prereq: *JAMM 225 or Permission*

JAMM 428 Environmental Journalism (3 cr)
Reporting on natural resources issues and the environment. Recommended Preparation: JAMM 225.

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.

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.

JAMM 444 Mass Media and Public Opinion (3 cr)
Role of media in the formation of public opinion; overview of survey methodology and interpretation.

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.

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.

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 350*

JAMM 456 Nonprofit Fundraising (3 cr)
See Comm 456.

JAMM 458 Public Relations Case Studies and Issues Management (3 cr)
Examination of actual and created public relations case studies; reasons for their success or failure examined and evaluated.
Prereq: *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: *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.

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 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.

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: *Junior/Senior standing and Permission*

JAMM 475 Digital Media Thesis Production (3 cr)
Thesis production and program content development for television, documentary, and narrative cinema. Combines advanced techniques, aesthetics, and craft of the overall broadcast production disciplines. Projects will be produced primarily within the digital environment. Final thesis work will be showcased at annual digital media festival.
Prereq: *Senior standing and Permission*

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.

JAMM 490 Global Media (3 cr)
Technologies and concepts of international media; models of international content flow; cross-cultural mass media.

JAMM 498 (s) Internship (0-3 cr, max 6)
Supervised experience in professional media organization. Graded P/F.
Prereq: *Permission of director, School of Journalism and Mass Media*

JAMM 499 (s) Directed Study (cr arr., max 6)

Justice Studies Courses

Donald E. Tyler, Dept. Chair, Dept. of Sociology and Anthropology (101 Phinney Hall 83844-1110; phone 208/885-6751).

Prerequisite: Students are required to complete JS 101 before enrolling in any other course in this field; exceptions by permission of the instructor.

JS 101 Introduction to the Justice System (3 cr)
May be used as core credit in J-3-d. Survey of criminal justice organizations and procedures including history and function of law enforcement, probation, and parole agencies.

JS 200 (s) Seminar (cr arr)

JS 204 (s) Special Topics (cr arr)

JS 299 (s) Directed Study (cr arr)

JS 310 Victimology (3 cr)
This course will introduce students to the field of victimology. The course examines how people become victims of crime and the effects of their victimization, victimization data and theories of victimology.
Prereq: *JS 101 or Soc 101*

JS WS330 Crime Control Policies (3 cr) WSU Crm J 330
Analysis of ideologies, assumptions, and performance of crime control policies.

JS 332 Corrections (3 cr)
See Soc 332.

JS 335 Terrorism, Society and Justice (3 cr)
Same as Soc 335. 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.
Prereq: *Soc 101*

JS 400 (s) Seminar (cr arr)

JS 404 (s) Special Topics (cr arr)

JS WS420 Law of Evidence and Criminal Procedure (3 cr) WSU Crm J 420
Principal court decisions concerning standards of conduct and rights in the criminal process; evidentiary principles and privileges.
Prereq: *JS 425*

JS WS424 Community Corrections (3 cr) WSU Crm J 424

JS 425 Criminal Law (3 cr)
Sources and purpose of criminal law, meaning of criminal responsibility, and elements of crime.
Prereq: *Junior or Senior standing*

JS 498 (s) Internship in Criminal Justice (1-6 cr, max arr)
Directed internship in designated criminal justice agency or institution. Graded P/F.
Prereq: *Permission*

JS 499 (s) Directed Study (cr arr)

JS WS505 Comparative Criminal Justice Systems (3 cr) WSU Crm J 505
Comparative study of criminal justice systems in selected foreign countries. Graduate-level counterpart has additional requirements.

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 (2 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)

LArc 251 Introduction to Principles of Site Design (3 cr) (LArc 383)
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 runoffand 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 Plant Materials and Design 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 Plant Materials and Design 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 301 Survey of Landscape Architecture & Golf Course Design (3 cr)
Survey of landscape architecture design principles and process with application to golf course design. CAD skills desirable. (Alt/yrs)
Prereq: *Junior standing and PGM student*

LArc 310 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. (Fall only)
Prereq: *Major in landscape architecture; non-majors by permission as space permits*

LArc 353 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 bioregional context; includes readings, lectures and field trips. Course offered in the first half of fall semester. 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 ID&WS358 Professional Office Practice in Landscape Architecture (2 cr) WSU L A 480
Office organization, fees, contracts, bonding, bidding specifications, insurance, and relationships with subcontractors. (Fall only)

LArc 363 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. 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 ID&WS389 History of Landscape Architecture (3 cr) WSU L A 260
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. (Spring only)

LArc 390 Italian Hill Towns and Urban Centers (3 cr)
May be used as core credit in J-3-d. 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 455 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. 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 465 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. Recommended Preparation: LArc 288 and LArc 289. (Spring only)
Prereq or Coreq: LArc 463, or Permission

LArc 480 The Emerging Landscape (3 cr)
May be used as core credit in J-3-d. A capstone course exploring the emerging cultural and environmental issues significant to the practice and scholarship of landscape architecture, land planning and community development. Keeping a journal and attendance at lectures outside of class time required. Includes service learning. Recommended Preparation: Comm 101. (Spring only)
Prereq: Engl 102 and Junior standing

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 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 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 ID&WS559 The Northern Rocky Regional Landscapes (4 cr) WSU L A 520
Biophysical characteristics of the Northern Rocky Mountain regional landscape.
Prereq: Graduate standing

LArc ID&WS560 Cultural Interpretation of Regional Landscapes (4 cr) WSU L A 521
Cultural characteristics of the Northern Rocky Mountain regional landscape.
Prereq: Graduate standing

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 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 400 (s) Seminar (cr arr)

LAS 403 (s) Workshop (cr arr)

LAS 404 (s) Special Topics (cr arr)

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 Introduction to Law and Procedure (3 cr)
Introduction to the history, institutions, and philosophy of law; roles and responsibilities of lawyers; nature of legal claims, process of legal analysis and reasoning; and principles of statutory interpretation. Introduction to civil procedure in state and federal courts, including jurisdiction, trials, and the preclusive effects of judgments.

Law 806 Procedure II (3 cr)
Continuation of the study of civil procedure from Law 805, including jurisdiction, venue, pleading, joinder of claims and parties, motions, discovery, trials, judgments, and appellate procedure.

Law 807 Property I (3 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 808 Property II (3 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 I (3 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 810 Torts II (2 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 I (3 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.

Law 814 Contracts II (3 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.

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 901 (s) Seminar (cr arr)
See the *Class Schedule* for specific topics.

Law 902 Constitutional Law I (3 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 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)
Continuation from Law 902 of the study of individual rights and liberties protected by the Constitution, with emphasis on civil rights legislation under Section 5 of the 14th Amendment; the "state action" doctrine; and freedom of speech and religion under the First Amendment.

Law 906 Seminar, Natural Resources Law and Policy (3 cr)
Selected topics in natural resources law and policy. Topics vary with the interest of the instructor and students.

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 Introduction to the Law of the Workplace (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 and Trade Regulations (3 cr)
Regulation of economic activity in a free enterprise system. Antitrust laws examined in detail.

Law 911 Principles of Suretyship (1 cr)
General overview of principles of suretyship and guaranty including rights of the guarantor, guarantor's defenses, and unique applications of suretyship doctrine. Accelerated course.

Law 912 Civil Mediation (2 cr)
Dynamics, benefits, and skills needed in third-party intervention in the settlement of civil disputes; step-by-step introduction to mediation process; examination of mediation as a collaborative process of resolving conflicts and assisting disputants to reach mutually satisfactory agreements. The final paper required in this course does not count toward the upper-division writing requirement. Accelerated course. Graded P/F.

Law 913 Family Mediation (2 cr)
The process of divorce mediation from initial consultation through and beyond settlement; dispute resolution theory and the practical application of these theories. The final paper required in this course does not count toward the upper-division writing requirements. Accelerated course. Graded P/F.

Law 914 (s) Dispute Resolution (1 cr, max 4)
As part of the Northwest Institute for Dispute Resolution, the College offers one or two courses each year that examine discreet areas of dispute resolution. Accelerated course.

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 (3 cr)
Introduction to the legal and policy challenges presented by the revolution in creative and commercial activity generated by the advent of the Internet. Topics will include jurisdictional issues arising from the transnational and fundamentally placeless character of digital commerce and communication; questions concerning rights to free speech and privacy on the Internet; and debates concerning the status of intellectual property online and the online distribution of creative content. The course will consider efforts by Congress to regulate – and by private parties to control – various types of online activities, including, among others, "cybersquatting," peer-to-peer file sharing, the distribution of "spam" and pornography, and online speech. Limited enrollment.

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 Regulations (3 cr)
The law of corporate finance under the Securities Act of 1933 and the Securities Exchange Act of 1934.

Law 921 Basic Legal Accounting (1 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 Intellectual Property: Unfair Competition (2 cr)
Survey of the common law and statutory means by which a business can protect its names, the marks used to identify its products and services, and the ideas, information, and business relationships which it has developed; trade names, trademarks, trade secrets, and other aspects of the law regulating unfair competition.

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 Intellectual Property: Patents and Copyrights (2 cr)
A survey of the means by which inventors and authors obtain and enforce rights under the patent and copyrights statutes.

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 933 State Debtor-Creditor Law (2 cr)
Study of the legal mechanisms for enforcing judgments, and the rights and protections of debtors and creditors as a matter of state law.

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 935 Idaho Constitutional Law (3 cr)
Survey of the Idaho Constitution, with particular emphasis on those sections that caused controversy at Idaho's constitutional convention and remain important today. Offered irregularly.

Law 937 Natural Resources Law and Legal History (3 cr)
Historical examination of the role of law in shaping the evolution of resource use and management in the Pacific Northwest.

Law 938 International Environmental and Water Law (3 cr)
An examination of international environmental law and the law of international water courses. Recommended Preparation: Law 916.

Law 939 Law and Science (3 cr)
The use of science in the courtroom 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.

Law 940 International Human Rights (2 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 944 Local Government and Land Use Law (3 cr)
Legislative, regulatory, tax, and borrowing authority of local government; contract and tort issues; special attention to land use regulation. A research paper may be required instead of an examination depending on size of class. Enrollment of second-year students may be limited by instructor. (Irregular)

Law 945 Community Property (2 cr)
Special problems that arise in connection with the community property system in the western states.

Law 946 Water Policy Seminar (3 cr)
An examination of advanced topics in water law. Recommended Preparation: Law 942.

Law ID947 Environmental Law I (3 cr) WSU ES/RP 548
Environmental planning and protection, regulation of air and water pollution, waste disposal, use of pesticides and other toxic chemicals, and remedies for environmental injury.

Law ID948 Public Land Law (3 cr) WSU ES/RP 549
History of public lands; special problems arising from ownership of land by governments.

Law 949 Native American Law (3 cr)
Same as AIST 420. Study of judicial, statutory, and administrative materials concerning the historical development of Federal Indian Policy, treaties, the trust relationship, tribal sovereignty and self-government, civil and criminal jurisdiction, rights of individual Indians, state's rights, hunting and fishing rights, and the natural resources of tribes. Law 949 is a law class and will be graded based on the norms 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 Law II - Seminar (3 cr)
An examination of advanced topics in environmental law. Recommended Preparation: Law 947. Limited enrollment.

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)
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 (1-2 cr)
A brief writing seminar including two briefs and the preliminary oral arguments of the McNichols Competition; the faculty advisor is the final arbiter of the number of credits awarded within the guidelines. Graded P/NP; credits earned are not class hours.

Law 956 Appellate (Moot) Court/Mock Trial (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)
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*

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 961 Jurisprudence (2 cr)
Consideration of the various views and philosophies of law as expressed in classical and contemporary writings; methods of legal analysis, the relationship between law and justice, between law and power, and between law and truth.

Law 962 Professional Responsibility (2 cr)
Status and function of the legal profession, responsibility to clients, the profession, the public, and the administration of justice.

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 968 Domestic Violence and the Law (2-3 cr)
This seminar will cover the legal system's response to the problem of domestic violence and to a lesser extent, stalking and sexual assault. Students will explore both civil and criminal avenues of redress. Existing shortcomings of those responses, and proposed reforms, will be examined. The course will address how domestic violence is treated in a variety of legal contexts, including in relation to child abuse, custody, visitation, mediation, parent education at divorce, relocation, child abduction, and torts. Students will partner with members of the Domestic Violence and Sexual Assault Clinic to assist clinic students on actual domestic violence and sexual assault cases. Students are expected to complete sixty hours of clinical service, a paper and a class presentation. Students enrolled in the Domestic Violence and Sexual Assault clinic may take the Domestic Violence & the Law seminar for 2 credit hours and will not be required to complete additional hours of clinical service.

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 972 Legal Externship (1 cr)
Legal work under the supervision of judges or government, non-profit, or private attorneys. Graded P/F; credits earned are not class hours.
Prereq: *Approval of Director of Clinical Programs under standards approved by the faculty and available to students and supervising attorneys*

Law 973 Public Service Externship (1-10 cr, max 10)
Includes placements with judges, prosecutors, public defenders, other government attorneys, or attorneys for non-profit organizations. The following courts and offices have programs with standing approval of the director: The Supreme Court and Court of Appeals of Idaho, the United States Court of Appeals for the Ninth Circuit, the United States District Court for the District of Idaho, the Attorney General of Idaho, and the United States Attorney for the District of Idaho. Graded P/F; credits earned are not class hours.
Prereq: *Approval of Director of Clinical Programs under standards approved by the faculty and available to students and supervising attorneys*

Law 974 Legal Aid Internship (1-3 cr, max 6)
In this two-semester course, students represent clients in civil and criminal cases. Field trips required when appropriate for serving clients. Recommended preparation: Law 953.
Prereq: *Qualification for limited license in Idaho, Law 950, Law 962 and Law 971, and Permission*
Coreq: *Law 958*

Law 975 Classroom Credit Public Service Externship (1-5 cr, max 10)
Students work in selected public service placements under the supervision of experienced judges and lawyers; attendance at a weekly seminar required (the seminar is available in Moscow, Boise, Coeur d'Alene, and Idaho Falls through interactive video). Graded P/F.
Prereq: *Permission*

Law 976 Semester in Practice (1-12 cr, max 12)
Students attend periodic classes and work as externs in the public and private sector under the supervision of the External Programs Coordinator. Open only to students in their last year of law school.
Prereq: *Permission*

Law 977 Clinical Lab (1 cr, max 4)
The College offers one-credit lab courses that provide clinical experience for interested second- and third-year students. The labs are designed to allow students to obtain practical experience in conjunction with upper-division substantive courses. The labs are supervised by experienced practitioners.

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, Law 962, Law 971, and Permission*

Law 979 Native American Natural Resource Law (3 cr)
An overview of the law surrounding Tribal cultural property, the protection and utilization of the land in terms of resource production and conservation, the development of natural resources derived from Indian lands and the intertwined principles of the federal trust responsibility, taxation of resources, the ever-growing field of Native water rights, and the on-going enforcement of treaty hunting, fishing and gathering rights. Recommended Preparation: Law 949.

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 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 443225, Moscow ID 83844-3225; 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 C416 Library Services to Rural Areas (1 cr)
Explore the administration and programming of rural public libraries, including historical and social context, financing and governance, staffing, and programming for the community. 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 C-J423/C-J523 Introduction to Reference Work (3 cr)
Reference books in school and public libraries; selecting reference collections. Research project and paper required for graduate credit.
Prereq for LibS 523: Permission

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 C523 Introduction to Reference Work (3 cr)
See LibS J423/J523.

LibS C525 Organization and Management of Small Libraries (4 cr)
See LibS J425/J525.

Martin School of International Studies Courses

Bill L. Smith, 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 WS302 Electronic Materials (3 cr) WSU MSE 302

MSE 308 Thermodynamics of Materials (3 cr)
Intro; first, second, and third law; auxiliary functions; behavior of solutions; free energy composition and phase diagrams of binary systems; reaction equilibria in systems containing components in condensed solutions; ternary diagrams; thermodynamics of alloys and ceramic materials
Prereq: *MSE 201, MSE 340, Math 310, and Chem 112*

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) (MSE 309)
See ChE 340.

MSE ID341 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: CS 211, 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 400 (s) Seminar (cr arr)

MSE 404 (s) Special Topics (cr arr)

MSE J410/J510 Plasma Processing of Materials (3 cr)
Fundamentals of thermal plasma processing of materials; examples of current and future industrial applications. Additional projects/assignments required for graduate credit. (Fall only)
Prereq: *MSE 201 or ChE 223; or Permission*

MSE 412 Mechanical Behavior of Materials (3 cr)
Mechanical properties of solids, testing methods, failure processes and theories, plasticity, mechanical processes in materials. (Spring only)
Prereq: *MSE 201 and Junior Standing; or Permission*

MSE J413/J513 Phase Equilibria in Materials (3 cr)
Equilibria in materials systems, including relationship of free energy to phase diagrams.
Prereq: *MSE 313*

MSE ID415 Materials Selection and Design (3 cr)
Same as ME 415. 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 ID-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 Environmental Degredation of Materials (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. (Fall only)
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 428 Advanced Engineering Ceramics (3 cr)
Ceramic crystal structure, phase diagrams and transformations, crystal properties and crystallography.

MSE J429/J529 Melting, Casting, and Powder Metallurgy (3 cr)
Principles behind a number of commercially important and developing synthesis technologies such as conventional powder metallurgy, rapid solidification, mechanical alloying, plasma processing, vapor deposition, and thermochemical processing. Additional projects/assignments reqd for grad cr. (Spring, Alt/yrs)
Prereq: *MSE 313 or Permission*

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)
Basic information on polymeric materials, both fundamentals and uses. (Fall only)
Prereq: *Chem 111 and 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) (MSE 414)
See ChE 453.

MSE 454 Process Analysis and Design II (3 cr)
See ChE 454.

MSE 456 Metallic Materials (3 cr) (MSE 407)
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) (MSE 430)
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 510 Plasma Processing of Materials (3 cr)
See MSE J410/J510.

MSE 513 Phase Equilibria in Materials (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 521 Light Metals (3 cr)
See MSE J421/J521.

MSE 523 Corrosion (3 cr)
See MSE J423/J523.

MSE 527 Ceramic Materials (3 cr)
See MSE J427/J527.

MSE 529 Melting, Casting, and Powder Metallurgy (3 cr)
See MSE J429/J529.

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) (MSE 563)
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 170-175-275-471-472.

Credit Limitations: Math 108 carries no credit after Math 137 or 143; Math 137 carries no credit after 143; Math 143 carries no credit after 160 or 170; Math 170 carries 2 credits after 160; Math 160 carries no credit after 170, Math 215 carries no credit after 411 or 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 core requirement.

Math 123 Mathematics Applied To The Modern World (3 cr)
May be used as core credit in J-3-c. Discussion of some aspects of mathematical thought through the study of problems taken from areas such as logic, number theory, geometry, probability, and combinatorics; discussion of historical development.

Math 130 Finite Mathematics (3 cr)
May be used as core credit in J-3-c. Systems of linear equations and inequalities, matrices, linear programming, and probability.
Prereq: *Sufficient score on SAT, ACT, or COMPASS Math Test*

Math 137 Algebra with Applications (3 cr)
May be used as core credit in J-3-c. 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)
May be used as core credit in J-3-c. 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: *2 yrs high school algebra (or Math 143) and 1 yr plane geometry, and/or* **Coreq:** *Math 143 or 170.*

Math 160 Survey of Calculus (4 cr)
May be used as core credit in J-3-c. 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: *One yr of high school geometry and one of the following: (1) 1-1/2 yrs high school algebra and sufficiently high score on SAT, ACT, or COMPASS Math Test, or (2) Math 137, or (3) Math 143.*

Math 170 Analytic Geometry and Calculus I (4 cr)
May be used as core credit in J-3-c. 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*

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. 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 core math course*

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.
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, Applications.
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) (Math 433)
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. (Spring, Alt/yrs)
Prereq: Math 310 or Permission

Math ID&WS451 Probability Theory (3 cr) WSU Math 443
Same as Stat 451. Random variables, expectation, special distributions (normal, binomial, exponential, etc.), moment generating functions, law of large numbers, central limit theorem. (Fall only)
Prereq or Coreq: Math 275, Graduate standing, or Permission

Math ID&WS452 Mathematical Statistics (3 cr) WSU Math and Stat 456
Same as Stat 452. Estimation of parameters, confidence intervals, hypothesis testing, likelihood ratio test, sufficient statistics. (Spring only)
Prereq: Math 451 or Permission

Math ID&WS-J453/ID&WS-J538 Stochastic Models (3 cr) WSU Stat 544
Same as Stat J453/J544. Markov chains, stochastic processes, and other stochastic models; applications. Additional projects/assignments reqd for grad cr. (Spring, Alt/yrs)
Prereq: Math 451 or Permission

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 (3 cr)
Groups, rings, and fields. (Fall only)
Prereq: Math 215 and Math 330; or Permission

Math 462 Abstract Algebra (3 cr)
Groups, rings, and fields. (Spring only)
Prereq: Math 461

Math 471 Introduction to Analysis 1 (3 cr)
Topology of Euclidean n-space, limit and continuity, differentiation, integration. (Fall only)
Prereq: Math 275, Math 215, or Permission

Math 472 Introduction to Analysis 2 (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 497 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission of department

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 ID&WS521 Topology (3 cr) WSU Math 525
Basic concepts of point set and algebraic topology. (Fall, Alt/yrs)

Math 522 Topology (3 cr)
Basic concepts of point set and algebraic topology. (Spring, Alt/yrs)

Math 523 Algebraic Topology (3 cr)
Basic homotopy theory, covering spaces, homology theory, and applications. (Alt/yrs)

Math 524 Algebraic Topology (3 cr)
Basic homotopy theory, covering spaces, homology theory, and applications. (Alt/yrs)

Math 525 (s) Seminar in Topology (1-3 cr, max arr)
Current literature.

Math 526 (s) Topics in Topology (1-3 cr, max 12)

Math 528 Differentiable Manifolds (3 cr)
Fundamentals of smooth manifolds, tangent spaces, vector fields, Lie groups, integration on manifolds, and applications.
Prereq: Math 521, and 471

Math ID&WS531 Complex Variables (3 cr) WSU Math 503
Theory of functions of a complex variable. (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 ID&WS538 Stochastic Models (3 cr)
See Math J453/J538.

Math ID&WS539 Theory of Ordinary Differential Equations (3 cr) WSU Math 512
Existence, uniqueness, and stability of solutions of first-order systems; other topics. (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.
Prereq: Math 539 or Permission

Math ID&WS541 (s) Seminar in Analysis (1-3 cr, max arr) WSU Math 581
Current literature.

Math WS543 Approximation Theory (3 cr) WSU Math 543

Math WS544 Advanced Matrix Computations (3 cr) WSU Math 544

Math WS547 Numerical Analysis of Elliptic PDE's (3 cr) WSU Math 546

Math 554 Advanced Topics in Geometry (3 cr)
(Alt/yrs)

Math 555 Groups and Fields I (3 cr)
Groups, fields, polynomials, Galois theory, representation theory. (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. (Spring, alt/yrs)
Prereq: Math 555 or Permission

Math 557 Ring Theory (3 cr)
Rings, ideals, modules, commutative algebra. (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. (Spring, alt/yrs)
Prereq: Math 557 or Permission

Math ID&WS561 (s) Seminar in Algebra (1-3 cr, max arr) WSU Math 582
Current literature.

Math ID&WS563 Mathematical Genetics (3 cr) WSU Math 563 and Biol 563
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. (Fall, Alt/yrs)
Prereq: Math 160 or Math 170 and Stat 251 or Stat 301

Math 571 Functional Analysis (3 cr)
Linear topological spaces and linear operators. (Fall, Alt/yrs)
Prereq: Math 536

Math 572 Functional Analysis (3 cr)
Linear topological spaces and linear operators. (Spring, Alt/yrs)
Prereq: Math 536

Math 575 Graph Theory (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 (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)

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 581 (s) Seminar in Combinatorics (1-3 cr, max arr)

Math WS583 Seminar in Applied Mathematics (3 cr, max arr) WSU Math 583

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, economic decision making, documentation skills, and use of structured programming concepts in designing personal applications. Three lec and one open 2-hr lab a wk. (Fall only)
Coreq: Math 170

ME 223 Mechanical Design Analysis (3 cr)
Use of a design and problem solving methodology in the creation of application programs; matrix methods; numerical integration; solution of differential equations; oral/written communication. Three lec and one 2-hr open lab a wk.
Prereq: ME 123
Coreq: Math 175

ME 301 Computer Aided Design Methods (3 cr)
Two and three dimensional graphics including geometric dimensioning and tolerancing (GDT); use of solid modeling software in engineering design (CAD); finite element analysis (FEA), and manufacturing (CAM).
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 ID&WS324 Dynamic Analysis in Machine Design (3 cr) WSU M E 312
Kinematic, static, and dynamic principles and application to analysis and synthesis of machines with emphasis on computer-aided design (CAD) techniques. Two lec and one 3-hr lab a wk; one 1-day field trip.
Prereq: Math 310, Engr 220, and ME 223
Coreq: Math 330

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.
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: ME 223
Coreq: Engr 240, 320, 335, and 350

ME 341 Intermediate Mechanics of Materials (3 cr)
Mechanics of materials approach to three dimensional stress and strain, plates, curved beams, pressure vessels, non-circular torsion and unsymmetrical ending; introduction to elementary energy methods and advanced strength theories.
Prereq: Engr 350, Math 275, 310

ME ID&WS345 Heat Transfer (3 cr) WSU M E 404
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 223, Engr 320, and Math 310

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 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)
Students will employ a systems approach to designing, testing, building and delivering an interdisciplinary engineering project. Projects are chosen at the discretion of the department.
Prereq: ME Certification and Permission

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 408 Group Mentoring IV (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/ID-J513 Engineering Acoustics (3 cr) WSU ME 523
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.
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 415 Materials Selection and Design (3 cr)
See MSE 415.

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 J418/J518 Discrete System Simulation and Animation (3 cr)
How to model discrete systems such as those found in manufacturing. A non-procedural computer language for writing computer code will be taught. Topics include inventory control, scheduling, and optimization; animation of simulation results. Special software for the animation will be covered. Additional exercises and a major term project required for graduate credit.
Prereq: ME 418: Junior status or Permission ME 518: Permission

ME 419 Advanced Simulation and Animation (3 cr)
Advanced topics in discrete system simulation with emphasis on topics of interest to the Mechanical Engineer. Students will learn how to model complex discrete systems using special software for both simulation and animation. Topics include: interfacing the simulation language with other software, creating stand-alone animations, creating presentations showing the animation results. Each student will be assigned a major project to simulate. (Spring only)
Prereq: ME 418

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 J421/J521 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. There are two major projects: solid modeling to reverse engineer an existing design and solid modeling for detail design synthesis.
Prereq: ME 301 and 341

ME 422 Applied Thermodynamics (3 cr)
Advanced topics in applied thermodynamics including availability (exergy) analysis of systems, advanced power and refrigeration cycles, combustion, thermodynamic properties of real fluids, phase equilibrium, and chemical equilibrium.
Prereq: Engr 320

ME 424 Mechanical Systems Design I (3 cr)
May be used as core credit in J-3-d. Study of production realization process including project planning, concept design, detail design, and manufacturing processes; modern design and manufacturing practices in each of these areas applied to a two-semester, industrial sponsored capstone design project (continued in ME 426). (Fall only)
Prereq: ME 301, 313, 324, 325, 330, 345, and Certification

ME 425 Machine Component Design II (3 cr)
Emphasis on material selection, machineability, joining, materials strengthening and surface treatment; design using metals, non metals and composite materials for strength, fatigue, creep and corrosion resistance; other topics include lubrication theory. Discussions of case studies and detailed design projects involving machine component elements.
Prereq: ME 325

ME 426 Mechanical Systems Design II (3 cr)
May be used as core credit in J-3-d. Continuation of ME 424. Additional manufacturing issues; continuation of a two-semester, industrial sponsored capstone design project (begun in ME 424) to include the detail design, prototype construction, and testing. (Spring only)
Prereq: ME 424
Coreq: ME 435

ME 428 Computer Aided Simulation (3 cr)
The course focuses on extending student knowledge of numerical simulation in the area of mechanics, heat transfer and fluid flow. The focus will be on both the theory and application using the computer with current methodologies. The focus will be on finite elements, boundary elements, and finite differences.
Prereq: ME 301, ME 345, Engr 335 and Engr 350

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
Coreq: Engl 317

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 thermal energy system component analysis and selection, component and system simulation, dynamic response of thermal systems, and system optimization. (Fall only)
Prereq: Engr 335 and ME 345
Coreq: Math 330

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 ID&WS444 Air Conditioning Engineering (3 cr) WSU M E 419
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.
Prereq: ME 345

ME J451/J551 Experimental Methods in Fluid Dynamics and Heat Transfer (3 cr)
Credit not granted for both ME 451 and ME 551. Theory and applications of transducers and instrumentation to measure velocity, temperature, and related quantities; flow visualization, pressure measurements, thermal anemometry, laser Doppler velocimetry, temperature and concentration measurement, and heat flux measurement. Additional projects/assignments reqd for grad cr. One 1-1/2 hr lec and one 3-hr lab a wk. Recommended Preparation: Engl 317, ME 345.
Prereq: ME 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 ID&WS472 Mechanical Vibrations (3 cr) WSU M E 449
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.
Prereq: Engr 220, Math 310, and ME 313; or Graduate standing

ME ID&WS481 Control Systems (3 cr) WSU M E 481
Same as ECE 470. Analysis and design of feedback control systems utilizing frequency and time domain methods, and computer-aided design tools.
Prereq for Electrical Engineering and Computer Engineering majors: ECE 350
Prereq for Mechanical Engineering majors: ME 313

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 508 Mechanics of Plates and Shells (3 cr)
Formulation of governing equations, assumptions, stress analysis, calculation of displacements, discussion of experimental analysis, buckling and vibration of plates and shells.
Prereq: ME 341 or CE 342

ME ID513 Engineering Acoustics (3 cr) WSU ME 523
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 518 Discrete System Simulation and Animation (3 cr)
See ME J418/J518.

ME 519 Fluid Transients (3 cr)
See CE 519.

ME 520 Fluid Dynamics (3 cr)
See ME J420/J520.

ME 521 Advanced Computer Aided Design (3 cr)
See ME J421/J521.

ME 526 Statistical Thermodynamics (3 cr)
Probability theory and quantum mechanics, statistical mechanics, thermodynamic probability, molecular interpretation of first and second laws; kinetic theories.
Prereq: Engr 320

ME ID&WS527 Thermodynamics (3 cr) WSU M E 527
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.
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 ID&WS534 Mechanics of Composite Materials (3 cr) WSU M E 534
Analysis of micromechanical and macromechanical behavior of composite materials with emphasis on fiber-reinforced composite; prediction of properties; stiffness and strength theories; laminated beams and plates; dynamic behavior; environmental effects.
Prereq: ME 341 or CE 342

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 ID&WS546 Convective Heat Transfer (3 cr) WSU M E 515
Energy conservation equations; laminar and turbulent forced convective heat transfer; internal and external flow; free convection.
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 551 Experimental Methods in Fluid Dynamics and Heat Transfer (3 cr)
See ME J451/J551.

ME 552 TechVentures: High Technology Entrepreneurship (3 cr)
See ME J452/J552.

ME 577 Design for Manufacture and Assembly (3 cr)
Techniques to design for ease of production of components that form a product and the assembly of those components; techniques for design for other life-cycle issues such as design for service and design for the environment.
Coreq: ME 424 or Equivalent

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 585 Design for Six Sigma (3 cr)
An introduction to the theory, process, and application of Design for Six Sigma. Topics include DFSS methodology, QFD, axiomatic design, TRIZ, and failure analysis. (Fall, Alt/yrs)
Prereq: ME 424 and Stat 301, or grad standing and Permission

ME 587 Quality Engineering (3 cr)
Same as EM 587. Designing quality into products and processes through designed experiments; Taguchi techniques and other quality topics of Six Sigma. (Fall, Alt/yrs)
Prereq: Stat 301

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

Andrew L. Turner, Ph.D., 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 ID&WS505 Preceptorship (1 cr)
First-year medical students gain experience and insight into medical practice situations; students are stationed in physician offices at WWAMI sites. Cooperative course taught jointly by UI and WSU (MedS 505).

MedS ID&WS510 Microscopic Anatomy (4 cr) WSU Med S 510
Description and microscopic examination of cell types, tissues, and major organs of the human body. Cooperative course taught jointly by UI and WSU (MedS 510). (Fall only)

MedS ID&WS511 Anatomy and Embryology 1 (5 cr) WSU Med S 511
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 ID&WS512 Mechanisms in Cellular Physiology (3 cr) WSU Med S 512
Fundamental cell physiology mechanisms: ionic, electrical gradients, sensory receptors, autonomic nervous system, energy metabolism, epithelial transport; gastrointestinal motility and secretions. Cooperative course taught jointly by UI and WSU (MedS 512). (Fall only)

MedS ID&WS513 Introduction to Clinical Medicine I (2 cr) WSU Med S 513
Instruction in communications skills and interview techniques to form the basis for the eventual doctor-patient relationship. Cooperative course taught jointly by UI and WSU (MedS 513). (Fall only)

MedS ID&WS514 Biochemistry I (3 cr) WSU Med S 514
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. Cooperative course taught jointly by UI and WSU (MedS 514) (Fall only)

MedS ID&WS516 Systems of Human Behavior I (3 cr) WSU Med S 516
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. Cooperative course taught jointly by UI and WSU (MedS 516). (Fall only)

MedS ID&WS522 Introduction to Clinical Medicine II (2 cr) WSU Med S 522
Communication skills as related to patients and dealing with patient history and professionalism. Cooperative course taught jointly by UI and WSU (MedS 522).

MedS ID&WS523 Introduction to Immunology (2 cr) WSU Med S 523
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. Cooperative course taught jointly by UI and WSU (MedS 523). (Fall only)

MedS ID&WS524 Biochemistry II (2 cr) WSU Med S 524
Continuation of MedS 514. Cooperative course taught jointly by WSU and UI (MedS 524). (Fall only)

MedS ID&WS526 Systems of Human Behavior II (2 cr) WSU Med S 526
Continuation of MedS 516. Cooperative course taught jointly by UI and WSU (MedS 526). (Fall only)

MedS ID&WS531 Anatomy and Embryology 2 (4 cr) WSU Med S 531
Gross anatomy; focus on head and neck anatomy, including skull, pharynx, and larynx; audition and balance. Continuation of MedS 511. Cooperative course taught jointly by WSU and UI. Cooperative course taught jointly by UI and WSU (MedS 531). (Spring only)

MedS ID&WS532 Nervous System (5 cr) WSU Med S 532
Presents the structure and function of the nervous system, including the eye. Neuropathological examples are presented as well as clinical manifestations of neurological disease. Cooperative course taught jointly by UI and WSU (MedS 532). (Spring only)

MedS ID&WS534 Microbiology and Infectious Diseases (6 cr) WSU Med S 534
Biology of microbial pathogens and the mechanisms of pathogenesis; clinical manifestations, epidemiology and general principles of diagnosis, therapy and prevention of infectious disease. Cooperative course taught jointly by UI and WSU (MedS 534). (Spring only)

MedS ID&WS535 Introduction to Clinical Medicine III (2 cr) WSU Med S 535
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. Cooperative course taught jointly by UI and WSU (MedS 535). (Spring only)

MedS ID&WS553 Anatomy & Embryology (Musculoskeletal) (3 cr) WSU Med S 553
Anatomy and clinical lectures, gross anatomy labs, living anatomy/clinical correlation, focus on musculoskeletal systems. Cooperative course taught jointly by UI and WSU (MedS 553). (Spring only)

MedS ID&WS590 Medical Information for Decision Making (1 cr) WSU Med S 590
Examines medical literature for the purpose of primary research, diagnosis, and therapeutic and preventative intervention. Cooperative course taught jointly by UI and WSU (MedS 590). (Spring only)

Microbiology, Molecular Biology and Biochemistry Courses

Bruce L. Miller, Interim Dept. Head, Dept. of Microbiology, Molecular Biology and Biochemistry (142 Life Sc. Bldg. 83844-3052; phone 208/885-7966; mmbb@uidaho.edu; www.ag.uidaho.edu/mmbb).

MMBB 154 Introductory Microbiology (3 cr)
May be used with MMBB 155 *as core credit in J-3-b or J-3-d when taken with* MMBB 155. Carries no credit after MMBB 250. May be taken by microbiology majors, but carries no cr after MMBB 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)
May be used with MMBB 154 *as core credit in J-3-b or J-3-d when taken with* MMBB 154. May be taken by microbiology majors but carries no credit after MMBB 255. Introductory laboratory training in basic microbiology; includes sterile technique, bacterial enumeration methods, culturing techniques, yogurt preparation and analysis, recombinant DNA techniques. Three hrs of lab a wk. (Spring only)
Coreq: *MMBB 154*

MMBB 250 General Microbiology (3 cr)
May be used with MMBB 255 *as core credit in J-3-b.* 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 111*

MMBB 255 General Microbiology Lab (2 cr)
May be used with MMBB 250 *as core credit in J-3-b.* Training in the handling of microscopes, basic lab equipment, and manipulation of microbes. Two 2-hr labs per week.
Prereq or Coreq: *MMBB 250*

MMBB 300 Survey of Biochemistry (3 cr)
Carries no credit after MMBB 380. Survey of structure, function, and metabolism of major constituents of living systems. (Fall and Summer only)
Prereq: *Chem 101 or 111*
Coreq: *Chem 275 or 277*

MMBB 380 Introductory Biochemistry (4 cr)
Carries one credit after MMBB 300. Introduction to the structure, function, and metabolism of major constituents of living systems. Three hrs lec and one hr with interactive problem solving. Recommended preparation: Chem 253 and 372. (Fall and Summer only)
Prereq: *Chem 101 or 111, and 277*

MMBB 382 Introductory Biochemistry Laboratory (2 cr)
Lab training in modern methods. One 3-hr lab and one 1-hr recitation a wk. (Fall only)
Prereq: *Chem 101 or 111, and 278*
Prereq or Coreq: *MMBB 380 or Equivalent*

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)
May be used as a science elective after 1 required credit, up to a maximum of 4 credits,. Graded P/F.
Prereq: *Permission*

MMBB 401 Undergraduate Research (1-4 cr, max 8)
Individual study.
Prereq: *Permission of instructor*

MMBB 404 (s) Special Topics (cr arr)

MMBB J409/J509 Immunology (3 cr)
Carries no credit after MMBB WS426. 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)
Coreq: *MMBB 300 or 380*

MMBB J412/J513 Pathogenic Microbiology (3 cr)
Epidemiology, host-parasite relationships, pathology, host response; treatment, prevention, and control of pathogenic microorganisms. Extra oral and/or written assignments required for graduate credit. (Spring, alt/yrs)
Prereq: *MMBB 250*

MMBB 416 Food Microbiology (3 cr)
See FS 416. (Fall only)

MMBB 417 Food Microbiology Laboratory (2 cr)
See FS 417. (Fall only)

MMBB WS420 Epidemiology (3 cr) WSU MBioS 446
Study of diseases in human populations; concepts of etiology, disease rates, susceptibility, and risk factors, screening for disease, and prevention.
Prereq: *Junior standing*

MMBB J421/J521 Clinical Internship (12-16 cr, max 32)
Year long rotation in a hospital clinical laboratory. Basic science information and practical knowledge of clinical diagnostic tests in the areas of hematology, chemistry, and microbiology. Additional work will be required for MMBB 521, to be determined by graduate committee.
Prereq for 421: *Microbiology major*
Prereq for 521: *Bachelor of Science degree in Microbiology or related degree*
Coreq: *Admission into a hospital or equivalent internship program*

MMBB J422/J522 Cellular and Molecular Basis of Disease (3 cr)
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 for 422: *Biol 210 or Gene 314, and MMBB 380*
Prereq for 522: *MMBB 541*

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: MMBB 250, Math 137 or 143. (Spring, alt/yrs)

MMBB J432/J532 Virology (3 cr)
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 reqd for grad credit. Recommended preparation: MMBB 250. (Fall, alt/yrs)
Prereq: *MMBB 380, Biol 210 or Gene 314 or permission*

MMBB 440 Advanced Laboratory Techniques (4 cr)
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: *MMBB 250*

MMBB J442/J542 Advanced Biochemistry II (3 cr)
MMBB 542 same as Chem 542. Intermediate biochemistry; metabolism, molecular physiology, and molecular biology. Extra oral and/or written assignments required for grad credit. (Spring only)
Prereq: *Chem 372; MMBB 380 or Chem 302 or 306; or Permission*

MMBB ID-J450/J550 Molecular Mechanisms in Microbiology (2 cr) WSU MBioS 447
In-depth discussion of molecular mechanisms and different experimental approaches in microbiology. Extra oral and/or written assignments reqd for grad cr. Recommended Preparation: MMBB 380. (Spring, Alt/yrs)
Prereq: *MMBB 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: *MMBB 250*

MMBB J463/J563 Molecular Parasitology (3 cr)
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 210 or Gene 314, and MMBB 475/575 or MMBB 422/522. (Spring only)
Prereq: *MMBB 154 or 250, and MMBB 300 or 380, or Permission*

MMBB WS465 Principles of Biophysical Chemistry (3 cr) WSU MBioS 465
For complete description of this courses, consult the WSU catalog.

MMBB J471/J571 Advanced Pathogenesis: Host Pathogen Interactions (3 cr)
How pathogens modify, disrupt or utilize cellular functions for their own purposes and the significance of these interactions in terms of both pathogenesis and host-cell biology. Pathogens that will be examined include viruses, bacteria, parasites, fungi and protozoa. Students will learn how to critically evaluate the scientific literature, develop hypotheses and design experiments to test these hypotheses. Students will gain a working knowledge of techniques currently being used to study hot-pathogen interactions. Additional oral and/or written assignments will be required for graduate-level credit. Recommended preparation: MMBB 412 and 432. (Fall, alt/yrs)
Prereq: *MMBB 541 and MMBB 485 or MMBB 585; or Biol 210, MMBB 480 and MMBB 488 or MMBB 588*

MMBB J475/J575 Cell Biology (3 cr)
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 MMBB 300 or 380*

MMBB 476 Biophysical Chemistry (3 cr)
Basic principles and applications of physical chemistry as applied to biological processes. An emphasis will be placed on using thermodynamics to describe protein folding and stability and quantum mechanics to describe the principle spectroscopic methods used to study biological macromolecules. (Spring only)
Prereq for 476: *Chem 372, Phys 112, MMBB 380, and MMBB 382*
Coreq for 476: *Math 170*

MMBB J482/J582 Protein Structure and Function (3 cr)
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: MMBB 380
Prereq for 582: MMBB 541

MMBB J485/J585 Prokaryotic Molecular Biology (3 cr)
Current theory and experimental basis for prokaryotic DNA, RNA, and protein synthesis, gene regulation and cell wall metabolism. Extra oral and/or written assignments required for graduate credit. (Spring only)
Prereq: *MMBB 250 and MMBB 380*

MMBB J486/J586 Plant Biochemistry (3 cr)
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/tyears)
Prereq: *MMBB 300 or MMBB 380*

MMBB J487/J587 Eukaryotic Molecular Genetics (3 cr)
Molecular basis of genetics of eukaryotes. Extra oral and/or written assignments required for graduate credit. Recommended preparation: MMBB J485/J587 and MMBB J488/J588. (Fall only)
Prereq: *MMBB 380 and Biol 210 or Gene 314*

MMBB J488/J588 Genetic Engineering (3 cr)
Techniques and theory underlying practical genetic modifications of plants, microbes, and animals. Extra oral and/or written assignments required for graduate credit. Recommended Preparation: MMBB 380. (Fall only)
Prereq: *Gene 314 or Biol 210*

MMBB 490 Senior Thesis and Research (2 cr, max 4)
Problem solving using a combination of laboratory and/or library skills.
Prereq: *Senior standing*

MMBB 497 (s) Practicum in Teaching (2 cr)
Teaching by advanced students under faculty supervision.
Prereq: *Permission*

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 507 Master's Degree Rotation (1 cr, max 3)
Incoming MS students receive a grade for laboratory rotations. The grade is based on performance in the laboratory and on a public seminar at the end of the rotation semester. Recommended Preparation: Undergraduate degree in Microbiology, Biochemistry or related topic.

MMBB 509 Immunology (3 cr)
See MMBB J409/J509.

MMBB 511 Research and Curriculum Progress (1 cr, max arr)
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.

MMBB 513 Pathogenic Microbiology (3 cr)
See MMBB J412/J513.

MMBB 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. (Spring only)
Prereq: *Permission*

MMBB 521 Clinical Internship (12-16 cr, max 32)
See MMBB J421/J521.

MMBB 522 Cellular and Molecular Basis of Disease (3 cr)
See MMBB J422/J522.

MMBB 525 Microbial Ecology (3 cr)
See MMBB J425/J525.

MMBB 532 Virology (3 cr)
See MMBB J432/J532.

MMBB 541 Biochemistry (3 cr)
Max 7 cr in any combination of MMBB 380, 480, 541, and 542. Intermediate biochemistry; intro to metabolism and the chemical and physical properties of biomolecules. (Fall only)

Prereq: Chem 372; MMBB 380 or ***Coreq:*** *Chem 302 or 306; or Permission*

MMBB 542 Advanced Biochemistry II (3 cr)
See MMBB J442/J542.

MMBB 550 Molecular Mechanisms in Microbiology (2 cr)
See MMBB J450/J550.

MMBB 555 Microbial Physiology (3 cr)
See MMBB J460/J555.

MMBB 563 Molecular Parasitology (3 cr)
See MMBB J463/J563.

MMBB 571 Advanced Pathogenesis: Host Pathogen Interactions (3 cr)
See MMBB J471/J571.

MMBB 575 Cell Biology (3 cr)
See MMBB J475/J575.

MMBB 582 Protein Structure and Function (3 cr)
See MMBB J482/J582.

MMBB 585 Prokaryotic Molecular Genetics (3 cr)
See MMBB J485/J585.

MMBB 586 Plant Biochemistry (3 cr)
See MMBB J486/J586.

MMBB 587 Eukaryotic Molecular Genetics (3 cr)
See MMBB J487/J587.

MMBB 588 Genetic Engineering (3 cr)
See MMBB J488/J588.

MMBB 589 Advanced Topics in Molecular Biology, Microbiology and Biochemistry (2 cr, max 4)
Recent research in enzymes, hormones, complex lipids, vitamins, nucleic acids, antibiotics, viruses, and MMBB genetics.
Prereq: *Permission*

MMBB 590 Teaching Practicum (2 cr)
Teaching by master's students under faculty supervision.
Prereq: *Permission*

MMBB 591 Teaching Practicum (2 cr, max 4)
Teaching by Ph.D. students under faculty supervision.
Prereq: *Permission*

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 the department head. Recommended Preparation: Undergraduate degree in Microbiology, Biochemistry or related topic.
Prereq: *Enrollment in a doctoral program*

Military Science Courses

LTC Jay C. Gardner, 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; lec, conference, and activities dealing with military subjects; option of participating in challenging outdoor activities such as whitewater rafting, mountaineering, rifle marksmanship, and rappelling; texts and lab fees 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.
Coreq: *MS 111*

MS 102 Fundamentals of Leadership and Management (1 cr)
Continuation of MS 101. Development of greater understanding of roles and responsibilities of Army officers; lec, conference, and activities dealing with military subjects; participation in challenging outdoor activities such as orienteering, mountaineering, and weapons qualification; occasional uniform wear reqd; texts, uniforms, and lab fees provided by dept; more focus on leadership development and the development of personal confidence. Participation entails no military obligation.
Coreq: *MS 112*

MS 111 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 wk.
Coreq: *MS 101*

MS 112 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 wk.
Coreq: *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; practical field training in variety of outdoor skills (mountaineering, rafting, rifle marksmanship); uniform wear reqd; texts, uniforms, and lab fees provided by department. Participation entails no military obligation.
Prereq: *MS 102 or Permission*
Coreq: *MS 211*

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; practical field training in variety of outdoor skills (mountaineering, rafting, rifle marksmanship); uniform wear reqd; texts, uniforms, and lab fees provided by department. Participation entails no military obligation.
Prereq: *MS 201 or Permission*
Coreq: *MS 212*

MS 211 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 wk.
Coreq: *MS 201*

MS 212 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 wk.
Coreq: *MS 202*

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 Operations (1 cr, max 4)
The Chrisman Raider Team is an elite group of individuals who compete on intercollegiate level in military skills of marksmanship, physical fitness, navigation, weapons, rope bridging, and long distance marching; rigorous physical training and practicing technical skills in preparation for two-day competition among schools throughout western U.S.
Coreq: *MS 101 or 102 or 201 or 202 or 301 or 302 or 401 or 402*

MS 289 Leadership Training Course (cr arr, max 6)
Intensive five-week summer encampment at Fort Knox, Kentucky; hands-on training in fundamentals of leadership in a military environment, land navigation, weapons training, drill and ceremony, and basic skills in doctrinal tactics employed by light infantry leaders.
Prereq: *50 cr hrs, 2.0 GPA, and Permission of department head*

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 five-wk Advanced Camp at Fort Lewis, Washington. Three hrs of lec, 2 hrs of lab, and 3 hrs of physical training a wk, plus field training exercises.
Prereq: *Either ROTC Basic Course, Camp Challenge, 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 five-wk Advanced Camp at Fort Lewis, Washington. Three hrs of lec, 2 hrs of lab, and 3 hrs of physical training a wk, plus field training exercises.
Prereq: *Either ROTC Basic Course, Camp Challenge, 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*

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 471 Command and Staff Functions (2 cr)
Hands-on practical applications of functions of U.S. Army officers assigned to command and staff positions; planning, coordinating, and implementing operations, training and logistic support for cadet battalion activities; practical exercises in interrelationships between commander, staff, higher headquarters, and subordinate units.
Coreq: *MS 401*

MS 472 Command and Staff Functions (2 cr)
Hands-on practical applications of functions of U.S. Army officers assigned to command and staff positions; planning, coordinating, and implementing operations, training and logistic support for cadet battalion activities; practical exercises in interrelationships between commander, staff, higher headquarters, and subordinate units.
Coreq: *MS 402*

MS 489 National Advanced Leadership Course (cr arr)
Intensive five-wk summer encampment at Ft. Lewis, Washington.
Prereq: *MS 301-302 and Permission*

MS 499 (s) Directed Study (cr arr)

Music Courses

Kevin B. Woelfel, 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 4)
Review of fundamentals of technique and musicianship in preparation for MusA 124 and MusA 134. Maximum two semesters.
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 125 Symphonic Band (1 cr, max arr)
Open to all students. Three rehearsals per week. (Spring only)
Prereq: *Audition and Permission*

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 247 Piano Proficiency Review (1 cr)
Review of material presented in MusA 145-246. Preparation for Piano Proficiency Exam.
Prereq: *MusA 246 with a grade of 'C' or better*

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.

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" in part 5 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" in part 5 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 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/odd 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 510 Advanced Jazz Improvisation (2 cr)
Topics studied will include comprehensive jazz harmony, pentatonics, rhythmic displacement, solo transcribing and analysis.

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.

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. Summers only, alternating choral (even yrs) and instrumental (odd yrs). Recommended Preparation: 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 120 Fundamentals of Music (2 cr)
For students in fields other than music. Instruction in reading and writing music notation, scales and basic harmonies through musical activities such as singing, playing simple instruments, and interacting with composing software. Not open to students who have taken MusC 141.

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*

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.*

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 J329/J529 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)
Continuation of MusC 325. Increasing emphasis on varied media and larger forms, but with value being placed on creativity and originality.

MusC 426 Electronic Music (2 cr)
Techniques of musical composition using electronic media. (Spring, Alt/odd yrs)
Prereq: *MusC 242 or Permission*

MusC J431/J531 History of Western Music Theory (3 cr)
A seminar in the historical development of music theory. Students enrolled for graduate credit will be expected to complete deeper analysis of selected methodologies, and to make a presentation in class.
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/even yrs)
Prereq: *MusC 242 or Permission*

MusC J438/J538 Theory Pedagogy (3 cr)
A seminar in the methods, techniques and materials for the teaching of music theory. Students enrolled for graduate credit will be expected to complete deeper analysis of selected methodologies, and to make a presentation in class. (Fall, Alt/odd yrs)
Prereq: *MusC 242 or Permission*

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 529 Theoretical Basis of Jazz (2 cr)
See MusC J329/J529.

MusC 530 Jazz Composition and Arranging (2 cr)
Analysis of significant jazz compositions throughout history. Stylistic projects involving major jazz composers. Transcription from recordings when scores are not available. Leading to creating individual arrangements and compositions.
Prereq: *MusC 329 or 529*

MusC 531 History of Western Music Theory (3 cr)
See MusC J431/J531.

MusC 537 Music in Film (3 cr)
See MusC J437/J537.

MusC 538 Theory Pedagogy (3 cr)
See MusC J438/J538.

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.

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)
May be used as core credit in J-3-d, except by music majors. 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)
May be used as core credit in J-3-d. 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. May not be counted as a required music history elective for music majors. (Spring,. Alt/even yrs)
Prereq: MusH 101 or MusH 111, with a grade of C or better, or Permission

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 J440/J540 (s) Studies in American Music (3 cr)
Selected topics in American music. Additional projects/assignments required for graduate credit. (Spring, Alt/odd yrs)
Prereq: MusH 321-323 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 J452/J552 Solo Vocal Repertoire (2 cr)
Historical and analytical survey of solo vocal literature. Additional projects/assignments required for graduate credit. (Fall, Alt/even yrs)
Prereq: Junior standing and Permission

MusH J453/J553 Opera Repertoire (2 cr)
Open to all students. Selected masterworks of opera literature. Additional projects/assignments required for graduate credit. (Fall, Alt/odd yrs)
Prereq: Junior standing and 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: Junior standing and 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: Junior standing and Permission

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 540 (s) Studies in American Music (3 cr)
See MusH J440/J540.

MusH 550 Orchestral Literature (2 cr)
See MusH J450/J550.

MusH 551 (s) Repertoire (2 cr, max arr)
See MusH J451/J551.

MusH 552 Solo Vocal Repertoire (2 cr)
See MusH J452/J552.

MusH 553 Opera Repertoire (2 cr)
See MusH J453/J553.

MusH 554 Keyboard Repertoire I (2 cr)
See MusH J454/J554.

MusH 555 Keyboard Repertoire II (2 cr)
See MusH J455/J555.

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 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 381 Elementary School Music Methods for Nonmajors (3 cr)
Same as EDCI 381. Curriculum, organization, and instructional materials for teaching general classroom music. This course is intended for elementary classroom teachers, nonmusic majors. One out-of-class field teaching experience may be scheduled.
Prereq: Permission

MusT 382 Elementary School Music Methods for Music Majors (3 cr)
Curriculum, organization, instructional materials, and strategies for teaching elementary general music. Must be taken before enrolling in MusT 432. Approximately three field teaching experiences must be scheduled in the elementary schools outside of class time. (Spring only)

MusT 383 Principles of Music Teaching (3 cr)
Philosophy, principles, curriculum, and organization of the school music program. Must be taken before enrolling in MusT 432. (Fall only)
Prereq: MusC 142 or Permission

MusT 385 Choral Music in the Secondary School (2 cr)
Methods, instructional materials, and techniques for teaching choral music in grades 7-12. Two lec and one lab a wk. Must be taken before enrolling in MusT 432. (Fall, Alt/even yrs)
Prereq: 2 cr in MusA 316 or 317, and MusC 142
Prereq or Coreq: MusT 383, MusA 387, or Permission

MusT 386 Instrumental Music in the Secondary School (2 cr)
Methods, instructional materials, and techniques for teaching instrumental music in grades 7-12. Two lec and one lab a wk. Must be taken before enrolling in MusT 432. (Spring only)
Prereq: MusC 142
Prereq or Coreq: MusT 383, MusA 387, or Permission

MusT 389 Orff, Kodaly, and Dalcroze (2 cr)
Philosophies and teaching techniques attributed to Carl Orff, Emile Jacques Dalcroze, and Zoltan Kodaly; Orff emphasizes movement, improvisation, singing, and percussion instruments; Dalcroze emphasizes movement; Kodaly emphasizes solfege singing, folk songs, child development, and personal musicianship. (Fall only)
Prereq: MusT/EDCI 381 or MusT 382 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 (7 or 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, keyboard proficiency exam, cumulative GPA of 2.75, acceptance to the College of Education and permission of the School of Music. The keyboard proficiency exam must be completed during the regularly scheduled exam by the tenth class day of the semester prior to the semester of student teaching.
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: Junior standing and 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: Junior standing and 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: Junior standing and 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 (2 cr)
Coreq: MusT 432.

MusT 465 Jazz Band Rehearsal Techniques (1 cr)
Methods, materials, and literature for jazz bands in public schools. (Fall only)
Coreq: MusT 466 and MusT 467; and 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 242
Coreq: MusT 465 and MusT 467

MusT 467 Band Literature and Rehearsal Techniques (1 cr)
Music, materials and rehearsal techniques for bands in public schools. (Fall only)
Prereq: MusT 383
Coreq: MusT 465 and MusT 466

MusT 485 Choral Ensemble Rehearsal Techniques (1 cr, max arr)
Various techniques of rehearsing singers in an ensemble. (Fall, Alt/evenyrs)
Coreq: MusT 385

MusT 486 Orchestral Literature and Rehearsal Techniques (1 cr, max arr)
Music, materials and rehearsal techniques for string ensembles in public schools. (Spring only)
Prereq or Coreq: MusT 251, MusT 383, and MusA 387
Coreq: MusT 386 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.

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 565 Advanced Jazz Methods (1 cr)
Advanced jazz rehearsal techniques for music teachers. (Summer only)

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 588 Kodaly Certification (1 cr, max arr)
Level I courses (pedagogy and solfége) focus specifically on pedagogy for pre-K through grade 2, including singing, movement, hand signs and solfége, and the development of music reading and writing skills. Planning and delivery of instruction as well as curriculum development for early grade music instruction are included. (Summer, even yrs)

MusT 589 Orff, Kodaly, and Dalcroze (3 cr)
Overview of teaching philosophies developed by Zoltan Kodaly, Carl Orff, and Emile Jaques-Dalcroze, includes a laboratory component that applies pedagogy to children in elementary music classes.

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. Two lec a week for first three weeks.

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 (1-2 cr)
Two-semester sequence in study of English and foreign language diction as represented by the International Phonetic Association.

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.

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 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 100 Technology for Exploring Nature (1 cr)
Dual credit course introducing students to modern geospatial tools, such as GIS, GPS, and remote sensing, commonly used in natural resource science, mapping, and management. A classroom and a field lab will complement the hands-on and web-based learning modules. Recommended preparation: basic computer literacy. (Spring only)

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)

NR 204 (s) Special Topics (cr arr)

NR 210 Management of Forest Ecosystems (3 cr)
Application and integration of forest ecology and basic natural resource management principles to develop a comprehensive management plan to enhance the health and/or use of a forest site. [This course will be a dual credit class taught only at Coeur d'Alene High School for students seeking to learn more about natural resource management.] Recommended preparation: Biology. (Fall only)

NR 299 (s) Directed Study (cr arr)

NR 310 Leadership for Natural Resources Management (1 cr)
Principles and practices of leadership; topics include goal setting and reflection, interpersonal communication, group dynamics and cooperation, and basic leadership skills. One 16-hour retreat, six 2-hr class sessions, two oral presentations, and one leadership project that contributes to the College of Natural Resources, the University of Idaho, or the community.

NR 400 (s) Seminar (cr arr)

NR 402 GIS Applications in Natural Resources (1 cr)
Application of GIS principles to natural resource problems. 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 hands on exercises. Four hrs/week for six weeks.
Prereq: Geog 385 or Permission

NR 403 (s) Workshop (cr arr)

NR 404 (s) Special Topics (cr arr)

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 510 Natural Resource Leadership (2 cr)
Develops leadership skills to manage natural resource agencies and organizations. Jointly taught by the University of Idaho and the University of Montana in 2, one-week classes. Graded P/F. (Spring only)

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 ID101 Introduction to Naval Science (2 cr) WSU N S 101
Intro to the Navy: customs, structure, basic leadership, career paths, and ships and aircraft of the U.S. Fleet. (Fall only).

NS ID102 Ships Systems I (3 cr) WSU N S 102
Intro to Naval shipboard engineering systems; propulsion systems; nuclear, gas turbine, and conventional; auxiliary systems and shipboard damage control; basic concepts in ship design. (Fall only)

NS ID&WS103 Introduction to Naval Science Laboratory (1 cr) WSU N S 103
Practical instruction for introduction to Naval Science. Graded P/F.
Prereq: NS 101

NS ID201 Ships Systems II (3 cr) WSU N S 201
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. (Spring only).

NS ID202 Seapower and Maritime Affairs (3 cr) WSU N S 202
Survey of U.S. Naval history; seapower and maritime affairs emphasizing present-day concerns; comparisons of U.S. and foreign Naval strategies. (Spring only)

NS 299 (s) Directed Study (cr arr)

NS ID301 Navigation (3 cr) WSU N S 301
Theory, principles, and procedures of terrestrial and electronic navigation, and "rules of the nautical road." (Spring only)

NS ID302 Naval Operations (3 cr) WSU N S 302
Naval operations and tactics, relative motion, and Maneuvering Boards. (Fall only)

NS ID311 Evolution of Warfare (3 cr) WSU N S 311
Evolution of war through tactics; strategy from Sun Tzu to J.F.C. Fuller. Recommended preparation: NS 101, 202. (Spring only)

NS ID401 Naval Leadership and Management (3 cr) WSU N S 401
Theories of management and management resources, motivational theories, and leadership. (Fall only)

NS ID402 Naval Leadership and Ethics (3 cr) WSU N S 402
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. (Spring only).

NS ID412 Amphibious Operations (3 cr) WSU N S 412
Amphibious doctrine from Gallipoli to the Mayaguez. Recommended preparation: NS 311. (Fall only)

NS 499 (s) Directed Study (cr arr)

Neuroscience Courses

Richard B. Wells, Program Director (104 Morrill Hall 83844-3017; phone 208/885-6242; 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 WS509 Design and Analysis of Biomedical Experiments (4 cr) WSU VPH 505

Neur WS520 Principles of Neurobiology (4 cr) WSU Neuro 520

Neur ID521 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. (Spring, Alt/yrs)
Prereq: Math 160 or 170 and Permission

Neur 526 Cognitive Neuroscience (3 cr)
See Psyc 526.

Neur WS540 Advanced Topics in Integrative Neuroscience (3 cr) WSU Neuro 540

Neur WS541 Advanced Topics in Cellular and Molecular Neuroscience (3 cr) WSU Neuro 541

Neur WS542 Advanced Topics in Disciplinary Neuroscience (3 cr) WSU Neuro 542

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)

Nuclear Engineering Courses

Fred Gunnerson, 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 R460 Nuclear Reactor Engineering (3 cr)
Nuclear reactor design problems in thermodynamics, fluid flow, heat transfer, fuel preparation, waste disposal, and material selection.
Prereq: Math 310 or Permission

NE R462 Nuclear Reactor Codes and Standards (3 cr)
Codes and standards by NRC, EPA, ASME and others applicable to design, construction, and operation of nuclear facilities.
Prereq: Permission

NE R470 Nuclear Reactor Safety (3 cr)
Light water reactor safety, liquid metal reactor safety and high temperature reactor safety; evaluation methods, system disturbances, safety criteria, containment, NRC licensing process, and computer codes for nuclear safety analysis.
Prereq: NE 460 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 R525 Neutron Transport Theory (3 cr)
Modeling of neutron transport through various media using transport principles and techniques. Emphasis is given to methods used for reactor core and component analysis.
Prereq: NE 460, Math 480 or Permission

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 R540 Fusion Energy (3 cr)
Basic concepts and experimental approaches to fusion, elementary plasma theory, plasma oscillations, heating; fusion reactor technology development and long-range prospects.
Prereq: Permission

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: NE 460 or 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: NE 460, Math 480 or Permission

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: NE 460 or Permission

NE R580 Waste Management and Nuclear Fuel Reprocessing (3 cr)
Head-end processing, solvent extraction processes, ion exchange processes, precipitation processes, and effluent management and disposal.
Prereq: Permission

NE R581 Treatment of Radioactive Waste (3 cr)
Alternative processes and operations for treatment of radioactive wastes before storage/disposal.
Prereq: NE 460 or 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 R585 Nuclear Fuel Cycles (3 cr)
Processes to support the existing LWR fuel cycle. Alternative fuel cycles including U-233, Pu 239 and mixed oxide fuels, and advanced reactor concepts. Recycling and recovery of nuclear materials, with emphasis on traditional fast reactor recycle.
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; Debbie Storrs (112 Administration Bldg 83844-3154; phone 208/885-4561), Coordinator

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 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 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 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)*

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)
May be used as core credit in J-3-a. 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)
May be used as core credit in J-3-d. Introduction to philosophical reasoning through historical study of Western moral thought.

Phil 201 Critical Thinking (3 cr)
May be used as core credit in J-3-d. Acquiring and improving important skills of thinking, reading, and writing critically; emphasis on avoiding fallacies and mastering forms of valid argument in ordinary language.

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 ID&WS221 Philosophy in Film (3 cr) WSU Phil 210
The use of film as "philosophical text", discussing philosophical theories and debates presented in films, both old and new.

Phil 240 Belief and Reality (3 cr)
May be used as core credit in J-3-d. Introduction to epistemology (examination of grounds and limits of knowledge) and metaphysics (inquiry into the nature of reality) through historical and contemporary readings.

Phil WS280 Philosophy and Religion of Islam (3 cr) WSU Phil 280
Same as RelS 280.

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 WS314 Philosophies and Religions of India (3 cr) WSU Phil 314
Same as RelS 314.
Prereq: *One course in philosophy*

Phil WS316 Philosophies and Religions of China and Japan (3 cr) WSU Phil 315
Same as RelS 315.
Prereq: *One course in philosophy*

Phil ID&WS320 History of Ancient and Medieval Philosophy (3 cr) WSU Phil 320
Philosophical thought from the early Greeks through the Middle Ages; concentration on metaphysics and theory of knowledge.

Phil ID&WS321 History of Modern Philosophy (3 cr) WSU Phil 321
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.

Phil WS322 19th Century Philosophy (3 cr) WSU Phil 322

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 ID&WS351 Philosophy of Science (3 cr) WSU Phil 350
May be used as core credit in J-3-d. Introduction to the critical analysis of the aims and methods of science, its principles, practices, and achievements.
Prereq: *3 credits of philosophy or 3 credits of natural science*

Phil 361 (s) Professional Ethics (3 cr, max 6)
May be used as core credit in J-3-d. 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 381 American Indian Environmental Philosophy (3 cr)
Exploration of traditional and contemporary American Indian thought about people in relationship to the more than human world. Recommended preparation: Any courses in philosophy, religious studies, American Indian studies, or environmental studies.

Phil 382 Philosophy of Ecology (3 cr)
Exploration of conceptual issues in ecology with special consideration of the connection between ecology and environmental philosophy. Recommended preparation: Any courses in philosophy, natural resources, or environmental studies.

Phil 404 (s) Special Topics (cr arr)

Phil ID&WS-J409/ID&WS-J509 Advanced Logic (3 cr) WSU Phil 401/501
First-order predicate logic plus some metatheory, applications and/or extensions. Additional work required for graduate credit.
Prereq: *Phil 202*

Phil WS-J413/WS-J513 Seminar in Philosophy of Religion (3 cr) WSU Phil 407/507
Phil 413 same as RelS 407.

Phil ID-J417/J517 Philosophy of Biology (3 cr) WSU Phil 418
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 WS420 Contemporary Continental Philosophy (3 cr) WSU Phil 420

Phil ID&WS-J442/J542 Philosophy of Mind (3 cr) WSU Phil 442
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 ID&WS-J443/J543 Philosophy of Language (3 cr) WSU Phil 443
Philosophical thinking about meaning, reference, and truth. Additional assignments required for graduate credit. Recommended Preparation: Phil 202 and 240.

Phil ID&WS446 Metaphysics (3 cr) WSU Phil 446
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 240.

Phil ID&WS447 Theory of Knowledge (3 cr) WSU Phil 447
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 240.

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 457 Natural Resource Ethics (3 cr)
Examination of key ethical concepts and arguments underlying all fields of natural resources. Recommended preparation: Any course in philosophy, environmental studies, or natural resources. (Spring, Alt/yrs)

Phil ID&WS-J470/J570 Philosophy of Law (3 cr) WSU Phil 470
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. Additional work required for graduate credit. Recommended Preparation: Phil 103.

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 491 Seminar in Professional Ethics and Diversity (3 cr)
Same as Soc 491. Capstone course for students pursuing certificates in professional ethics or diversity. Interdisciplinary seminar culminating in research projects and presentations under the direction of faculty mentors.
Prereq: Phil 361 or Soc 301 or Permission

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 508 (s) Critical Theory and Continental Aesthetics (3 cr)
See Art 508.

Phil ID&WSJ509 Advanced Logic (3 cr) WSU Phil 501
See Phil J409/J509.

Phil ID&WS510 Seminar in the History of Philosophy (3 cr, max 6) WSU Phil 510
Systematic exploration of the central works of an individual philosopher or philosophical movement.

Phil WS513 Seminar in Philosophy of Religion (3 cr) WSU Phil 507
See Phil J413/J513.

Phil 517 Philosophy of Biology (3 cr)
See Phil J417/J517.

Phil ID&WS520 Seminar in Ethical Theory (3 cr) WSU Phil 520
The major issues, views, and figures of ethical theory from ancient Greece to the present.

Phil ID&WS522 Seminar in Metaphysics (3 cr) WSU Phil 522
The nature of reality, through study of key concepts such as God, personhood, free will, causation, space, time, and identity.

Phil ID&WS524 Seminar in Epistemology (3 cr) WSU Phil 524
Classical problems, questions, and theories involving the concept of knowledge.

Phil 525 Philosophy and Feminism (3 cr)
Analysis of schools of feminist theory and impact of feminism on philosophy and other disciplines. Recommended Preparation: At least one undergraduate course in philosophy or women's studies.

Phil WS532 Seminar in Business Ethics (3 cr) WSU Phil 532

Phil WS535 Advanced Biomedical Ethics (3 cr) WSU Phil 535

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.

Phil 556 Religion and the Environment (3 cr)
Explores concepts of the sacred, the human, nature, their interrelationships from several religious traditions; relates these to ecology, environmental ethics. Specific religious traditions covered may vary. Recommended Preparation: At least one 300-400 level philosophy or religious studies course.

Phil 570 Philosophy of Law (3 cr)
See Phil J470/J570.

Phil 571 Ecological Jurisprudence (3 cr)
Inquiry into the nature of law as a product of culture, emphasizing property, land tenure, and environmental rights and responsibilities. Recommended Preparation: Phil 103, 452, or 470.

Physical Education Courses

Kathy Browder, Dept. Chair, Dept. of Health, Physical Education, Recreation and Dance (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

Activity Courses

Note: PEB 105, 106, 107, and 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 105 (s) Land-Based Individual and Group Fitness Activities (1 cr, max arr)
A variety of individual and group fitness activities performed on land such as step aerobics, body toning, weight training, jogging, backpacking, yoga, pilates, cycling, etc. Two hrs per wk. Graded P/F.

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, Softball and Archery (1 cr)
Skill development and knowledge of teaching progressions, techniques, strategies, and analysis and correction of skills in golf, softball and archery. 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 201 Fitness Activities and Concepts (2 cr)
Topics related to individual fitness development; focus on development of personal skills in presenting and teaching fitness activities for public and private sector programs. Two lec and 1 hr of lab a wk.

PEP 202 Skill and Analysis: Stunts and Tumbling (1 cr)
Skill analysis, skill development, spotting, and teaching techniques in tumbling. Two lec-labs a wk. (Spring only)

PEP 203 (s) Workshop (cr arr)

PEP 204 (s) Special Topics (cr arr)

PEP 220 Coaching Youth Sports (1 cr)
Practical, hands-on introduction to basics of youth sports coaching; basics of developing appropriate coaching philosophy; how such sports sciences as sport psychology, sport pedagogy, sport physiology, sport medicine, sport law, and sport management help to effectively implement athlete-centered approach to coaching; students participate in six-week practicum and receive feedback on how to improve their coaching. Two lec a wk.

PEP 243 Recreation Activities (2 cr)
Same as Rec 243. Experience in planning, organizing, leading, and evaluating a broad range of games, social recreation, music, drama, arts and crafts, and special events activities.

PEP 266 Aquatic Instructor's Course (2 cr)
Methods. Students passing Red Cross standards will receive instructor's certificate. Recommended Preparation: certificate in lifeguarding or emergency water safety and pass swimming skills pre-test.

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 310 Cultural and Philosophical Aspects of Sport (2 cr)
Analysis of philosophical and sociological phenomenon in sport. (Fall only)

PEP WS311 Strength Training (3 cr) WSU Ath T 311

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.
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

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: HPRD 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: EDCI 302
Prereq or Coreq: PEP 360, PEP 380, PEP 440, and six professional activity courses

PEP J414/J514 Proseminar in Physical Education (1 cr)
Course content and materials designed to prepare students for entry into the physical education teaching internship, the physical education teaching profession, and for continuing professional development; should be taken the semester before the teaching internship. Additional items including grant writing, writing for publication, and research review on professional and career development will be required for those registered for graduate credit.

PEP J417/J517 Advanced Human Biomechanics (3 cr)
This course is designed to provide the student with an in-depth understanding of the fundamental aspects of biomechanical analyses, including kinematic, kinetic, energetic, and neuromuscular considerations. The student will become familiar with quantitative analysis procedures used to analyze human movement activities in clinical, educational, performance, and wellness settings. Independent quantitative research project required for graduate credit.
Prereq: Math 143, Phys 111, and PEP 300

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: HPRD 350, 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: EDCI 302
Prereq or Coreq: PEP 360, PEP 380, PEP 440, and six professional activity courses

PEP 424 Adapted Methods in Physical Activity Pedagogy (2 cr)
Adapting physical education programs to meet individual needs. 2 hours of lec per week. Includes a 20 hour required practicum working with individuals with disabilities. Lecture-Lab.
Prereq: EDCI 302
Prereq or Coreq: PEP 360, PEP 380, and six professional activity courses

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: EDCI 302
Prereq or Coreq: PEP 360, PEP 380, and six professional activity courses

PEP 455 Design & Analysis of Research in HPERD (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 health, physical education, sport science, 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 health, physical education, recreation, and human performance 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 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 480 Seminar in Sportsmanship: Moral Development (3 cr)
Philosophic and psychological study of moral development and resultant effect on moral value education in sport.

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: EDCI 302 and division approval
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: 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: 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 508 Motor Learning (3 cr)
The study of the principles and concepts of human behavior related to and affected by human movement with emphasis on motor skill acquisition.

PEP 510 Motor Control (3 cr)
This course provides an examination of the neural structures and processes involved in the control of movement and in the maintenance of body posture.

PEP WS511 Theories, Research, Techniques in Counseling Psychology I (3 cr) WSU CoPsy 511

PEP WS512 Theories, Research, Techniques in Counseling Psychology II (3 cr) WSU CoPsy 512
Prereq: PEP 511

PEP 514 Proseminar in Physical Education (1 cr)
See PEP J414/J514.

PEP WS515 Ethics and Professional Problems in Counseling Psychology (3 cr) WSU CoPsy 515

PEP 516 Neuromechanics of Human Movement (3 cr)
An in-depth understanding of the integration of biology and physics necessary to analyze and evaluate human movement and to prevent injury. Focuses on the neuromuscular and musculoskeletal systems and their contribution to movement and injury etiology. Also provides in-depth examination of single and multiple joint complexes.
Prereq: Permission

PEP 517 Advanced Human Biomechanics (3 cr)
See PEP J417/J517.

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 519 Qualitative Analysis of Movement (3 cr)
Quanlitative study of human movement. Explores various models for qualitative analysis; focuses on detection and correction of movement errors, using analytical and pedagogical techniques from all subdisciplines of human movement.

PEP WS521 Theoretical Foundations of Group Counseling (3 cr) WSU CoPsy 518
Prereq: PEP 512

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 WS525 Counseling Diverse Populations (3 cr) WSU CoPsy 525
Prereq: PEP 512

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)

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 WS541 Clinical and Experimental Hypnosis Seminar (3 cr) WSU CoPsy 541
Prereq: Ph.D student in counseling, educational, experimental, or clinical psychology

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 WS562 Advanced hypnosis and therapy (3 cr) WSU CoPsy 562
Prereq: PEP 525 or Permission

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 591 Moral Development in Physical Activity (3 cr)
Study of current research and practices of moral reasoning and moral development in physical activity.

PEP 593 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: PEP 418 or Permission

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

Wei Jiang Yeh, 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 111 or 211; Phys 111 carries no credit after 211; 112 carries no credit after 212.

Phys 100 Fundamentals of Physics (4 cr)
May be used as core credit in J-3-b. 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)
May be used as core credit in J-3-b. 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 core 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 (4 cr)
May be used as core credit in J-3-b. 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 (4 cr)
May be used as core credit in J-3-b. Electricity, magnetism, optics, and modern physics. Three lec, one recitation, and one 2-hr lab a wk.
Prereq: Phys 111

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 (4 cr)
May be used as core credit in J-3-b. 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 (4 cr)
May be used as core credit in J-3-b. 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 213 Engineering Physics III (4 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 301 Junior Physics Lab (2 cr)
Experimental techniques in modern physics, including optics, atomic, nuclear, and solid state physics; computer uses, error analysis, and scientific literature searches. One 1-hr lec and one 3-hr lab a wk. (Spring only)
Prereq: *Phys 213 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*
Coreq: *Math 275 and Phys 213*

Phys 321 Analytical Mechanics (3 cr)
Kinematics and dynamics of particles; oscillating systems; dynamics of the rigid body.
Prereq: *Phys 212 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 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 ID371 Mathematical Physics (3 cr) WSU Phys 371
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, 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 or 213, 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 ID-J425/J525 Relativity (3 cr) WSU Phys 425
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/ID&WS-J533 Thermal and Statistical Physics I (3 cr) WSU Phys 533
Classical thermodynamics, entropy, thermodynamic potentials, kinetic theory, classical and quantum statistical mechanics, ensembles, partition functions, introduction to phase transitions. (Fall only)
Prereq: *Phys 305*

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 or 213, 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) (Phys J463/J563)
See MSE J464/J564.

Phys ID&WS-J465/ID&WS-J565 Particle and Nuclear Physics (3 cr) WSU Phys 465/565
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.
Prereq for 465: *Phys 305*
Prereq for 565: *Admission to physics graduate program or Permission*

Phys ID&WS-J484/J584 Astrophysics (3 cr) WSU Astr 435
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.
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 R510 Radiation Shielding and Design Concepts (3 cr)
Prereq: Basic differential and integral calculus, and Permission

Phys 511 Techniques of Experimental Physics (3 cr)
Development of experimental techniques and skills in active research fields; foundation for any field of physics. Nine hrs of lab a wk.

Phys 512 Techniques of Experimental Physics (3 cr)
Development of experimental techniques and skills in active research fields; foundation for any field of physics. Nine hrs of lab a wk.

Phys R517 Radiation Dosimetry Instrumentation (3 cr)
Radiation detection methods; stats, instrumentation, and close determination; emphasis on radiation protection.

Phys ID&WS521 Advanced Mechanics (3 cr) WSU Phys 521
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.
Prereq: Phys 322

Phys 525 Relativity (3 cr)
See Phys J425/J525.

Phys 528 Numerical Methods (3 cr)
See Phys J428/J528.

Phys ID&WS533 Thermal and Statistical Physics I (3 cr) WSU Phys 533
See Phys J433/J533.

Phys ID&WS541 Electromagnetic Theory (3 cr) WSU Phys 541
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.
Prereq: Phys 322, 342

Phys ID&WS542 Electromagnetic Theory (3 cr) WSU Phys 542
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.
Prereq: Phys 322, 342

Phys 543 Optics (3 cr)
See Phys J443/J543.

Phys 544 Quantum Optics (3 cr)
See Phys J444/J544.

Phys ID&WS550 Quantum Mechanics (3 cr) WSU Phys 550
Physical basis; Schroedinger wave formulation, Heisenberg matrix formulation, transformation theory, approximation methods, radiation theory, theory of scattering; application to atomic systems.
Prereq: Phys 305, Phys 322

Phys ID&WS551 Quantum Mechanics (3 cr) WSU Phys 551
Physical basis; Schroedinger wave formulation, Heisenberg matrix formulation, transformation theory, approximation methods, radiation theory, theory of scattering; application to atomic systems.
Prereq: Phys 305, Phys 322

Phys 564 Materials Physics and Engineering (3 cr) (Phys 563)
See Phys J464/J564.

Phys ID&WS565 Particle and Nuclear Physics (3 cr)
See Phys J465/J565.

Phys ID&WS571 Mathematical Methods of Physics (3 cr) WSU Phys 571
Methods and problems.
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

Jeffrey C. Stark, Division Chair, Horticultural Sciences (242 Iddings Wing, Ag. Sc. Bldg 83844-2339; phone 208/529-8376; jstark@uidaho.edu).

Robert Zemetra, Division Chair, Crop and Weed Sciences (242 Iddings Wing, Ag. Sc. Bldg 83844-2339: phone 208/885-7810; rzemetra@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 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 302 Golf and Sports Turf Management (3 cr)
Turfgrass science, cultivation and management for a wide variety of commercial applications. Recommended Preparation: Majoring in Horticultural Sciences or Crop Sciences, or Professional Golf Management.
Prereq: Junior standing

PlSc WS310 Pomology (3 cr) WSU Hort 310
Relationships between physiological processes in fruit trees and management decisions necessary for successful commercial production. One 2-day field trip. (Alt/yrs)

PlSc WS313 Viticulture and Small Fruits (3 cr) WSU Hort 313

PlSc WS332 Interior Plantscaping (2 cr) WSU Hort 332

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 ID340 Nursery Management (3 cr) WSU Hort 340
Management of commercial nurseries from plant propagation through sale of the plants. (Alt/yrs)

PlSc ID341 Nursery Management Laboratory (1 cr) WSU Hort 341
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.
Coreq: PlSc 340

PISc WS357 Greenhouse Management and Crop Production (3 cr) WSU Hort 357

PISc WS358 Greenhouse Management and Crop Production - Lab (1 cr) WSU Hort 358

PISc WS360 World Agricultural Systems (3 cr) WSU CropS and SoilS 360
Study of agro-environmental characteristics of world agriculture; historical and contemporary features of world food production.
Prereq: 2 semesters physical or biological sciences

PISc 398 Internship (1-6 cr, max 6)
Graded Pass/Fail.
Prereq: Permission of department

PISc 399 (s) Directed Study (1-2 cr, max 2)

PISc 400 (s) Seminar (1 cr)

PISc 401 Plant Growth and Development (3 cr)
Application of physiological principles to the management of plants in agronomic, horticultural and forest systems. (Spring only)
Prereq: PISc 205

PISc 404 (s) Special Topics (cr arr)

PISc 407 Field Crop Production (3 cr)
Management and use of crops in Idaho and the Northwest.

PISc 408 Cereal Science (3 cr)
Crop history and biology of major cereal crops, emphasizing cool season cereals. Recommended Preparation: Biol 115.

PISc ID-J410/ID-J510 Biology of Weeds (3 cr) WSU CropS 413/513
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. (Alt/yrs)

PISc WS-J412/WS-J512 Advanced Cropping Systems (3 cr) WSU CropS and PI P 403/503
Modern cropping systems: concepts of crop health management within a cropping systems context; diagnosis and management of biotic and abiotic constraints to crop production; interactions of these constraints; concepts of biological control; integration of biological, physical, and chemical approaches to pests and disease control: role of technological innovations; impact of national and international statutes; agreements and treaties on sustainable growth of crop production. Additional projects/assignments required for graduate credit.

PISc 415 Plant Pathology (3 cr)
Same as For 414. 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: PISc 102 , and MMBB 154, 155 or MMBB 250 (or permission)

PISc 416 Plant Pathology Laboratory (1 cr)
Development of skill and techniques used for the diagnosis, isolation, identification, and characterization of plant pathogenic microorganisms. Recommended Preparation: Familiarity with plant physiology, biological structure of plants and animals, and general agriculture. (Fall, alt/yrs)
Prereq or Coreq: PISc 415 or Permission of instructor

PISc WS418 Post-Harvest Biology and Technology (3 cr) WSU Hort 418

PISc WS-J421/WS-J521 General Mycology (4 cr) WSU PI P 421/521
(Alt/yrs)

PISc ID-J433/ID&WS-J533 Plant Tissue Culture Techniques (3 cr) WSU Hort/CropS 533
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: PISc 300. (Alt/yrs)

PISc 438 Pesticides in the Environment (3 cr)
See Soil 438.

PISc J446/ID-J546 Plant Breeding (3 cr) WSU CropS 546
Application of genetic principles to improvement of crop plants. Grad students reqd to complete additional term paper. (Alt/yrs)
Prereq: Gene 314 or Equivalent

PISc ID-J451/ID-J551 Vegetable Crops (3 cr) WSU 451/551
Production, physiology, storage, and marketing of major and minor vegetable, herb, and spice crops from a worldwide perspective. Recommended preparation: PISc 201, PISc 205, PISc 300 or equivalents.
Prereq: PISc 102 or equivalent

PISc 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: PISc 102 or Biol 213 or Permission

PISc 480 Field Trip (1 cr, max 3)
Three-day field trip to production areas.
Prereq: Permission

PISc ID-J490/ID-J590 Potato Science (3 cr) WSU Hort 490/590
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.

PISc 499 (s) Directed Study (cr arr)

PISc 500 Master's Research and Thesis (cr arr)

PISc 501 (s) Seminar (cr arr)

PISc 502 (s) Directed Study (cr arr)

PISc 504 (s) Special Topics (cr arr)

PISc WS506 Epidemiology and Management of Plant Diseases (3 cr) WSU PI P 551

PISc ID510 Biology of Weeds (3 cr)
See PISc J410/J510.

PISc WS511 Viruses and Virus Diseases of Plants (4 cr) WSU PI P 511
(Alt/yrs)

PISc WS512 Advanced Cropping Systems (3 cr)
See PISc J412/J512.

PISc WS515 Molecular Approaches for Improving Crop Quality and Adaptation (3 cr) WSU CropS 505
(Alt/yrs)

PISc ID520 Plant Cytogenetic Techniques (3 cr) WSU CropS 520
Techniques to study plant genes and chromosomes. Two lec and 4 hrs of lab a wk. (Alt/yrs)
Prereq: Gene 314 or Equivalent

PISc WS521 General Mycology (4 cr)
See PISc J421/J521.

PISc ID&WS533 Plant Tissue Culture Techniques (3 cr)
See PISc J433/J533.

PISc WS535 Molecular Genetics of Plant and Pathogen Interactions (3 cr) WSU PI P 535
(Alt/yrs)

PISc ID&WS539 Herbicide Fate and Mode of Action (4 cr) WSU CropS 539
Fate of herbicides in plants, soil, and water; physiological and biochemical mode of herbicide action; mechanisms of herbicide resistance. (Alt/yrs)
Prereq: PISc 338, and MMBB 300 or 380, or Permission

PISc ID546 Plant Breeding (3 cr)
See PISc J446/J546.

PISc ID547 Biometrics for Plant Scientists (3 cr) WSU CropS 547
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. (Alt/yrs)
Prereq: PlSc 102 and Stat 401 or Equivalent

PlSc ID551 Vegetable Crops (3 cr) WSU 551
See PlSc J451/J551.

PlSc ID590 Potato Science (3 cr) WSU Hort 590
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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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.

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)
May be used as core credit in J-3-d. 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 380 Canadian Political System (3 cr)
General examination of Canadian cultural identity, constitutional principles, federalism, govt structure, political process, and electoral behavior.

PolS 381 Western 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 J421/J521 Political Leadership (3 cr)
Theories of political and social leadership; presidential leadership; international leadership; moral and ethical leadership; case studies of leadership success and failure. Additional projects/assignments required for graduate credit.

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 J434/J534 American Lawmaking Institutions (3 cr)
An in-depth exploration of the Presidency, Congress and the Supreme Court, their political and structural histories and their interactions to form public policy in the United States. Additional projects/assignments reqd for grad cr. Recommended Preparation: PolS 101, 332, and 437.
Prereq: Senior in good standing

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.
Prereq: Senior standing or Permission

PolS J440/J540 (s) International Organizations and International Law (3 cr)
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. Additional projects/assignments required for graduate credit.

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 J450/J550 Nonprofit Organization and Management (3 cr)
Study of the role of nonprofits as contributors to public service delivery and as private service providers, including organization structures, management practices, financing, legal conditions and challenges they face. Additional projects/assignments required for graduate credit. (Spring, alt/yrs)

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/ID-J552 Administrative Law and Regulation (3 cr) WSU Pol S 552
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 456 Tribal Governments (3 cr)
The Tribal Government class shall assist in developing a clear understanding of the evolution of the American Tribal governmental system and their development in the United States. The class shall provide an overview of tribes and their governing structures prior to European entry into former native territories and lands within the United States Boundary.

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 521 Political Leadership (3 cr)
See PolS J421/J521.

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 WS530 Scope of Political Science (3 cr) WSU Pol S 501

PolS 534 American Lawmaking Institutions (3 cr)
See PolS J434/J534.

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 540 (s) International Organizations and International Law (3 cr)
See PolS J440/J540.

PolS 549 World Politics and War (3 cr)
See PolS J449/J549.

PolS 550 Nonprofit Organization and Management (3 cr)
See PolS J450/J550.

PolS ID552 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 ID556 Governmental Policy and Program Analysis (3 cr) WSU Pol S 515
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 564 Environmental Politics and Policy (3 cr)
Political and institutional context for the formulation, implementation, and evaluation of U.S. environmental policy.

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.

Professional-Technical and Technology Education Courses

Larry Stauffer, Acting Associate Dean, College of Engineering (322 E. Front St., Boise, ID, 83702; phone 208/364-6180).

PTTE 200 (s) Seminar (cr arr)

PTTE 333 Industrial Electronics (3 cr)
This course will provide students an in-depth knowledge of electronic components and circuits used in automated industrial settings.

PTTE 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.

PTTE 364 Hazardous Materials (3 cr)
Handling, transportation, and storage of hazardous materials; how to protect and suppress fires that occur in hazardous materials.

PTTE 432 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.

PTTE 434 Quality Assurance Organization and Management (3 cr)
Industrial management principles applied to effective economic control of quality assurance activities.

PTTE 435 Industrial Transportation Safety (3 cr)
Principles of safety in all aspects of industrial transportation; roads, railroads, air, water, pipeline.

PTTE 436 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.

PTTE 443 Government Contract Law (3 cr)
Contract formation, and contract administration pertaining to government contracts.

PTTE 446 Labor Law (3 cr)
Practical legal considerations in employer/employee relationships, including union contracts.

PTTE 448 Construction Safety (3 cr)
Major components of construction health and safety, including hazards, law, written programs, implementation, control and behavior.

PTTE 452 Fire Emergency Planning (3 cr)
This course is intended to provide information that will enable persons just entering the profession or expanding their roles to have the ability to assess their community's fire hazards, determine community resources, and write an all-hazards plan to assign responsibility to various agencies who will respond during a fire emergency or disaster.
Prereq: *Permission*

PTTE 454 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.

PTTE 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: PTTE 436.

PTTE 474 Power Distribution (3 cr)
This course examines the distribution of energy after the production phase. It will cover power grid design, operation, and security.

PTTE 483 Project and Construction Management (3 cr)
This course introduces the fundamental nature of projects and defines special techniques involved in project/construction management. Concepts such as the definition of a project, the nature of the project team, and the role and function of the project manager are presented. Discussion incorporates the language of projects, the context in which projects are conducted, and the key players in the project management process. Students investigate practical application of project management principles as applied to practice settings. The Project Management Body of Knowledge (PMBOK) is introduced as the basis to further explore practices, tools, and techniques for successful project management.

PTTE 486 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.

PTTE 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*

PTTE 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*

PTTE 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*

PTTE 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*

PTTE 523 Industrial Safety Applications (3 cr)
Application of engineering science to safety problems; static and dynamic forces on structures, pressure systems; effects of temperature, chemicals, fatigue, and other agencies on strength of materials; use of vectors in engineering analysis.

PTTE 524 Nuclear Detection and Measurement (3 cr)
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. In-class and laboratory experiments are included.
Prereq: *Permission*

PTTE 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.

PTTE 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: PTTE 525.

PTTE 527 Occupational Health Hazards (3 cr)
In-depth examination and implementation of the field of industrial hygiene practice; focus on recognition, evaluation, and control of occupational health hazards.

PTTE 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: PTTE 432.

PTTE 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.

PTTE 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: PTTE 525.

PTTE 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: PTTE 525.

PTTE 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

PTTE 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)

Psychology Courses

Kenneth D. Locke, Dept. Chair, Dept. of Psychology and Communication Studies (206 Student Health Ctr. 83844-3043; phone 208/885-6324).

Prerequisite: Unless otherwise stated, Psyc 101 is a prerequisite to all other courses in this field. Unless a prerequisite is specifically stated, the prerequisite to all graduate courses is permission of department and instructor.

Psyc 101 Introduction to Psychology (3 cr)
May be used as core credit in J-3-d. 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)

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)

Psyc 204 (s) Special Topics (cr arr)

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)

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.

Psyc 311 Abnormal Psychology (3 cr)
Nature, causes, treatment, and prevention of patterns of emotional disturbances and personality disorders, including neuroses and psychoses.

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 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.

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.

Psyc 372 Physiological Psychology (3 cr)
Physiological bases of animal and normal human behavior.
Prereq: Psyc 101, and Biol 102 or higher

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 218

Psyc 400 (s) Seminar (cr arr)

Psyc 403 (s) Workshop (cr arr)

Psyc 404 (s) Special Topics (cr arr)

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 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.

Psyc J416/ID-J516 Industrial/Organizational Psychology (3 cr) WSU Psych 519
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 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.

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.

Psyc J435/ID-J535 Personnel Psychology (3 cr) WSU Psych 555
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.
Prereq: Psyc 416

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.

Psyc 444 Sensation and Perception (3 cr)
Fundamental processes and variables in sensory, perceptual, and cognitive experiences of humans.
Prereq: Psyc 218

Psyc ID446 Engineering Psychology (3 cr) WSU Psych 448
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.
Prereq: Psyc 218 or Stat 301 or Permission

Psyc 448 Psycholinguistics (3 cr)
See Engl 448.

Psyc J450/J550 Training and Performance Support (3 cr)
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.

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.

Psyc 456 Psychology of Emotion (3 cr)
Theories of emotion; biological and social variables influencing the activation of emotion.

Psyc J461/ID-J561 Human-Computer Interaction (3 cr) WSU Psych 561
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 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.

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.

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.

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.

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.

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.

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.

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.

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 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.

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 305 and 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 305, 483, and 484*
Prereq for 591: *Psyc 305, 583, and 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 472, 483, and 485*
Prereq for 592: *Psyc 572, 583, and 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 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.

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.

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 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 218 and 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: *Permission*

Psyc 498 (s) Internship (1-6 cr, max arr)
Directed internship in an approved setting that features psychological applications.
Prereq: *Permission*

Psyc 499 (s) Directed Study (cr arr)

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 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 ID516 Industrial/Organizational Psychology (3 cr) WSU Psych 519
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 WS533 Adult Psychopathology (3 cr) WSU Psych 533

Psyc ID535 Personnel Psychology (3 cr) WSU Psych 555
See Psyc J435/J535.

Psyc ID541 Social Psychology in the Workplace (3 cr) WSU Psych 541
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.
Prereq: *Permission*

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 ID561 Human-Computer Interaction (3 cr) WSU Psych 561
See Psyc J461/J561.

Psyc ID562 Advanced Human Factors (3 cr) WSU Psych 562
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.
Prereq: Psyc 446, and Psyc 586 or Stat 401; or Permission

Psyc WS565 Physiological Psychology (3 cr) WSU Psych 574
Neuoanatomical, neurochemical, and other biological cases of human and animal behavior.

Psyc WS566 Behavioral Pharmacology (3 cr) WSU Psych 577
Survey of drugs which affect brain function with emphasis on animal models and clinical applications.

Psyc WS567 Behavioral Neuroscience (3 cr) WSU Psych 579
Advanced topics in neurochemistry, neurophysiology, and neuroanatomy, as they relate to behavior.

Psyc WS568 Sensory Bases of Behavior (3 cr) WSU Psych 584
Sensory and physiological aspects of vision, audition, and other senses.

Psyc WS569 Foundations of Neuropsychology (3 cr) WSU Psych 575
Foundation in brain/behavior relationships and neuropathological syndromes; preparation for advanced training in neuropsychological assessment.

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 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

Rangeland Ecology and Management Courses

Karen L. Launchbaugh, Dept. Chair, Dept. of Rangeland Ecology and Management (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 102 Opportunities in Rangeland Ecology and Management (1 cr)
Basic principles, contemporary issues, and professional opportunities in rangeland management. Introduction to careers with ranches, land management agencies, consulting firms, and environmental organizations.

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 in this course. 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, 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 251 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 299 (s) Directed Study (cr arr)

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 116; or Plsc 205

REM 351 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 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 357 Rangeland and Riparian Habitat Assessment (3 cr)
Methods for inventory and monitoring of upland and riparian rangeland communities; basic sampling techniques used for measuring vegetation attributes and assessing production and utilization of vegetation for management purposes; evaluation of plant communities will be interpreted with respect to ecological health, watershed protection, and value as livestock and wildlife habitat. Two lec and one field trip/lab a wk. (Fall only).
Prereq: *Stat 251 or Permission*

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 Applied Spatial Analysis in Natural Resources (2 cr)
Course reviews basic GIS concepts emphasizing hands-on experience and independent problem solving. The overarching goal is to guide students towards excellence in assessing and analyzing management issues in natural resources with GIS and other spatial analysis techniques. (Fall only)

REM 403 (s) Workshop (cr arr)

REM 404 (s) Special Topics (cr arr)

REM 407 GIS Application in Fire Ecology and Management (1 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. (Spring only)
Prereq: *NR 402 or GIS Primer*

REM 410 Principles of Vegetation Measurement and Assessment (1 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 429 Landscape Ecology (3 cr)
See For 429.

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. Recommended Preparation: a course in general ecology. (Spring only).

REM 450 Global Environmental Change (3 cr)
See Geog 450.

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 454 Invasive Plant Management (3 cr)
Ecological principles and management options for invasive plant control on rangelands; focus on landscape-level management approaches including detection, monitoring, and prevention of weed invasions, restoration of weed-infested rangeland and coordinated weed management planning. One 2-day field trip. Recommended Preparation: PlSc 338. (Spring, Alt/odd yrs)

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 1-week field trip. Recommended Preparation: REM 251. (Spring only)

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.uidaho.edu/range459/]. Recommended Preparation: a course in general ecology or Permission (Fall only).

REM 460 Rangeland Ecology Current Topics and Field Studies (1 cr)
Discussion of topics related to changing knowledge and technology relevant to ecology of grasslands, shrublands and woodlands. Min. five discussion classes; 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.

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 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 527 Landscape Ecology of Forests and Rangelands (2-3 cr)
Ecological relationships of biotic communities in heterogeneous environments, spatial and temporal patterns, importance of landscapes in maintenance of ecosystem diversity and function. One 2-hr lecture/discussion a week based on extensive reading of current literature and case studies. In addition, those students taking 3 credits will meet an additional hour a week, focusing on quantitative landscape analysis, and they will participate in a 2-day field trip. (Spring only)
Prereq: Upper-division plant or animal ecology

REM 530 Stream Ecology (3 cr)
See Fish 530.

REM ID551 Rangeland Vegetation Ecology (3 cr) WSU NATRS 551
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. (Spring, Alt/odd yrs)
Prereq: Plant ecology and Permission

REM ID560 Plant Ecophysiology (3 cr) WSU NATRS 524
Functional responses and adaptations of individual plant species to their environment, emphasizing morphological and physiological mechanisms that influence plant establishment, the physical environment, below- and above-ground productivity, and plant interactions such as competition, herbivory, and allelopathy. (Fall only)
Prereq: A course in general ecology (i.e. REM 221) and general botany, or Permission [www.EcologyOnline.net]

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

Kathy Browder, Dept. Chair, Dept. of Health, Physical Education, Recreation and Dance (101 Phys. Ed. Bldg. 83844-2401; phone 208/885-7921).

Rec 102 Introduction to Recreation Professions (1 cr)
Intro to recreation and its related management problems, 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 106 Introductory Arboricultural Tree Climbing Techniques (1 cr)
Introduction to the techniques and skills required for arboricultural and recreational tree climbing. Course fee of $40.00 for equipment.

Rec 110 Recreation for People with Disabilities (3 cr)
Overview of recreation for special populations with emphasis on history, etiology, characteristics, services, resources, professional competencies and opportunities, and recreation programs. Two 1-day field trips may be required.

Rec 125 Outdoor Leisure Pursuits (2 cr)
Focus on wide range of outdoor leisure pursuits available in America, the public and private entities that administer them, and changes that increasing demand will necessitate in the future. Field trips required.

Rec 200 (s) Seminar (cr arr)

Rec 203 (s) Workshop (cr arr)

Rec 204 (s) Special Topics (cr arr)

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 208 Professional Involvement in Recreation (1 cr)
This course is designed to encourage students to gain exposure to the recreation and leisure profession by participating in professional development activities such as: conferences, workshops, seminars or special education programs.

Rec 220 Rock Climbing (1 cr)
Intro to fundamentals of basic rock climbing including equipment, climbing techniques, knots, belaying, and rappelling; emphasis on skill development, risk management, and leadership. Three off-campus field sessions. Recommended Preparation: Two courses from Rec 125, 320, 420, CSS 287, 387, 487, 490. (Alt/yrs)

Rec 221 Mountaineering (2 cr)
Intro 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. One 3-day field trip. Recommended Preparation: Rec 220 and two courses from Rec 125, 320, 420, CSS 287, 387, 487, 490. (Alt/yrs)

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 Rec 125, 320, 420, CSS 287, 387, 487, 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 Rec 125, 320, 420, CSS 287, 387, 487, 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: Rec 215; two courses from Rec 125, 320, 420, CSS 287, 387, 487, 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: Rec 215; two courses from Rec 125, 320, 420, CSS 287, 387, 487, 490, or Permission

Rec 226 Whitewater Canoeing (1 cr)
Introduction to fundamentals of tandem canoe paddling on whitewater rivers; equipment, trip planning, and paddling technique will be examined and practiced. One lec and 2 hrs of lab a wk; one 4- to 7-day field trip.
Prereq: Rec 215

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 243 Recreation Activities (2 cr)
See PEP 243.

Rec 254 Camp Leadership (3 cr)
Objectives, program, and philosophy of private, organizational, and school camp programs. One 3-4 day field trip. (Alt/yrs)

Rec 256 Camp Counseling Practicum (2-3 cr, max 3)
For camp counselors who are employed by or assigned to approved camps. Cr granted on the basis of one cr for each two wks of camping. Student contracts with instructor for written work.
Prereq: Permission

Rec 260 Historical Perspectives of Leisure and Society (3 cr)
History of and expanding role of leisure in 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 (1 cr, max 2)
Practical experience in agency recreation and leisure services. Forty clock hrs reqd a 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 320 Outdoor Recreation Leadership (2 cr)
Consideration and examination of successful outdoor recreation leaders; contemporary issues, effective trip planning, and evaluation of outdoor trips. (Alt/yrs.)

Rec 321 Wilderness Medicine and Evacuation (1 cr)
Fundamentals of handling wilderness emergencies; instruction including prevention, recognition, evaluation, treatment, and evacuation of injured people in remote situations. One 2-day field trip. (Alt/yrs)

Rec 340 Hospitality, Leisure, and Recreation Enterprises (3 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. (Alt/yrs)

Rec 365 Leisure and the Aging Process (3 cr)
Recreation programming for the elderly based on aging process, cultural influences, and psychological and sociological aspects; visitation and field experience reqd. (Alt/yrs)

Rec WS382 Hospitality Management and Organization (3 cr) WSU HBM 381
Same as CSS 381.

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 410 Trends and Legal Issues in Leisure Services (3 cr)
Current trends and legal issues in recreation and parks field; group discussion; background and experience in solving recreation problems through selected topics of current importance in recreation/parks field. (Alt/yrs)

Rec 420 Experiential Education (2 cr)
Philosophy and administration of adventure activities, initiative games, ropes courses, and their application to individual and group development; program development and staff development. Field trips required. (Alt/yrs)

Rec 455 Design & Analysis of Research in HPERD (3 cr)
Same as H&S 455 and PEP 455. This course is designed to survey the basic types of research methods often found in health, physical education, sport science, 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 health, physical education, recreation, and human performance 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

Rec 487 Recreation Program Planning and Marketing (1 cr)
Planning and development of recreation programs and implementation of marketing techniques; practical application emphasis.

Rec 493 Management of Leisure Services and Facilities (3 cr)
Planning and development; leadership, facilities, finances, services, and public relations. (Alt/yrs)

Rec 495 (s) Practicum in Tutoring (1 cr, max arr)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: Permission

Rec 498 (s) Internship in Recreation (cr arr)
Supervised field work with a professional recreation agency.
Prereq: Rec 280, 445, and Senior standing

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).

RelS 133 Religion and Family (2 cr)
Overview of influence of religion on dating, courtship, marriage, and family life.

RelS 204 (s) Special Topics (cr arr)

RelS 208 Italian Renaissance Art and Culture (3 cr)
See Art 208.

RelS WS280 Philosophy and Religion of Islam (3 cr) WSU Phil 280
See Phil 280.

RelS 302 Biblical Judaism: Texts and Thought (3 cr)
See Phil 302.

RelS 303 Early Christianity: Texts and Thought (3 cr)
See Phil 303.

RelS 307 Buddhism (3 cr)
See Phil 307.

RelS 311 Development of Social Theory (3 cr) (RelS 414)
See Soc 311.

RelS WS314 Philosophies and Religions of India (3 cr) WSU Phil 314
See Phil 314.

RelS WS315 Philosophies and Religions of China and Japan (3 cr) WSU Phil 315
See Phil 316.

RelS 327 Belief Systems (3 cr)
See Anth 327.

RelS 375 The Bible as Literature (3 cr)
See Engl 375.

RelS 404 (s) Special Topics (cr arr)

RelS WS407 Seminar in Philosophy of Religion (3 cr) WSU Phil 407
See Phil 413.

RelS 413 Psychology of Religion (3 cr)
See Psyc 413.

RelS 422 Plateau Indians (3 cr)
See Anth 422.

RelS 423 Religion, Culture and Society (3 cr)
See Soc 422.

RelS 442 The Medieval Church: Europe in the Early and High Middle Ages (3 cr)
See Hist 442.

RelS 443 The Medieval State: Europe in the High and Late Middle Ages (3 cr)
See Hist 443.

RelS 448 The Reformation (3 cr)
See Hist 448.

Sociology Courses

Donald E. Tyler, Chair, Dept. of Sociology and Anthropology (101 Phinney Hall 83844-1110; phone 208/885-6751).

Prerequisite: The successful completion of Soc 101 is required for enrollment in upper-division sociology courses; exceptions by permission.

Soc 101 Introduction to Sociology (3 cr)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. Contemporary social issues and personal deviations; crime and delinquency, poverty and wealth, drugs, sexual variations, racism, sexism, and the environment.

Soc 240 Introduction to Social Services (3 cr)
Survey of the field of social welfare and contemporary social services. (Alt/yrs)
Prereq: *Soc 101 and 230*

Soc 250 Social Conflict (3 cr)
May be used as core credit in J-3-d. 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.
Prereq: *Soc 101*

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.

Soc 310 Methods of Social Research (3 cr)
Principal methods of data collection, analysis, and interpretation.
Prereq: *Stat 251; departmental major or minor*

Soc J311/J514 Development of Social Theory (3 cr) (Soc 414)
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.

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.

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, 230, 240, and sociology major, or Permission*

Soc 320 Sociology of Substance Abuse (3 cr)
Sociological-psychological analysis of etiology, epidemiology, prevention, and treatment of substance abuse in U.S.; major focus on family issues (including marital relationships, co-dependency) and lifestyle changes; dynamics of social change, subcultures, and symbolic functions attached to drug abuse; issues related to gender, occupational functioning, AIDS, and other topics.

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.
Prereq: *Soc 101*

Soc 325 Sociology of the Family (3 cr)
Comparative and historical analysis of family systems, principles of social organization of the family; macroanalysis of kinship structures.

Soc 330 Juvenile Delinquency (3 cr)
Extent, causes, and control of juvenile delinquent behavior.

Soc 331 Criminology Theory (3 cr)
Review and assessment of common explanations of crime, deviant behavior and control. One 1-day field trip.

Soc 332 Corrections (3 cr)
Same as JS 332. History, facilities, processes, and strategies for correction and punishment of offenders; analysis of concepts of prevention and control of crime. A one-day field trip.

Soc 333 Elite and White Collar Crime (3 cr) (JS 333)
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.

Soc 334 Police and Social Control (3 cr) (JS 320)
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. A one-day field trip.

Soc 335 Terrorism, Society and Justice (3 cr)
See JS 335.

Soc 336 Comparative Criminal Justice Systems (3 cr) (JS 350)
Comparative study of justice systems in selected foreign countries. (Alt/yrs)

Soc 339 Crime and the Media (3 cr) (JS 340)
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 250 and/or Soc 301.
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 367 (s) Global Justice (3 cr, max arr)
See Phil 367.

Soc 400 (s) Seminar (cr arr)

Soc 401 Justice Policy Issues (3 cr) (JS 401)
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: *Senior standing and departmental major or minor or Permission*

Soc 403 (s) Workshop (cr arr)

Soc 404 (s) Special Topics (cr arr)

Soc 422 Religion, Culture & Society (3 cr)
Same as RelS 423. 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.

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 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.

Soc 439 Inequalities in the Justice System (3 cr) (JS 422)
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.

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, neo-liberalism, 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. Recommended Preparation: Soc 250 or Soc 301.
Prereq: *Soc 101*

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 491 Seminar in Professional Ethics and Diversity (3 cr)
See Phil 491.

Soc 495 (s) Practicum in Tutoring (1 cr, max 2)
Tutorial services performed by advanced students under faculty supervision. Graded P/F.
Prereq: *Permission*

Soc 498 (s) Internship (1-6 cr, max arr)
Supervised professional field experience in human service organizations. Graded P/F.
Prereq: *departmental major and Permission*

Soc 499 (s) Directed Study (cr arr)
Intended to accommodate a wide variety of sociological topics.
Prereq: *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

Robert L. Mahler, Division Chair, Soil and Land Resources Division (242 Iddings Wing, Ag. Sc. Bldg. 83844-2339; phone 208/ 885-7025; bmahler@uidaho.edu).

Soil 205 The Soil Ecosystem (3 cr)
May be used as core credit in J-3-b. 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 core 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 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. (Alt/yrs, Fall)

Soil ID416 Sustainable Small Acreage Farming and Ranching (3 cr) WSU SoilS 404
Overview of small acreage production systems, evaluation of goals and resources, land evaluation, marketing options, and accessing community resources. Three field trips.

Soil 422 Environmental Soil Chemistry (3 cr)
Chemical processes in soil environment. Recommended Preparation: Soil 205, 206, and Chem 112 or 113. (Alt/yrs)

Soil J425/J525 Microbial Ecology (3 cr)
See MMBB J425/J525.

Soil 437 Soil Biology (3 cr)
Introduction to soil organisms including bacteria, fungi, and macroinvertebrates and the influence of their activities on soil processes. Two lec and one 3-hr lab a wk. Recommended Preparation: Soil 205 and MMBB 250. (Alt/yrs)

Soil 438 Pesticides in the Environment (3 cr)
Same as Ent and PlSc 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 ID&WS442 Environmental Research Methods (3 cr) WSU SoilS 442
Field and laboratory characterization of soil, plant, and water samples in relation to plant growth and environmental problem solving; includes independent or team projects.
Prereq: *Soil 205 and 422*

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 Soil Development and Classification (3 cr)
Relationship of soil development to soil properties; soil profile descriptions and classification. Two lec and one 2-hr lab a wk; two 1-day or one 2-day field trips. Recommended Preparation: Soil 205 and 206.

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.
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 515 Soil and Environmental Physics (3 cr)
See Soil J/415/J515.

Soil 525 Microbial Ecology (4 cr)
See MMBB J425/J525.

Soil ID537 Soil Biochemistry (3 cr) WSU SoilS 537
Origin, chemical structure, and significance of soil biochemical compounds. (Alt/yrs)
Prereq: *Soil 422, MMBB 380, MMBB 250 or Permission*

Soil 546 Drinking Water and Human Health (3 cr)
See EnvS J446/J546.

Soil ID547 (s) Soil Fertility Management (1-3 cr, max 3) WSU SoilS 547
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 ID557 Advanced Soil Genesis and Classification (3 cr) WSU SoilS 557
Processes of soil genesis as influenced by environmental factors; rationale and development of soil taxonomy; field study of pedological problems. Two lec and one 2-hr lab a wk; 1/2-day and 1-day field trips reqd.
Prereq: *Soil 454 or Permission (Alt/yr)*

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)

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 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 460 Early Childhood Assessment (3 cr)
Overview of the assessment process, link between assessment and curriculum planning, cultural responsiveness in assessment, legal issues and family partnerships. Review and experience with various types of strategies and tools for screening and assessing infants and young children ages birth through 8 across all developmental domains. Recommended Preparation: FCS 234 and 235. (Fall and Summer only)

EDSP 461 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 to curriculum, designing instructional programming for natural settings and formal settings; involving families, collaboration among professionals, working with volunteers and paraprofessionals. Recommended Preparation: FCS 234 and 235, EDSP 460. (Spring only)

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 490 Infant Practicum (7-10 cr)
Direct practical experience in settings serving typically and atypically developing infants: ages birth to 35 months. Demonstration of screening, assessment, development of IFSP, programming n natural environments, working closely with parents to increase their roles as partners and collaboration among service providers.
Prereq: *EDSP 460, 461 or Permission*

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 521 Introduction of Evaluation of Children and Youth (2 cr)
EDSP 521 carries no credit after EDSP 425. This course provides special educators with the skills necessary to plan, conduct, and use assessment information to assist in determining eligibility of students for special education services and planning services for students with disabilities. (Spring only)
Prereq: *EDSP 501*
Coreq: *EDSP 597 (1 cr)*

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 or EDSP 521*

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 544 Advanced Applied Behavior Analysis and Positive Behavior Support (3 cr)
Focus on advanced applications of applied behavior analysis, positive behavior support for students with significant behavioral challenges. Students map positive behavior support practices; complete comprehensive functional assessment of students with conduct disorders, mental illness, and cognitive impairment; develop comprehensive data-based behavioral supports plan; practice application of advanced behavior change techniques. (Spring only)
Prereq: *EDSP 540 and a standard exceptional child certificate or equivalent*

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 578 Curriculum and Assessment for Students with Severe Disabilities 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 Severe Disabilities 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 580 Consulting Teacher (3 cr)
Emphasis on models of consultation; role and responsibility of positions; skills necessary to establish productive, collaborative relationships with school personnel; systems change theory. (Alt/yrs)

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

Rick L. Edgeman, Chair, Bi-State 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 and 301 or for both Stat 251 and 271.

Stat 150 Introduction to Statistics (3 cr)
May be used as core credit in J-3-c. 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)
May be used as core credit in J-3-c. Cr is not given for Stat 251 after Stat 271 or Stat 301. 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: *Math 137, 143, 160, 170, or 2 yrs of high school algebra and Permission*

Stat 262 Decision Analysis (1 cr)
May not be taken for credit after Stat 271. An overview of basic components of decision theory, conditional probability, and Bayesian analysis.
Prereq or Coreq: *Stat 251*

Stat 271 Statistical Inference and Decision Analysis (4 cr)
Credit not allowed for both Stat 271 and 251 or for both Stat 271 and 301. Introduction to statistical methods including probability, decision theory, confidence intervals, hypothesis testing, correlation, regression, and nonparametric techniques. May involve evening exams.
Prereq: *Math 160 or 170*

Stat 301 Probability and Statistics (3 cr)
Intended for engineers, mathematicians, and physical scientists. Cr not given for both Stat 251 and 301 or for both Stat 271 and 301. Intro to sample spaces, random variables, statistical distributions, hypothesis testing, basic experimental design, regression, and correlation.
Prereq: *Math 175*

Stat ID401 Statistical Analysis (3 cr) WSU Stat 401
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.
Prereq: *Stat 251, 271, or 301*

Stat WS412 Biometry (3 cr) WSU Stat 412

Stat ID&WS422 Sample Survey Methods (3 cr) WSU Stat 422
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.
Prereq: *Stat 251, 271, or 301*

Stat 423 Beginning SAS Programming (1 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. Graded Pass/Fail.
Prereq: *Stat 251, 271, or 301*

Stat 424 Intermediate SAS Programming (1 cr)
SAS programming with several SAS modules such as SAS/Graph, SAS/IML, and SAS/Macro language. Graded Pass/Fail.
Prereq: *Stat 251, 271, or 301 and Stat 423 or Equivalent experience*

Stat 425 Topics in SAS Programming (1 cr)
Topics in SAS programming, such as covering particular SAS modules in depth. Graded Pass/Fail.
Prereq: *Stat 251, 271, or 301*

Stat ID428 Geostatistics (3 cr)
See GeoE 428.

Stat 433 Econometrics (3 cr)
See Econ 453.

Stat ID446 Six Sigma Innovation (3 cr) WSU Stat 446
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 401. (Spring, Alt/yrs)
Prereq: *Stat 251, Stat 271, or Stat 301*

Stat ID&WS451 Probability Theory (3 cr)
See Math 451.

Stat ID&WS452 Mathematical Statistics (3 cr) WSU Math and Stat 456
See Math 452.

Stat ID&WS-J453/ID&WS-J544 Stochastic Models (3 cr) WSU Stat 544
See Math J453/J538.

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 ID507 Experimental Design (3 cr) WSU Stat 507
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.
Prereq: Stat 401

Stat 511 Design for Six Sigma and Lean Management (3 cr)
See Bus 531.

Stat WS513 Advanced Topics in Mathematical and Quantitative Methods (1-6 cr, max 12) WSU Stat 513
Topics may include advanced econometrics, dynamic optimizations, computer applications, methodology.
Prereq: Permission

Stat ID514 Nonparametric Statistics (3 cr) WSU Stat 514
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.
Prereq: Stat 401

Stat WS518 Techniques of Sampling (3 cr) WSU Stat 518
Sample surveys for business use; theory and application with emphasis on appropriate sample types and the estimation of their parameters.
Prereq: Permission

Stat ID&WS519 Multivariate Analysis (3 cr) WSU Stat 519
The multivariate normal, Hotelling's T^2, multivariate general linear model, discriminant analysis, covariance matrix tests, canonical correlation, and principle component analysis.
Prereq: Stat 401

Stat WS520 Statistical Analysis of Qualitative Data (3 cr) WSU Stat 520

Stat WS522 Biostatistics and Statistical Epidemology (3 cr) WSU Stat 522
Rigorous approach to biostatistical and epidemiological methods including relative risk, odds ratio, cross-over designs, survival analysis and generalized linear models.

Stat WS527 Quality Control (3 cr) WSU Stat 572
Simple quality assurance tools; process monitoring; Shewhart control charts; process characterization and capability; sampling inspection; factorial experiments.

Stat WS534 Analyses of Mixed Linear Models (3 cr) WSU Stat 534
Theory and applications of generalized linear mixed models, nonlinear mixed effects models and meta-analysis.

Stat WS539 Time Series (3 cr) WSU Stat 516

Stat WS542 Applied Stochastic Models (3 cr) WSU Stat 542
Stochastic processes, Markov models, stochastic dynamic programming, queues and simulation applied to business problems.
Prereq: Permission

Stat ID&WS544 Stochastic Models (3 cr)
See Math J453/J538.

Stat 546 Spatial Statistics (3 cr)
See Geog 542.

Stat ID&WS550 Regression (3 cr) WSU Stat 535
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.
Prereq: Math 330 and Stat 451
Coreq: Stat 452

Stat WS552 Econometrics II (3 cr) WSU Stat 552
Econometric methods for systems estimation; simultaneous equations, discrete and limited dependent variable, panel data, and time series data.
Prereq: Permission

Stat ID555 Statistical Ecology (3 cr)
See WLF 555.

Stat ID&WS565 Computer Intensive Statistics (3 cr) WSU Stat 536
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. (Alt/yrs)
Prereq: Stat 451, Stat 452, Math 330, and computer programming experience or Permission

Stat WS566 Analyzing Microarray and Other Genomic Data (3 cr) WSU Stat 565
Statistical issues from pre-processing (transforming, normalizing) and analyzing genomic data (differential expression, pattern discovery and predictions).

Stat ID&WS571 Reliability Theory (3 cr) WSU Math 573
Statistical concepts; stochastic material strengths and lifetimes; strength versus safety analysis; reliability of coherent systems; maintenance models; complex systems. (Alt/yrs)
Prereq: Math 451

Stat ID&WS575 Theory of Linear Models (3 cr) WSU Stat 533
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.
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

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)
May be used as core credit in J-3-d. For nonmajors. 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 (4 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. Three lec and six hrs of lab a wk.

The 104 Theatre Technology II (4 cr)
Methods of costume construction techniques; intro to masks, sewing, millinery, and costume craft skills. Three lec and six hrs of lab a wk.

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*

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 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 221 History of World Cinema I (3 cr)
May be used as core credit in J-3-d. Introduction to film history; a comprehensive survey of the major film movements from the birth of the cinema to the mid 20th Century.

The 222 History of World Cinema II (3 cr)
May be used as core credit in J-3-d. Introduction to modern film history; a comprehensive survey of the major film movements from the mid 20th Century to the contemporary cinematic scene.

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 105-106*

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) (The 207)
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*

The 311 Pattern Development (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*

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 386 Documentary Film (3 cr)
May be used as core credit in J-3-d. An examination of the historical development of nonfiction film. 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.

The 390 (s) Theatre Practice (cr arr)
Open to nonmajors. Practical experience in all aspects of theatre production and performance.

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)
Advanced design studio.
Prereq: *The 201, 202, and 205; or Permission*

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*

The 411 Theatre Methods (1 cr)
Students learn ways of introducing drama to the classroom in a variety of unique teaching methodologies, including improvisation, role-playing, theatre games and scripted materials.

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 J421/J521 Advanced Theatre Management (3 cr)
Studies in advanced computer application, people skills, and theatre management techniques. Specific emphasis on Actors Equity rules and regulations, professional production models, production management, and artistic direction. Additional projects/assignments required for graduate credit.
Prereq: The 320

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 J445/J545 Film & Theatre of the Holocaust (3 cr)
This course studies the plays and films of the Holocaust examining the unique relationship between historical fact and the artist's response to the impact of those facts on the human character. The course treats the films and dramatic literature of the Holocaust as a unique genre of "survivalist" literature of atrocity, which is as much a response to one of history's darkest periods as it is an emergence of a new artistic form. Additional projects/assignments required for graduate credit.

The 451 Nonverbal Communication (3 cr)
See Comm 421.

The 463 Advanced Costume Technology (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

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. Four hrs of lab a wk.

The 465 Advanced Scene Design (3 cr)
Development of a conceptual approach to design through assorted design projects. Recommended Preparation: The 464.

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

The J467/J567 Asian Theatre History (3 cr)
The 467 only: *May be used as core credit in J-3-d.* This historical survey examines the structure and form of traditional Asian theatre, viewed within the religious, sociological and aesthetic contexts of the culture. Theatre, dance, puppetry and mask performances of India, Indonesia, China and Japan will form the basis of our examination. Additional projects/assignments required for graduate credit. (Alt/yrs)

The 468 Theatre History I (3 cr)
May be used as core credit in J-3-d. 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)
May be used as core credit in J-3-d. 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. Recommended Preparation: The 205.

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 521 Advanced Theatre Management (3 cr)
See The J421/J521.

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)
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.
Prereq: Permission

The 545 Film & Theatre of the Holocaust (3 cr)
See The J445/J545.

The 567 Asian Theatre History (3 cr)
See The J467/J567.

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

Veterinary Science Courses

Carl W. Hunt, Dept. Head, Dept. of Animal and Veterinary Science (213 Ag. Sc. Bldg. 83844-2330; phone 208/885-6345; angelac@uidaho.edu).

Note: Courses in this subject field that have a WS prefix are open only to students who have veterinary science graduate student status or by permission of the director of the Idaho faculty of the WOI Regional Program in Veterinary Medical Education.

VS 499 (s) Directed Study (cr arr)

VS 500 Master's Research and Thesis (cr arr)

VS 501 (s) Seminar (cr arr)

VS 502 (s) Directed Study (cr arr)

VS 504 (s) Special Topics (cr arr)

VS 598 (s) Internship (cr arr)

Virtual Technology and Design Courses

Brian F. Sumption, Coordinator (120 Art and Architecture North; phone 208/885-7083; sumption@uidaho.edu)

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 the application of current 3D digital modeling techniques in virtual design. Two 1-1/2hr lecture/lab a wk and associated work.

VTD 245 Advanced Modeling (3 cr) (VTD 345)
Exploration of methods for creating virtual objects and environments including visualization techniques and geometry optimization. Study of mesh, patch and NURBS modeling. 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) (VTD 346)
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, Art 122 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 computer-generated animation from concept to postproduction; focus includes 3D methods, time/motion scripting, scene development and rendering processes; examines methods for wide range of applications. Two 1-1/2hr lecture/lab a wk and associated work. (Spring only)
Prereq: VTD 244 or Permission

VTD 271 Interactive Technologies (3 cr) (VTD 371)
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 344 Computer-Aided Design (2 cr)
Exploration of computer technologies used to investigate, verify, and present design decisions; emphasis directed toward topics relevant to the representation of built forms and design knowledge.

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 advanced methods for communicating information through 3D computer-generated animation tools. Projects focus on issues associated with topics ranging from physics-based interactions to motion

capture and rigging structures. Three 1hr lecture/lab a wk and associated work. (Spring only)
Prereq: VTD 366 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 371; or Permission

VTD 400 (s) Seminar (cr arr)

VTD 404 (s) Special Topics (cr arr)

VTD 457 Capstone Design Studio I (9 cr)
Sequential contract courses built around the collective content of five interdisciplinary clusters; research, design & implementation of comprehensive virtual design project. Three 4-hr studios a wk and associated work.
Prereq: VTD 356

VTD 458 Capstone Design Studio II (9 cr)
Sequential contract courses built around the collective content of five interdisciplinary clusters; research, design & implementation of comprehensive virtual design project. Three 4-hr studios a wk and associated work.
Prereq: VTD 457

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; http://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 600 Doctoral Research and Dissertation (cr arr)

Wildlife Resources Courses

Kerry Paul Reese, Dept. Head, Dept. of Fish and Wildlife Resources (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 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 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 WS-J431/WS-J531 Wildlife Nutrition (3 cr) WSU NATRS 431/531
Nutritional requirements and interactions of wildlife populations. (Spring only).

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 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 WS531 Wildlife Nutrition (3 cr) WSU NATRS 531
See WLF J431/J531

WLF ID540 Conservation Genetics (3 cr) WSU Biol 540
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 401 or Permission*

WLF ID545 Wildlife Habitat Ecology (2-3 cr) WSU NATRS 542
Reading and discussion on habitat concepts, analyses, and applications. Students enrolled in the 3rd credit will complete additional readings and quatitative problem sets.
Prereq: *WLF 492 or Permission, animal and plant ecology*

WLF ID546 Upland Game Ecology (2 cr) WSU NATRS 546
Ecology and management of forest and rangeland wildlife species. Three days of field trips. (irregular offering)
Prereq: *Permission*

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 ID555 Statistical Ecology (3 cr) WSU Stat 555
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. (Spring, Alt/yrs)
Prereq: *Math 451 or Permission*

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)
May be used as core credit in J-3-d. 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 499 (s) Directed Study (cr arr)

FACULTY

M. Duane Nellis, President; Doug Baker, Provost; John A. Miller, Chair of the Faculty Council (2009-10); Rod Hill, 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, John T.; 2009; Assistant Professor of Geogrpahy; Ph.D.; University of California Irvine; 2006.

ABBOTT, Richard D.; 1991; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; University Of Idaho; 1983.

ABDEL-RAHIM, Ahmed S.; 2002; #Associate Professor of Civil Engineering (P.E.); Ph.D.; Michigan State University; 1998.

ABDO, Zaid O.; 2005; #Assistant Professor of Mathematics and Statistics; Adjunct Assistant Professor of Bioinformatics and Computational Biology; Ph.D.; University of Idaho; 2005.

ABO, Barbara B.; 1976; Extension Professor and Ada County Extension Educator (Family and Consumer Science/4-H Youth Development); M.S.; Iowa State University; 1975.

ABO, Hirotachi; 2006; #Assistant Professor of Mathematics; Ph.D.; Saarland University; 2002.

ADAMS, Anne E.; 2008; Assistant Professor of Curriculum and Instruction; M.A.; University of California Davis; 1982.

ADMASSU, Wudneh; 1992; #Professor of Chemical Engineering; Department Chair, Department of Chemical and Materials Engineering; Ph.D.; University Of Idaho; 1984.

AFFLECK, Stephen B.; 1988; Affiliate Associate Professor of Chemical Engineering; Ph.D.; Iowa State University; 1980.

AGENBROAD, Ariel L.; 2008; Assistant Extension Professor and Canyon County Extension Educator (Horticulture, Small Acreage); M.S.; University of Idaho; 2007.

AHMADZAHEH, Amin; 2000; #Associate Professor of Dairy Management; Ph.D.; Virginia Polytechnic Institute; 1998.

AIKEN, Katherine G.; 1984; #Professor of History; Dean, College of Letters, Arts and Social Sciences; Ph.D.; Washington State University; 1980.

AIZEN, Elena M.; 2001; Adjunct Associate Professor of Geography; Ph.D.; Russian Academy of Sciences; 1986.

AIZEN, Vladimir; 2001; #Research Professor of Geography; Adjunct Professor of Environmental Science; Ph.D.; Russian Academy of Sciences; 1988.

AKUJUOBI, Cajetan; 1998; Affiliate Associate Professor of Electrical Engineering; Ph.D.; George Mason University; 1995.

ALBANO, Richard K.; 1991; Affiliate Assistant Professor of Physics; Ph.D.; University of California Los Angeles; 1989.

ALBERTSON-PLOUCHA, Helen; 2009; Senior Instructor of Law; Associate Dean of Administration and Students, College of Law; J.D.; Temple University; 1997.

ALBRECHT, Carol Padgham; 1989; #Associate Professor of Music (oboe, music history); Ph.D.; Kent State University; 2008.

ALEKSANDER, Adam K.; 2000; Affiliate Associate Professor of Mechanical Engineering; Ph.D.; Texas A&M University; 1995.

ALESSI, R. Samuel; 2001; #Affiliate Assistant Professor of Mechanical Engineering; Ph.D.; North Dakota State University; 1989.

ALHASSAN, Abubakar D.; 2008; Assistant Professor of Journalism and Mass Media; Ph.D.; University of Florida; 2008.

ALLEN, Charles A.; 1986; Affiliate Professor of Chemistry; Ph.D.; Oregon State University; 1969.

ALLEN, Richard G.; 1998; #Professor of Biological and Agricultural Engineering and of Civil Engineering (P.E.); Ph.D.; University of Idaho; 1984.

ALLEN, Theresa M.; 1999; Lecturer in Mathematics; Ph.D.; University of Washington; 1993.

ALVAREZ, Juan M.; 2001; Associate Professor of Entomology; Ph.D.; University of Florida; 2000.

ALVES-FOSS, James; 1991; #Professor of Computer Science; Adjunct Professor of Electrical and Computer Engineering; Ph.D.; University of California Davis; 1991.

ANDERS, Paul J.; 2003; Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; University of Idaho; 2002.

ANDERSON, Cort L.; 2002; #Assistant Research Professor of Fish and Wildlife Resources; Adjunct Assistant Professor of Forest Resources; Ph.D.; Yale University; 1991.

ANDERSON, Erik T.; 1987; #Extension Professor of Agricultural Information; Director of Agricultural Communication; Ph.D.; University of Idaho; 1997.

ANDERSON, Janice Capel; 1985; #Professor of Philosophy and Religious Studies; Ph.D.; University of Chicago; 1985.

ANDERSON, John W.; 2008; Assistant Professor of Virtual Technology and Design; M.S.; University of Idaho; 2006.

ANDERSON, Mark D.; 1982; Professor of Law; J.D.; University of Chicago; 1977.

ANDERSON, Michael J.; 1989; #Professor of Mechanical Engineering; Ph.D.; Washington State University; 1989.

ANDERSON, Miranda S.; 2007; Assistant Professor of Interior Design; M.Arch.; University of Idaho; 1999.

ANDERSON, Trudy J.; 2003; Adjunct Professor of Adult, Career, and Technology Education; Associate Vice President and Center Executive Office, Boise; Ph.D.; Ohio State University; 1988.

ANWAY, Matthew D.; 2007; Assistant Professor of Biological Sciences; Ph.D.; Washington State University; 2000.

ANZALDO-GONZALEZ, Demetrio; 2007; Assistant Professor of Foreign Languages and Literatures (Spanish); Ph.D.; University of California Irvine; 2001.

APA, Anthony Dean; 2005; Affiliate Assistant Professor; Ph.D.; University of Idaho; 1998.

APEL, William A.; 1993; Affiliate Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; Ohio State University; 1978.

ARAJI, Ahmed A.; 1968; #Professor of Agricultural Economics; Ph.D.; University of Missouri; 1968.

ARION, Teri A.; 2001; Catalog Librarian with rank of Assistant Professor; M.L.S.; University of Wisconsin; 1999.

ARMPRIEST, Diane E.; 2001; #Associate Professor of Architecture; Program Coordinator of Architecture and Interior Design; M.Arch.; University of Oregon; 1997.

ARNETT, Ronald C.; 1996; Affiliate Assistant Professor of Geology; M.S.; University of Washington; 1986.

ARRIZABALAGA, Gustavo; 2004; #Associate Professor of Microbiology, Molecular Biology, and Biochemistry; Ph.D.; Massachusetts Institute of Technology (MIT); 1999.

ASSEFI, Touraj; 1995; #Professor of Electrical Engineering; Ph.D.; University of Southern California; 1973.

ASTON, D. Eric; 2001; #Associate Professor of Chemical Engineering; Adjunct Associate Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; University of Washington; 2001.

ATKINSON, David A.; 1996; #Affiliate Assistant Professor of Chemistry; Ph.D.; Washington State University; 1992.

ATKINSON, David H.; 1989; #Professor of Electrical Engineering; Ph.D.; Washington State University; 1989.

ATTEBURY, Ramirose I.; 2008; Reference/Instruction Librarian with rank of Assistant Professor; M.A.; Central Washington University; 2007.

AUSTIN, Gary; 1991; #Associate Professor of Landscape Architecture; M.L.A.; California State Polytechnic; 1981.

AUTUMN, Kellar; 2009; Affiliate Professor of Biological Sciences; Ph.D.; University of California Berkeley; 1995.

AWWAD-RAFFERTY, Rula Z.; 1998; #Associate Professor of Interior Design; Adjunct Associate Professor of Environmental Science; Interior Design Program Coordinator; Ph.D.; Washington State University; 1995.

AY, Suat U.; 2007; #Assistant Professor of Electrical and Computer Engineering; Ph.D.; University of Southern California; 2005.

AYERS, Arthur R.; 2006; Affiliate Professor of Biological Sciences; Ph.D.; University of Colorado; 1975.

AYERS, M. Wayne; 2007; #Assistant Professor of Animal and Veterinary Science; Ph.D.; Washington State University; 1992.

BABCOCK, Virgina M.; 2008; Lecturer in Sociology, Anthropology and Justice Studies; Ph.D.; Washington State University; 1995.

BABOVIC, Valdan; 1997; Affiliate Assistant Professor of Civil Engineering; Ph.D.; International Institute for Infrastructure; 1995.

BAGLIETTO, Emilio; 2008; Affiliate Associate Professor of Mechanical Engineering; Laurea (Doctor); University of Pisa; 2002.

BAILEY, J. Franklin; 1984; Adjunct Instructor in Materials Science and Engineering and Metallurgical Engineering; Supervisor, Electron Microscopy Center; M.S.; Texas A&M University; 1971.

BAILEY, Jeffrey J.; 1991; #Professor of Management, Marketing and Operations; Adjunct Professor of ETHICS, Center for ETHICS; Ph.D.; University of Akron; 1991.

BAIRD, Lynn N.; 1974; Head, Access Services, University Library, with rank of Professor; Dean, University Library; M.P.A.; University of Idaho; 1979.

BAKER, Douglas D.; 2005; Professor of Management, Marketing and Operations; Provost and Executive Vice President; Ph.D.; University of Nebraska; 1983.

BAKER, Leslie L.; 2000; Affiliate Assistant Professor of Geological Sciences; Ph.D.; Brown University; 1996.

BAKER, R. Jacob; 1993; #Affiliate Assistant Professor of Electrical Engineering; Ph.D.; University of Nevada Reno; 1993.

BAKER, Sarah D.; 2009; Assistant Extension Professor and Extension Educator (Animal Science); M.S.; University of Idaho; 2005.

BAKER-EVELETH, Lori; 2003; #Associate Professor of Information Systems; Ph.D.; Washington State University; 2003.

BALDECK, Eugene M.; 1981; Affiliate Clinical Professor of Medical Science; M.D.; University of Washington; 1959.

BALDUS, Ronald J.; 1981; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; University of Idaho; 1979.

BALDWIN, Carol A.; 2010; Adjunct Assistant Professor of Adult, Career and Technology Education; Ph.D.; University of Idaho; 2006.

BALEMBA, Onesmo B.; 2008; Assistant Professor of Medical History/Biological Sciences; Ph.D.; Royal Veterinary and Agricultural University; 2001.

BANKS, Anna; 1989; #Associate Professor of Theatre and Film; Ph.D.; University of Southern California; 1989.

BANKS, Stephen P.; 1989; #Professor of Communication; Ph.D.; University of Southern California; 1987.

BARABASZ, Arreed F.; 2002; Affiliate Professor of Physical Education/Sport Psychology; Ph.D.; University of Canterbury; 1981.

BARANNYK, Lyudmyla; 2007; Assistant Professor of Mathematics; Ph.D.; New Jersey Institute of Technology; 2003.

BARANOWSKI, John D.; 1996; Affiliate Associate Professor of Food Science and Toxicology; Ph.D.; Washington State University; 1982.

BARBOUR, James D.; 1996; #Associate Professor of Entomology; Ph.D.; North Carolina State University; 1992.

BARLOW, Fred D. III; 2006; #Associate Professor of Electrical and Computer Engineering; Ph.D.; Virginia Polytechnic Institute; 1999.

BARNES, Gregory O.; 2002; Affiliate Associate Professor of Electrical and Computer Engineering; M.S.; University of Idaho; 1990.

BARNES, Gwendolyn; 2008; Assistant Research Professor of Physics; Ph.D.; University of Arizona; 2007.

BARNES, Jason W.; 2008; Assistant Professor of Physics; Ph.D.; University of Arizona; 2004.

BARNES, Kim M.; 2000; #Associate Professor of English; M.F.A.; University of Montana; 1995.

BARNEY, Danny L.; 1988; #Extension Professor of Horticulture; Superintendent of the Sandpoint Research and Extension Center; Ph.D.; Cornell University; 1987.

BARRASH, Warren; 1991; Affiliate Professor of Geological Engineering; Ph.D.; University of Idaho; 1986.

BARROWS, Frederic T.; 2006; Affiliate Professor of Animal and Veterinary Sciences; Ph.D.; Iowa State University; 1987.

BARSKY-SHOAF, Debonny L.; 1988; Affiliate Assistant Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; Pittsburgh School of Medicine; 1981.

BARSNESS, Wylla D.; 1990; Affiliate Professor of Adult, Career, and Technology Education; Ph.D.; University of Minnesota; 1969.

BART, Gwendolyn D.; 2008; Affiliate Assistant Professor of Physics; Ph.D.; University of Arizona; 2007.

BARTOLINO, James R.; 2005; Affiliate Assistant Professor of Geological Sciences; Ph.D.; Texas Technology University; 1991.

BARTON, Benjamin K.; 2008; #Assistant Professor of Psychology and Communication Studies; Ph.D.; University of Alabama; 2005.

BATDORF, James A.; 1989; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; University of Idaho; 1988.

BATHURST, Pamela G.; 1997; #Associate Professor of Music (voice); M.Mus.; University of Michigan; 1978.

BAUER, Michael E.; 2007; Assistant Extension Professor and Bonner Country Educator of Horticulture; Ph.D.; University of Idaho; 1989.

BAUSCHER, Richard H.; 1990; Affiliate Assistant Professor of Educational Administration; Ed.D.; Washington State University; 1984.

BAYOMY, Fouad M.; 1991; #Professor of Civil Engineering (P.E.); Ph.D.; Ohio State University; 1982.

BEAN, Randy R.; 1978; Affiliate Professor of Veterinary Medicine; D.V.M.; Washington State University; 1972.

BEARD, D. Benjamin; 1987; Professor of Law; J.D.; Case Western Reserve University; 1982.

BECHINSKI, Edward J.; 1982; #Extension Professor of Entomology; Ph.D.; Iowa State University; 1982.

BECK, Gerald L.; 1988; Affiliate Assistant Professor of Adult, Career, and Technology education; Ed.D.; University of Idaho; 1987.

BEECHAM, John J. Jr.; 2001; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; University of Montana; 1980.

BEISER, Michael E.; 1983; Adjunct Instructor in Recreation; Coordinator, Outdoor Programs; B.A.; Washington State University; 1983.

BEITEL, George A.; 1991; Affiliate Associate Professor of Physics and Electrical Engineering; Ph.D.; University of Wisconsin; 1969.

BELL, Susan M.; 1984; Extension Professor and Ada County Extension Educator (Horticulture); M.A.; Oregon State University; 1985.

BELLER, Jennifer M.; 2003; Affiliate Associate Professor of Health, Physical Education, Recreation and Dance; Ph.D.; University of Idaho; 1990.

BENDER, Donald A.; 2002; Affiliate Professor of Forest Products; Ph.D.; Purdue University; 1984.

BENDER, Nathan E.; 2006; Head, Special Collections, University Library, with rank of Professor; M.L.S.; Kent State University; 1986.

BENEFIEL, Arthur N.; 2005; Affiliate Instructor of Forest Resources; M.S.; University of Washington; 1984.

BENNETT, Denise J.; 2006; Senior Instructor of Journalism and Mass Media; M.A.; Eastern Washington University; 2006.

BERGMAN, Leah; 2000; #Associate Professor of Physics; Ph.D.; North Carolina State University; 1995.

BERGSTROM, Scott J.; 2003; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Brigham Young University; 1986.

BERRY, Ray A.; 1981; #Affiliate Professor of Mechanical Engineering; Ph.D.; University of Idaho; 1992.

BERVEN, Christopher A.; 2002; Assistant Professor of Physics; Ph.D.; University of Oregon; 1995.

BEYERLEIN, Steven W.; 1987; #Professor of Mechanical Engineering; Ph.D.; Washington State University; 1987.

BIALOSTOCKI, Arie; 1984; #Professor of Mathematics; Ph.D.; Tel Aviv University; 1984.

BILDERBACK, Barry T.; 2008; Assistant Professor of Music History; Ph.D.; University of Oregon; 2001.

BILLER, Ernest F.; 1991; #Associate Professor of Adult, Career, and Technology Education; Ph.D.; Southern Illinois University; 1982.

BILLIN, Susan; 2006; Lecturer in Music; M.Mus.; University of Rochester; 1971.

BINGHAM, Richard T.; 1959; Affiliate Professor of Forest Resources; M.S.; University of Idaho; 1942.

BIRD, R. Kenton; 1999; Associate Professor of Journalism and Mass Media; Director, School of Journalism and Mass Media; Ph.D.; Washington State University; 1999.

BISBEE, Yolanda J.; 2007; Adjunct Instructor of American Indian Studies; M.Ed.; University of Idaho; 2005.

BISCHOFF, Marilyn C.; 1980; Extension Professor and Family Economics Specialist; M.S.H.Ec.; University of Idaho; 1993.

BITTERWOLF, Thomas E.; 1988; #Professor of Chemistry; Ph.D.; West Virginia University; 1976.

BJORNBERG, David; 1996; Affiliate Assistant Professor of Biological and Agricultural Engineering; Ph.D.; University of Iowa; 1995.

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BLACKMAN, Harold S.; 2002; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Arizona State University; 1980.

BLACKMAN, James R.; 1996; Affiliate Professor of Biological Sciences; M.D.; University of Iowa; 1969.

BLATNER, Keith A.; 1986; Affiliate Associate Professor of Forest Products; Ph.D.; Virginia Polytechnic Institute; 1983.

BLEW, Mary C.; 1994; #Professor of English; Ph.D.; University of Missouri; 1969.

BLEW, Roger D.; 2002; Affiliate Assistant Professor of Environmental Science; Ph.D.; University of Calgary; 1991.

BOCKELMAN, Harold E.; 1987; Affiliate Assistant Professor of Plant Science; Ph.D.; University of California Davis; 1974.

BODINE, Timothy N.; 2009; Affiliate Assistant Professor of Animal and Veterinary Science; Ph.D.; Oklahoma State University; 2004.

BOEHMKE, Mary Ann R.; 1991; Assistant Humanities Librarian with rank of Assistant Professor; M.L.S.; University of Washington; 1985.

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BOHACH, Gregory A.; 1988; #Professor of Microbiology, Molecular Biology and Biochemistry; Associate Dean; Director, Agriculture Experimental Station; Ph.D.; West Virginia University; 1985.

BOHL, William; 1990; Extension Professor and Bingham County Extension Educator (potatoes); Ph.D.; Iowa State University; 1981.

BOHLSCHEID, Jeffri C.; 2007; #Assistant Professor of Food Science and Toxicology; Ph.D.; Washington State University; 2005.

BOISEN, Monte B. Jr.; 2001; #Professor of Mathematics; Department Chair, Department of Mathematics; Ph.D.; University of Nebraska; 1970.

BOITANI, Luigi; 2000; Affiliate Professor of Fish and Wildlife Resources; Laurea (Doctor); Rome; 1970.

BOLDEN, Bruce M.; 1997; Senior Instructor in Computer Science; M.S.; University of California Davis; 1987.

BOLIN, Mary K.; 1986; Head, Technical Services, University Library, with rank of Professor; M.L.S.; University of Kentucky; 1981.

BOLIN, Robert L.; 1986; Social Science Reference Librarian with rank of Associate Professor; M.P.A.; University of Georgia; 1983.

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BOND, Leonard; 2005; Affiliate Professor of Computer Science and Physics; Ph.D.; City University; 1978.

BONMAN, J. Michael; 2003; Affiliate Professor of Plant, Soil and Entomological Sciences; Ph.D.; Washington State University; 1980.

BONNICHSEN, Bill; 1977; Supervisory Geologist, Idaho Geological Survey; Ph.D.; University of Minnesota; 1968.

BOSQUE-PEREZ, Nilsa A.; 1997; #Professor of Entomology; Adjunct Associate Professor of Environmental Science; Interim Dean, College of Graduate Studies; Ph.D.; University of California Davis; 1985.

BOSTICK, Mary T.; 1991; Affiliate Assistant Professor of Special Education; Regional Special Education Consultant, College of Education; Ph.D.; University of Idaho; 1991.

BOUGHTON, Janice M.; 1996; Affiliate Clinical Professor of Medical Science; M.D.; Johns Hopkins University; 1986.

BOYD, Raymond J. Jr.; 1963; Affiliate Professor of Forest Resources; M.F.; Colorado State University; 1950.

BRADLEY, Joseph; 2008; Assistant Professor of Accounting; Ph.D.; Claremont Graduate University; 2004.

BRADY, Patricia A.; 1983; Affiliate Clinical Professor of Medical Science; M.D.; Ohio State University; 1976.

BRANDT, Elizabeth B.; 1988; Professor of Law; Associate Dean for Faculty Affairs, College of Law; J.D.; Case Western Reserve University; 1982.

BRANEN, Joshua R.; 2007; Adjunct Assistant Professor of Food Science and Toxicology; Ph.D.; University of Idaho; 2006.

BRANEN, Laurel J.; 1990; #Professor of Family and Consumer Sciences; Adjunct Associate Professor of Food Science and Toxicology; Ph.D.; University of Idaho; 1989.

BRAUNS, Eric B.; 2005; #Assistant Professor of Chemistry; Adjunct Assistant Professor of Neuroscience; Ph.D.; University of South Carolina; 2001.

BRECKENRIDGE, Robert P.; 1994; Affiliate Professor of Adult, Career, and Technology Education; M.S.; Penn State University; 1979.

BRECKENRIDGE, Roy M.; 1978; Adjunct Professor of Geology; Supervisory Geologist, Idaho Geological Survey; Ph.D.; University of Wyoming; 1974.

BREGITZER, Phillip; 1990; Affiliate Assistant Professor of Plant Science; Ph.D.; University of Minnesota; 1989.

BREHM, Matthew T.; 2006; Assistant Professor of Architecture; M.Arch.; University of Oregon; 1998.

BRELAND, Jacob W.; 2008; Assistant Professor of Management and Human Resources; Ph.D.; University of Mississippi; 2008.

BRIDY, Annemarie; 2007; Associate Professor of Law; J.D.; Temple University; 2004.

BRIGHAM, Donald H. II; 1991; Lecturer in Landscape Architecture; B.L.A.; University of Idaho; 1979.

BRILL, Stephen H.; 2002; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Vermont; 1998.

BRIONES, Aurelio; 2009; Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; Hokkaido University; 2002.

BROOKS, Erin S.; 2007; Adjunct Assistant Professor of Biological and Agricultural Engineering; Ph.D.; University of Idaho; 2003.

BROOKS, Randall H.; 1991; Extension Professor and Clearwater County Extension Educator (Forestry and Agriculture); Ph.D.; Michigan Technology University; 1991.

BROOKS, Thomas M.; 2006; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; University of Tennessee; 1998.

BROWDER, Kathy D.; 2001; #Associate Professor of Exercise Science; Adjunct Associate Professor of Neuroscience; Acting Associate Dean, College of Education; Department Chair, Department of Health, Physical Education, Recreation and Dance; Ph.D.; Texas Woman's University; 1992.

BROWN, Bradford D.; 1975; #Extension Professor of Soil Science and Crop Management; Ph.D.; Utah State University; 1985.

BROWN, Brian R.; 1998; Affiliate Instructor in Adult, Career, and Technology Education; M.Ed.; University of Idaho; 1994.

BROWN, Celeste J.; 2003; #Adjunct Associate Professor of Biological Sciences and Bioinformatics and Computational Biology; Ph.D.; University of Georgia; 1989.

BROWN, Jack; 1992; #Professor of Plant Breeding and Genetics; Ph.D.; St Andrews; 1988.

BROWN, John B. III; 1999; Affiliate Clinical Professor of Medical Science; M.D.; Southern California School of Medicine; 1991.

BROWN, Peter M.; 2004; Affiliate Assistant Professor of Forest Resource; Ph.D.; Colorado State University; 2004.

BROWN, Rebecca S.; 2008; Adjunct Assistant Professor of Agricultural and Extension Education; Ph.D.; Iowa State University; 1991.

BRUCK, Hugh A.; 1995; Affiliate Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; California Institute of Technology; 1994.

BRUMLEY, Debra L.; 1992; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Idaho; 1991.

BRYANT, Amy E.; 2000; #Affiliate Assistant Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; University of Idaho; 1999.

BRYANT, Patrick S.; 1991; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; University of Idaho; 1993.

BUDWIG, Ralph S.; 1985; #Professor of Mechanical Engineering; Acting Director, Boise Engineering, College of Engineering; Ph.D.; Johns Hopkins University; 1985.

BUEHLER, David M.; 2009; Affiliate Assistant Professor of Computer Science and Electical and Computer Engineering; Ph.D.; University of Idaho; 2004.

BUETTNER, Claudeen R.; 1994; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ed.D.; University of Idaho; 1990.

BUFFENBARGER, James R.; 2000; Affiliate Associate Professor of Computer Science; Ph.D.; University of California Davis; 1990.

BUFFINGTON, John M.; 2004; #Affiliate Assistant Professor of Civil Engineering; Ph.D.; University of Washington; 1998.

BUKVICH, Daniel J.; 1978; #Professor of Music (percussion, music theory, jazz choirs); M.Mus.; University of Idaho; 1978.

BULGIN, Marie S.; 1977; Professor of Veterinary Medicine; D.V.M.; University of California Davis; 1967.

BULLOCK, Milton G.; 1981; Affiliate Professor of Adult, Career, and Technology Education; B.S.M.E.; Idaho State University; 1970.

BUNTING, Stephen C.; 1978; #Professor of Range Resources; Adjunct Professor of Environmental Science; Ph.D.; Texas Technology University; 1978.

BURDGE, Julia; 2009; Affiliate Associate Professor of Chemistry; Ph.D.; University of Idaho; 1994.

BURKHARDT, J. Wayne; 1995; #Affiliate Professor of Range Resources; Ph.D.; University of Idaho; 1969.

BURNETT, Donald L.; 2002; Professor of Law; Dean, College of Law; L.L.M.; University of Virginia; 1990.

BURRATO, Gregory J.; 1977; Affiliate Clinical Professor of Medical Science; M.D.; Creighton University; 1966.

BURTIS, Melanie A.; 2006; Affiliate Assistant Professor of Adult, Career and Technology Education; Ph.D.; University of Idaho; 2005.

BURTON, Damon D.; 1983; #Professor of Physical Education; Ph.D.; University of Illinois; 1983.

BUSTAMANTE, Ernesto; 2007; #Assistant Professor of Psychology; Ph.D.; Old Dominion University; 2007.

BYERS, John A.; 1980; #Professor of Zoology; Adjunct Professor of Neuroscience; Ph.D.; University of Colorado; 1980.

CAIN, Kenneth D.; 1999; #Associate Professor of Fishery Resources; Ph.D.; Washington State University; 1997.

CAISLEY, Robert C.; 2001; #Associate Professor of Theatre and Film; M.F.A.; Illinois State University; 1993.

CALDWELL, Kaye M.; 2001; Affiliate Instructor of Teaching, Learning, and Leadership; Ph.D.; University of Idaho; 1994.

CAMERON, Kelly; 1989; Affiliate Assistant Professor of Electrical Engineering; Ph.D.; University of Idaho; 1989.

CAMP, Stacey L.; 2008; #Assistant Professor of Anthropology; Ph.D.; Stanford University; 2008.

CAMPBELL, Alton G.; 1983; #Professor of Forest Products; Associate Dean, College of Graduate Studies; Ph.D.; University of North Carolina; 1983.

CANFIELD-DAVIS, Kathryn M.; 2006; Assistant Professor of Educational Leadership; Ph.D.; Gonzaga University; 1996.

CANNON, John G.; 2008; #Assistant Professor of Adult, Career and Technology Education; Ph.D.; Virginia Polytechnic Institute; 2005.

CAPLAN, Allan B.; 1992; Associate Professor of Microbiology, Molecular Biology and Biochemistry; Adjunct Associate Professor of Environmental Science; Ph.D.; University of Iowa; 1980.

CARLESON, Thomas E.; 1982; #Affiliate Professor of Chemical Engineering; Ph.D.; University of Washington; 1982.

CARLEY, Caroline D.; 2004; Affiliate Instructor of Anthropology; M.A.; University of Idaho; 1979.

CARLSON, Lisa J.; 1993; #Professor of Political Science; Ph.D.; Rice University; 1994.

CARLSON, Ronald D.; 1986; Affiliate Professor of Biological and Agricultural Engineering; M.S.; University of Idaho; 1974.

CARNEY, Kevin P.; 1995; Affiliate Assistant Professor of Chemistry; Ph.D.; University of Vermont; 1987.

CARR, Robert S.; 2007; Affiliate Professor of Civil Engineering; Ph.D.; Iowa State University; 1985.

CASANOVES, Fernando; 2006; Affiliate Associate Professor of Statistics; Ph.D.; University of Cordoba; 2004.

CASTLE, Peter M.; 2000; Affiliate Professor of Chemistry; Ph.D.; Purdue University; 1969.

CAUDILL, Christopher C.; 2006; Adjunct Instructor of Plant, Soil and Entomological Sciences; Ph.D.; Cornell University; 2002.

CECIL, L. DeWayne; 1998; Affiliate Instructor in Geology and Geological Engineering; M.S.; Drexel University; 1990.

CEGNAR, William S.; 1978; Affiliate Professor of Veterinary Medicine; M.S.; University of Idaho; 1975.

CHACON, Carlos M.; 2004; Affiliate Senior Instructor of Conservation Social Sciences; J.D.; University of Costa Rica; 1993.

CHAE, Myung-Hee; 2007; #Assistant Professor of Family and Consumer Sciences; Ph.D.; Virginia Polytechnic Institute; 2006.

CHAHINE, Mireille; 2003; #Associate Professor, Extension Dairy Specialist; Ph.D.; University of Minnesota; 2003.

CHAMBERS, Ian D.; 2008; #Assistant Professor of History; Ph.D.; University of California Riverside; 2006.

CHANDLER, Steven R.; 1981; #Professor of English; Adjunct Professor of Neuroscience; Director, MA-TESL; Ph.D.; University of Texas; 1979.

CHARIT, Indrajit; 2007; #Assistant Professor of Materials Science and Engineering; Ph.D.; University of Missouri; 2004.

CHARLIER, Henry A. Jr.; 2006; Affiliate Assistant Professor of Biological Sciences; Ph.D.; Medical College of Wisconsin; 1997.

CHARPENTIER, Claudia V.; 2004; Affiliate Professor of Conservation Social Sciences; Ph.D.; University of Idaho; 1994.

CHASE, Jennifer R.; 2006; Affiliate Professor of Biological Sciences; Ph.D.; Yale University; 1998.

CHECKETTS, Max L.; 2002; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Utah State University; 1990.

CHEN, Jianli; 2007; Assistant Professor of Wheat Breeding, Genetics and Genomics; Ph.D.; Virginia Polytechnic Institute; 2005.

CHENG, I. Francis; 1997; #Associate Professor of Chemistry; Adjunct Associate Professor of Microbiology, Molecular Biology and Biochemistry and Environmental Science; Ph.D.; Penn State University; 1988.

CHERRY, Robert S.; 1994; #Affiliate Professor of Chemical Engineering; Ph.D.; Rice University; 1987.

CHEYNEY, Charles C.; 1985; Extension Professor and Butte County Extension Educator; M.S.; University of California Davis; 1978.

CHILDERS, Susan E.; 2003; #Assistant Professor of Geology; Adjunct Assistant Professor of Environmental Science and Microbiology, Molecular Biology and Biochemistry; Ph.D.; University of Connecticut; 1997.

CHOI, Daniel S.; 2007; #Associate Professor of Materials Science and Engineering; Ph.D.; University of California Los Angeles; 2000.

CHRISTE, Karl; 2000; Affiliate Professor of Chemistry; Ph.D.; Technical University (Stuttgart); 1961.

CHRISTIAN, Jerry D.; 1998; Affiliate Professor of Chemistry; Ph.D.; University of Washington; 1965.

CHRISTIANSEN, Jeanne S.; 1985; #Associate Professor of Special Education; Vice Provost for Academic Affairs; Ph.D.; Utah State University; 1976.

CHRISTOPHERSEN, Kjell A.; 2003; Affiliate Professor of Forest Resources; Ph.D.; Washington State University; 1974.

CHUNG, Yunhyung; 2007; Assistant Professor of Management and Human Resources; Ph.D.; Rutgers University; 2007.

CHURCH, James A.; 1987; Extension Professor and Idaho County Extension Educator (Beef); M.S.; University of Idaho; 1982.

CLARK, Douglas W.; 2006; Affiliate Instructor of Adult, Career and Technology Education; B.S.; Oklahoma State University; 1990.

CLARK, H. James; 2008; Lecturer in Journalism and Mass Media; M.A.; Wayne State University; 1966.

CLARK, Ken W.; 1999; Affiliate Assistant Professor of Religious Studies; Ph.D.; University of Idaho; 1997.

CLARK, William H.; 1989; Affiliate Assistant Professor of Entomology; M.S.; University of Nevada Reno; 1972.

CLARKE, George W.; 1994; Affiliate Instructor in Adult, Career, and Technology Education; M.S.; University of Idaho; 1988.

CLAYTON, Lydia A.; 2009; Assistant Extension Professor and Nez Perce County Extension Educator (Horticulture and Small Farms); M.S.; University of Idaho; 2008.

CLAYTON, Stephen R.; 2004; Affiliate Assistant Professor of Biological and Agricultural Engineering; Ph.D.; University of Idaho; 2002.

CLEMENT, Stephen L.; 1986; Affiliate Professor of Entomology; Ph.D.; University of California Davis; 1976.

CLEVELEY, C. Brian; 1991; Senior Instructor of Virtual Technology and Design; M.Arch.; University of Idaho; 1986.

CLIFTON, Amy E.; 2003; Affiliate Assistant Professor of Geological Sciences; Ph.D.; Rutgers University; 2000.

CLOUD, Joseph G.; 1977; #Professor of Zoology; Department Chair, Department of Biological Sciences; Ph.D.; University of Wisconsin; 1974.

COATS, Eric R.; 2006; #Assistant Professor of Environmental Engineering (P.E.); Ph.D.; Washington State University; 2005.

COCHNAUER, Timothy G.; 1996; Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; University of Idaho; 1983.

COFFMAN, Richard B.; 1978; #Associate Professor of Economics; Ph.D.; University of Washington; 1972.

COHEN, Jessica; 2008; #Assistant Professor of Mathematics Education; Ph.D.; Oregon State University; 2008.

COLE, David N.; 1980; Affiliate Professor of Conservation Social Sciences; Ph.D.; University of Oregon; 1977.

COLE, Douglas G.; 1998; #Associate Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; Washington State University; 1990.

COLE, Galen; 1993; Affiliate Associate Professor of Physical Education; Ph.D.; Southern Illinois University; 1982.

COLE, J. Roger; 1976; #Professor of Music (clarinet, music theory); D.M.A.; Yale University; 1982.

COLE, Jerald; 1988; Affiliate Professor of Physics; Ph.D.; Delft (The Netherlands); 1979.

COLEMAN, Mark; 2008; #Associate Professor and Director of the Intermountain Forest Tree Nutrition Cooperative; Ph.D.; University of Washington; 1988.

COLLINS, Carol; 1998; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Idaho; 1997.

COLWELL, Frederick S.; 1993; Affiliate Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; Virginia Polytechnic Institute; 1986.

CONGLETON, James L.; 1980; #Professor of Fishery Resources; Assistant Leader of Idaho Cooperative Fish and Wildlife Research Unit; Ph.D.; University of California San Diego; 1970.

CONNELLY, John W.; 1987; #Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; Washington State University; 1982.

CONNOLE, Heidi L.; 2006; #Assistant Professor of Marketing; Ph.D.; Washington State University; 2005.

CONNOLLY, Patrick J.; 2005; Affiliate Assistant Professor of Civil Engineering; Ph.D.; Oregon State University; 1996.

CONNOR, Cathy L.; 2004; Affiliate Associate Professor of Geological Sciences; Ph.D.; University of Montana; 1984.

CONNOR, William P.; 2003; Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; University of Idaho; 2001.

CONNORS, James J.; 2008; Associate Professor of Agricultural and Extension Education; Department Chair, Department of Agricultural and Extension Education; Ph.D.; Michigan State University; 1992.

COOK, Stephen P.; 1999; #Associate Professor of Forest Resources; Adjunct Associate Professor of Plant, Soil, & Entomological Sciences and Environmental Science; Ph.D.; North Carolina State University; 1985.

COOKE, Stephen C.; 1986; #Associate Professor of Agricultural Economics; Adjunct Associate Professor of Forest Resources and Environmental Science; Ph.D.; Michigan State University; 1985.

CORRY, Shauna J.; 2001; #Associate Professor of Architecture; Ph.D.; Washington State University; 2000.

CORSINI, Dennis L.; 1977; Affiliate Professor of Plant Pathology; Ph.D.; University of Idaho; 1971.

COSENS, Barbara; 2004; Associate Professor of Law; L.L.M.; Lewis & Clark College; 2003.

COURRAU, Jose A.; 2004; Affiliate Assistant Professor of Conservation Social Sciences; Ph.D.; University of Idaho; 2002.

COX, David F.; 2002; #Affiliate Professor of Electrical and Computer Engineering; Ph.D.; Utah State University; 1974.

CRAIG, Richard D.; 1997; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ed.D.; Brigham Young University; 1980.

CRAIG, Traci Y.; 2002; #Associate Professor of Psychology; Ph.D.; Purdue University; 2002.

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CRAWFORD, Douglas C.; 1999; Affiliate Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; University of Michigan; 1991.

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CROCKETT, Alan B.; 1991; Affiliate Assistant Professor of Adult, Career, and Technology Education; M.S.; University of Maryland; 1972.

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CROOK, Harold D.; 2002; Affiliate Instructor of American Indian Studies.

CROOKSTON, Nicholas L.; 1978; Affiliate Professor of Forest Resources; M.S.; University of Idaho; 1977.

CROSBY, Gerald; 1979; Affiliate Professor of Chemical Engineering; Ph.D.; University of Washington; 1973.

CROSS, Kelly L.; 2006; Affiliate Instructor of Counseling and School Psychology, Special Education and Educational Leadership; Ph.D.; Boise State University; 2005.

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CRUISE, Sandra A.; 1988; Affiliate Assistant Professor of Adult, Career, and Technology Education; M.A.; University of Northern Colorado; 1979.

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CZECH, Brian M.; 2005; Affiliate Professor of Fish and Wildlife Resources; Ph.D.; University of Arizona; 1997.

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DACEY, Raymond; 1984; #Professor of Economics, Finance and Information Systems and of Statistics; Adjunct Professor of Philosophy; Ph.D.; Purdue University; 1970.

DAHLKE, Hans J.; 1993; Affiliate Professor of Civil Engineering; Ph.D.; Stanford University; 1964.

DAKINS, Maxine E.; 1994; #Associate Professor of Environmental Science; Ph.D.; SUNY at Syracuse; 1994.

DALEY LAURSEN, Steven B.; 2002; Professor of Forest Resources and Conservation Social Sciences; Ph.D.; University of Idaho; 1984.

DALTON, Joseph C.; 2000; #Associate Professor of Animal Science; Ph.D.; Virginia Polytechnic Institute; 1999.

DANEHY, Robert J.; 2002; Affiliate Assistant Professor of Forest Resources; Ph.D.; State University of New York (SUNY); 1994.

DAVIS, Anthony S.; 2007; #Assistant Professor of Native Plant Regeneration and Silviculture; Director, Center for Forest Nursery and Seedling Research; Ph.D.; Purdue University; 2006.

DAVIS, Howard P.; 1995; #Affiliate Assistant Professor of Exercise Science; Ph.D.; University of Oregon; 1993.

DAVIS, John C.; 1993; #Associate Professor of Teacher Education; Adjunct Associate Professor of Geological Sciences; Ph.D.; Utah State University; 1993.

DAVIS, Tracy L.; 2008; #Assistant Professor of Animal and Veterinary Sciences (Reproduction Physiology); Ph.D.; Ohio State University; 2004.

DAWSON, Paul J.; 1989; Affiliate Assistant Professor of Mechanical Engineering; Ph.D.; Washington State University; 1987.

DAY, E. Wayne; 1992; Affiliate Clinical Professor of Medical Science; M.D.; University of Oklahoma; 1975.

DE CLERCK, Fabrice A.J.; 2009; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of California Davis; 2004.

DE CLERCK-FLOATE, Rosemarie; 2003; Affiliate Associate Professor of Plant, Soil and Entomological Sciences; Ph.D.; Northern Arizona University; 1991.

DE HARO MARTI, Mario E.; 2007; Assistant Extension Professor and Gooding County Educator (Environmental Sci/CAFO); M.S.; University of Idaho; 2007.

DEAN, Adam J.; 2010; Affiliate Assistant Professor of Mechanical Engineering; Ph.D.; Penn State University; 2008.

DEAN, Stacey R.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; University of Colorado; 1975.

DEARIEN, John A. Jr.; 1992; Affiliate Professor of Civil Engineering; Ph.D.; University of Missouri; 1968.

DELMASTRO, Joseph R.; 1991; Affiliate Assistant Professor of Chemistry; Ph.D.; Northwestern University.

DEN BRAVEN, Karen R.; 1987; #Professor of Mechanical Engineering; Ph.D.; Colorado State University; 1986.

DENNIS, Brian C.; 1981; #Professor of Wildlife Resources and Statistics; Adjunct Professor of Bioinformatics and Computational Biology; Ph.D.; Penn State University; 1982.

DERINGER, Nancy; 2008; #Assistant Professor of Family Economics and Family Studies; Ph.D.; University of Idaho; 2005.

DESELAR-TIEDMAN, Christine A.; 1995; Catalog Librarian with rank of Assistant Professor; M.A.; University of Iowa; 1994.

DEVADOSS, Stephen; 1992; #Professor of Agricultural Economics; Ph.D.; Iowa State University; 1985.

DEYOUNG, Edwin J.; 2004; Adjunct Instructor of Geography; M.S.; Montana State University; 1996.

DEZZANI, Raymond J.; 2004; #Assistant Professor of Geography; Adjunct Assistant Professor of Statistics; Ph.D.; University of California Riverside; 1996.

DI PASQUO, Mercedes; 2010; Affiliate Associate Professor of Geological Sciences; Ph.D.; University of Buenos Aires; 1999.

DICKIN, D. Clark; 2006; #Assistant Professor of Exercise Science; Adjunct Assistant Professor of Neuroscience; Ph.D.; Oregon State University; 2002.

DICKOW, Robert H.; 1984; #Associate Professor of Music (horn, theory, composition); Ph.D.; University of California Berkeley; 1979.

DIEBEL, Penelope L.; 1999; Affiliate Associate Professor of Agricultural Economics; Ph.D.; Virginia Polytechnic Institute; 1990.

DIXON, Michael P.; 2000; #Associate Professor of Civil Engineering; Ph.D.; Texas A&M University; 2000.

DOEBELI, Michael W.; 2005; Affiliate Associate Professor of Biological Sciences; Ph.D.; University of Basel; 1992.

DOLNY, Dennis G.; 1984; #Professor of Exercise Science; Ph.D.; Kent State University; 1985.

DONATI, Richard B.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; State University of New York (SUNY); 1974.

DONELICK, Margaret Burke; 1998; Affiliate Assistant Professor of Geology and Geological Engineering; Ph.D.; Dalhousie University; 1991.

DONELICK, Raymond A.; 1998; Affiliate Assistant Professor of Geology and Geological Engineering; Ph.D.; Rensselaer Polytechnic; 1988.

DONOHOE, Gregory W.; 2002; #Associate Professor of Electrical and Computer Engineering; Acting Chair, Department of Computer Science; Ph.D.; University of New Mexico; 1989.

DOUMIT, Matthew E.; 2008; Associate Professor of Animal and Veterinary Sciences (Meat Specialist); Ph.D.; Michigan State University; 1994.

DRAKE, Thomas A.; 1996; Lecturer in English; M.A.; University of Idaho; 1996.

DROWN, David C.; 1980; #Associate Professor of Chemical Engineering; Ph.D.; University of Idaho; 1975.

DROWN, Stephen R.; 1994; #Professor of Landscape Architecture; Adjunct Professor of Architecture and Environmental Science; Program Coordinator of Landscape Architecture; M.L.A.; State University of New York (SUNY); 1974.

DUGAN, Frank M.; 2008; Affiliate Associate Professor of Forest Resources; Ph.D.; Washington State University; 1992.

DUMROESE, Kasten R.; 2002; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of Idaho; 1996.

DUPONT, Ronald J.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; University of Wisconsin; 1964.

DURRANT, Sue M.; 1993; Affiliate Associate Professor of Physical Education; Ph.D.; Ohio State University; 1976.

DUVAL, D. Christopher; 2009; Assistant Professor of Theatre; M.F.A.; University of California Irvine; 1998.

DUVALL, Emily; 2007; #Assistant Professor of Language Arts; M.Ed.; Virginia Polytechnic Institute; 2003.

DUVALL, Steven F.; 2007; #Assistant Professor of Counseling and School Psychology; Ph.D.; University of Kansas; 1990.

DYAR, Melinda D.; 2000; Affiliate Assistant Professor of Geological Sciences; Ph.D.; Massachusetts Institute of Technology (MIT); 1985.

DYE, Lorie; 1994; Extension Professor and Jefferson County Extension Educator (Family Relations); M.S.; Brigham Young University; 1991.

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EBERHARTER-MAKI, Elaine; 2006; Affiliate Instructor of Counseling and School Psychology, Special Education and Educational Leadership; J.D.; University of Idaho; 1984.

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EBORN, Benjamin M.; 2003; Associate Extension Professor and Teton County Extension Educator (Agriculture and Community Development); M.S.; University of Idaho; 2002.

ECKWRIGHT, Gail Z.; 1978; Humanities Librarian with rank of Professor; M.L.S.; University of Wisconsin; 1976.

EDGEMAN, Rick L.; 2004; #Professor of Statistics; Department Chair, Department of Statistics; Ph.D.; University of Wyoming; 1983.

EDWARDS, Dean B.; 1986; #Professor of Mechanical Engineering; Adjunct Professor of Electrical and Computer Engineering; Ph.D.; California Institute of Technology; 1977.

EDWARDS, Louis L. Jr.; 1961; #Professor of Chemical Engineering; Adjunct Professor of Forest Products; Ph.D.; University of Idaho; 1966.

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EDWARDS, W. Daniel; 1987; #Associate Professor of Chemistry; Ph.D.; University of Missouri; 1976.

EGGLESTON, Richard J.; 1992; Affiliate Clinical Professor of Medical Science; M.D.; University of Kansas; 1967.

EGOLF, David P.; 1994; #Professor of Electrical Engineering; Ph.D.; Purdue University; 1976.

EIGENBRODE, Sanford D.; 1995; #Professor of Entomology; Adjunct Associate Professor of Environmental Science; Ph.D.; Cornell University; 1990.

EISENBARTH, Christopher A.; 2003; #Assistant Professor of Community Health; Ph.D.; Oregon State University; 2003.

EISLEY, Mark E.; 1992; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Brigham Young University; 1990.

ELBAKIDZE, Levan G.; 2008; #Assistant Professor of Agricultural Economics; Ph.D.; Texas A&M University; 2004.

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ELLIOT, William J.; 2003; Affiliate Professor of Biological and Agricultural Engineering, and of Geography; Ph.D.; Iowa State University; 1988.

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EMMETT, William W.; 2000; Affiliate Professor of Civil Engineering; Ph.D.; Johns Hopkins University; 1968.

EMTMAN, Richard A.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; University of Washington; 1981.

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ENGELHARDT, Maxwell; 1992; Affiliate Professor of Statistics; Ph.D.; University of Missouri; 1969.

ENGLAND, James J.; 1995; #Professor of Veterinary Medicine; Director, Caine Veterinary Teaching Center; D.V.M.; Colorado State University; 1981.

ENLOE, Loraine D.; 2006; #Assistant Professor of Music (Instrumental Music Education); Ph.D.; University of North Carolina; 2007.

ERICKSON, Luke V.; 2006; Assistant Extension Professor and Madison County Extension Educator (FCS/Finance); M.S.; Utah State University; 2006.

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EVELETH, Daniel M.; 1997; #Associate Professor of Human Resource Management; Ph.D.; Washington State University; 1996.

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EVERETT, Richard L.; 1997; Affiliate Associate Professor of Range Resources; Ph.D.; Oregon State University; 1984.

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FAIRLEY, Jerry P.; 2000; #Associate Professor of Hydrogeology; Adjunct Assistant Professor of Environmental Science; Ph.D.; University of California Berkeley; 2000.

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FANCY, Steven G.; 1996; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; University of Alaska; 1986.

FARMER, Pamela M.K.; 2006; Affiliate Assistant Professor of Adult, Career and Technology Education; Ph.D.; University of Idaho; 2002.

FAUX, Cynthia M.; 2007; Affiliate Professor of Geological Sciences; Ph.D.; Yale University; 2000.

FAY, John J.; 2005; Affiliate Professor of Fish and Wildlife Resources; Ph.D.; City University; 1974.

FEARN, Linda; 2006; Lecturer in Medical Science; M.D.; University of Washington; 1983.

FEHRENBACHER, Richard W.; 1992; #Associate Professor of English; Ph.D.; Duke University; 1992.

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FELLMAN, John K.; 1977; #Affiliate Associate Professor of Plant Science; Ph.D.; University of Idaho; 1982.

FERGUSON, Dennis E.; 1980; Affiliate Professor of Forest Resources; Ph.D.; University of Idaho; 1991.

FERGUSON, Jason J.; 2007; Assistant Professor of Art and Design; M.F.A.; University of Delaware; 2007.

FERRANTI, Luigi; 1996; Affiliate Assistant Professor of Geology; Ph.D.; University of Naples; 1995.

FIEDLER, Fritz R.; 2000; #Associate Professor of Civil Engineering (P.E.); Ph.D.; Colorado State University; 1997.

FIFE, Tianna E.; 2007; Assistant Extension Professor and Twin Falls County Extension Educator (Animal and Veterinary Science); M.S.; University of Idaho; 2007.

FILLER, Jeff R.; 2000; Affiliate Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; Washington State University; 1989.

FILLMORE, Denzel; 1995; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Brigham Young University; 1971.

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FINEGAN, Bryan G.; 2002; Affiliate Assistant Professor of Forest Resources; Dr.Scient.; University of Helsinki; 1985.

FINNEY, Mark A.; 2004; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of California Berkeley; 1991.

FINS, Lauren; 1979; #Professor of Forest Genetics; Ph.D.; University of California Berkeley; 1979.

FLERCHINGER, Gerald N.; 1990; Affiliate Assistant Professor of Biological and Agricultural Engineering; Ph.D.; Washington State University; 1987.

FLETCHER, Janice W.; 1979; #Professor of Family and Consumer Sciences and Early Childhood Development and Education; Ed.D.; Auburn University; 1978.

FLETCHER, T. Rick; 1989; #Associate Professor of Chemistry; Ph.D.; University of California Davis; 1986.

FLINN, John E.; 1988; #Affiliate Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; Washington State University; 1972.

FLINT, Stephan D.; 2009; Affiliate Instructor of Rangeland Ecology and Management; M.S.; Utah State University; 1977.

FLOERCHINGER-FRANKS, Ginger; 2004; Affiliate Assistant Professor of Adult, Career, and Technology Education; Dr.P.H.; Loma Linda University; 1996.

FLORES, Stephan P.; 1987; #Associate Professor of English; Director, Honors Program; Ph.D.; University of Michigan; 1988.

FODOR, Julie A.; 1993; #Associate Professor of Education; Interim Director of the Idaho Center on Disabilities and Human Development; Ph.D.; University of Utah; 1993.

FOLTZ, John C.; 1991; #Professor of Agricultural Economics and Rural Sociology; Associate Dean, College of Agricultural and Life Sciences; Director of Academic Programs; Ph.D.; Purdue University; 1991.

FOLTZ, Randy B.; 2000; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of Idaho; 1993.

FOLWELL, Annette L; 2000; #Associate Professor of Communication; Ph.D.; University of Oklahoma; 1997.

FONNESBECK, Jacqueline E.; 2003; Affiliate Assistant Professor of Chemistry; Ph.D.; Montana State University; 1997.

FOOTE, Roy F.; 1978; Affiliate Professor of Electrical Engineering; M.S.E.E.; University of Idaho; 1976.

FORAKER-THOMPSON, Jane; 1988; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Stanford University; 1985.

FORCE, Jo Ellen; 1979; #Professor of Forest Resources; Adjunct Professor of Environmental Science; Department Head, Department of Forest Resources; Ph.D.; Ohio State University; 1978.

FORNEY, Larry J.; 2000; #Professor of Biology; Adjunct Professor of Bioinformatics and Computational Biology; Ph.D.; Michigan State University; 1982.

FORNSHELL, Gary C.G.; 1992; Extension Professor and Multi-county Extension Educator (Aquaculture); M.S.; Auburn University; 1986.

FORTUNATO, Elizabeth; 2000; #Associate Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; University of California San Diego; 1994.

FOSTER, James A.; 1990; #Professor of Biological Sciences; Adjunct Professor of Computer Science, Philosophy, and Bioinformatics and Computational Biology; Ph.D.; Illinois Institute of Technology; 1990.

FOX, Robert V.; 2006; Affiliate Assistant Professor of Chemistry; Ph.D.; University of Idaho; 2003.

FRADKIN, Steven C.; 2005; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; Dartmouth College; 1997.

FRANK, Steven M.; 1999; Affiliate Assistant Professor of Chemistry; Ph.D.; Washington State University; 1989.

FRANZ, James A.; 2002; Affiliate Professor of Chemistry; Ph.D.; University of Illinois; 1974.

FRAZIER, Tim G.; 2009; Assistant Professor of Geogrpahy; Ph.D.; Penn State University; 2009.

FREEMUTH, John; 1992; Affiliate Professor of Forest Resources; Ph.D.; Colorado State University; 1985.

FRENCH, H. Graeme; 1992; Affiliate Clinical Professor of Medical Science; M.D.; Tulane University; 1985.

FRENZEL, James F.; 1990; #Associate Professor of Electrical Engineering; Adjunct Associate Professor of Neuroscience; Ph.D.; Duke University; 1989.

FRENZEL, Karen Z.; 1990; Assistant Professor of Electrical Engineering; Ph.D.; Duke University; 1986.

FREY, Rodney P.; 1998; #Professor of American Indian Studies and Anthropology; Ph.D.; University of Colorado; 1979.

FRITZ, Sharon K.; 1996; Associate Professor of Adult, Career, and Technology Education; Psychologist, Student Counselor Center, with rank of Associate Professor; Ph.D.; University of Idaho; 1996.

FROSTAD, Alvin L.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; University of Washington; 1965.

FRYXELL, Glen E.; 2002; Affiliate Associate Professor of Chemistry; Ph.D.; University of North Carolina; 1986.

FUJITA, Yoshiko; 2004; Affiliate Assistant Professor of Environmental Science; Ph.D.; Stanford University; 1997.

FUNABIKI, Ruth Patterson; 1977; Head of Technical Services with rank of Associate Professor; M.L.S.; Kent State University; 1973.

FURNISS, Malcom M.; 1982; Affiliate Professor of Entomology and of Forest Resources; M.S.; University of Idaho; 1966.

FUTRELL, Jean H.; 2000; Affiliate Professor of Chemistry; Ph.D.; University of California Berkeley; 1958.

GABEL, Kathe A.; 1989; #Professor of Family and Consumer Sciences; Adjunct Associate Professor of Food Science and Toxicology, and of Physical Education; CPD Director; Ph.D.; Utah State University; 1987.

GAGEL, Charles W.; 2001; #Associate Professor of Adult, Career and Technology Education; Department Chair, Department of Adult, Career, and Technology Education; Ph.D.; University of Minnesota; 1995.

GALINDO, Ed; 2005; Affiliate Assistant Professor of American Indian Studies; Ph.D.; Utah State University; 2003.

GALLANT, Francis X.; 2006; Adjunct Assistant Professor of Counseling and School Psychology, Special Education and Educational Leadership; Ph.D.; University of Idaho; 1998.

GAN, Jian; 2005; Affiliate Assistant Professor of Materials Science and Engineering; Ph.D.; University of Michigan; 1999.

GANGULI, Amy C.; 2009; Affiliate Assistant Professor of Rangeland Ecology and Management; Ph.D.; Oklahoma State University; 2005.

GAO, Fuchang; 1999; #Associate Professor of Mathematics; Adjunct Associate Professor of Bioinformatics and Computational Biology; Ph.D.; University of Connecticut; 1999.

GARA, Robert I.; 1997; Affiliate Professor of Forest Resources; Ph.D.; Oregon State University; 1964.

GARCIA, Meliton M.; 1994; Affiliate Professor of Adult, Career, and Technology Education; M.P.H.; University of California Berkeley; 1963.

GARDINER, Mary E.; 2001; #Professor of Educational Leadership; Ph.D.; University of Virginia; 1990.

GARDNER, Jay C.; 2009; Professor of Military Science; M.S.; Naval Postgraduate School; 1999.

GARRISON, Leonard L.; 2006; #Assistant Professor of Music (Flute, Aural Skills); D.M.; Northwestern University; 1993.

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GARTON, Edward O.; 1977; #Professor of Wildlife Resources and of Statistics; Adjunct Professor of Environmental Science; Ph.D.; University of California Davis; 1976.

GASKIN, John F.; 2008; Affiliate Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; Washington University; 2002.

GASSER, Heather S.; 2009; Adjunct Instructor; M.S.; Colorado State University; 2000.

GATHERCOAL, Paul H. Jr.; 2008; Professor of Curriculum and Instruction; Department Chair, Department of Curriculum and Instruction; Ph.D.; University of Oregon; 1990.

GAYLORD, T. Gibson; 2007; Affiliate Assistant Professor of Animal and Veterinary Science; Ph.D.; Texas A&M University; 2000.

GEE, Jerry R.; 1998; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Kansas State University; 1988.

GEGO, Edith; 1998; Affiliate Assistant Professor of Biological and Agricultural Engineering; Ph.D.; University of Gembloux; 1993.

GEIST, Dennis J.; 1990; #Professor of Geology; Ph.D.; University of Oregon; 1985.

GELLES, David S.; 1996; Affiliate Professor of Materials Science and Engineering and Metallurgical Engineering; Sc.D.; Massachusetts Institute of Technology (MIT); 1971.

GEMBERLING, Alan J.; 1986; Associate Professor of Music (trombone, wind ensemble, jazz band); M.Mus.; University of Idaho; 1988.

GEORGE, Archie A.; 2003; Adjunct Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Texas; 1977.

GERGELY, Kevin J.; 2009; Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; University of Idaho; 2003.

GERVASE, Mary M.; 2006; Affiliate Instructor of Counseling and School Psychology, Special Education and Educational Leadership; Ph.D.; University of New Mexico; 1995.

GESE, Eric M.; 2008; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; University of Wisconsin; 1995.

GESELL, Thomas F.; 1994; Affiliate Professor of Physics; Ph.D.; University of Tennessee; 1971.

GESSLER, Paul E.; 1997; #Associate Professor of Forest Resources; Adjunct Associate Professor of Environmental Science; Ph.D.; Australian National University; 1996.

GIESE, David F.; 1977; Professor of Art and Design; M.F.A.; University of Arizona; 1972.

GILLERMAN, Virginia S.; 1989; Adjunct Professor of Geology; Supervisory Research Geologist; Ph.D.; University of California Berkeley; 1982.

GILLESPIE, Donna R.; 2001; Associate Extension Professor and Minidoka County Extension Educator (Area 4-H/Youth and Family Consumer Science); M.S.; University of Idaho; 1977.

GILLHAM, Patrick F.; 2006; #Assistant Professor of Sociology; Ph.D.; University of Colorado; 2003.

GINN, Timothy R.; 2010; Affiliate Professor of Biological and Agricultural Engineering; Ph.D.; Purdue University; 1988.

GIRVAN, James T.; 1994; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Oregon; 1988.

GLAZE, Benton; 2000; #Associate Extension Professor and Extension Beef Cattle Specialist; Ph.D.; Kansas State University; 1998.

GOBLE, Dale D.; 1982; #Professor of Law; Adjunct Professor of Environmental Science; J.D.; University of Oregon; 1978.

GOC KARP, Grace; 1993; #Professor of Physical Education; Ph.D.; University of Idaho; 1984.

GODCHAUX, Martha M.; 2000; Affiliate Professor of Geological Sciences; Ph.D.; University of Oregon; 1969.

GOFF, Kenneth M.; 2006; Affiliate Associate Professor of Materials Science and Engineering; Ph.D.; Georgia Institute of Technology; 1991.

GOLLBERG, Greg E.; 2005; Adjunct Instructor of Forest Resources; M.S.; University of Idaho; 2001.

GOMBERT, Dirk; 2000; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; University of Idaho; 1994.

GOODWIN, Anthony R.H.; 1993; Affiliate Assistant Professor of Chemical Engineering and Mechanical Engineering; Ph.D.; University College; 1987.

GOODWIN, Peter; 1996; #Professor of Civil Engineering (P.E.); Adjunct Professor of Biological and Agricultural Engineering; Ph.D.; University of California Berkeley; 1986.

GORCHELS, Catherine M.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; University of Oregon; 1974.

GORDON, Teresa P.; 1986; #Professor of Accounting; Ph.D.; University of Houston; 1986.

GORMAN, Thomas M.; 1987; #Professor of Forest Products; Adjunct Professor of Architecture; Department Head, Department of Forest Products; Ph.D.; SUNY at Syracuse; 1987.

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GRADEN, Dale T.; 1992; #Professor of History; Ph.D.; University of Connecticut; 1991.

GRADER, George W.; 2009; Affiliate Assistant Professor of Geological Sciences; Ph.D.; University of Idaho; 2003.

GRAFF, Elizabeth A.; 2007; Assistant Professor of Landscape Architecture; M.L.A.; University of Illinois; 1997.

GRAHAM, Russell T.; 1979; Affiliate Professor of Forest Resources; Ph.D.; University of Idaho; 1981.

GRAUKE, John H.; 1996; Affiliate Clinical Professor of Medical Science; M.D.; University of Texas; 1973.

GRAY, Beulah H.; 2003; Affiliate Professor of Animal and Veterinary Science; Ph.D.; University of Minnesota; 1966.

GRAY, C. Wilson; 1980; Extension Professor and Extension Agricultural Economist; M.S.; University of California Davis; 1976.

GREEN, Deborah L.; 2008; Digital Initiatives Librarian with rank of Assistant Professor; M.L.I.S.; University of South Carolina; 2007.

GREENFIELD, Robin G.; 1997; Adjunct Assistant Professor of Special Education and Project Coordinator; Ph.D.; University of Oregon; 1991.

GREENLEE, Michael J.; 2002; Head of Public Services with rank of Associate Professor; J.D.; Indiana University; 2002.

GREEVER, Barbara C.; 1988; Principal Catalog Librarian with rank of Associate Professor; M.Lib.Sc.; Indiana University; 1985.

GREGORY, Bayard O.; 1988; Affiliate Assistant Professor of Adult, Career, and Technology Education; M.A.; California State University Long Beach; 1967.

GREGSON, James A.; 2001; #Professor of Adult, Career and Technology Education; Ed.D.; Virginia Polytechnic Institute; 1990.

GRIBB, Molly M.; 2003; Affiliate Associate Professor of Civil Engineering; Ph.D.; University of Wisconsin; 1993.

GRIEB, Terrance; 1996; #Associate Professor of Finance; Ph.D.; University of Cincinnati; 1996.

GROENEWOLD, Gary S.; 2000; #Affiliate Associate Professor of Chemistry; Ph.D.; University of Nebraska; 1983.

GRUSSING, LuVerne D.; 1986; Affiliate Assistant Professor of Conservation Social Sciences; M.Ed.; University of Minnesota; 1976.

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HAGEDORN, Donald J.; 1991; Affiliate Professor of Plant Pathology; Ph.D.; University of Wisconsin; 1948.

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HAGRMAN, Donald L.; 1988; Affiliate Professor of Physics; Ph.D.; University of Utah; 1970.

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HALL, John B.; 2008; Associate Professor of Animal and Veterinary Sciences (Beef Specialist); Superintendent, Nancy M Cummings Research Center; Ph.D.; University of Kentucky; 1991.

HALL, Troy E.; 2001; #Associate Professor of Protected Area Visitor Studies; Ph.D.; Oregon State University; 1996.

HALLETT, Norman N.; 1985; Affiliate Associate Professor of Educational Administration; Ed.D.; University of Idaho; 1982.

HALLORAN, Gregory J.; 2001; #Associate Professor of Dance; M.F.A.; Ohio State University; 1996.

HAM, Bruce L.; 1987; Affiliate Clinical Professor of Medical Science; M.D.; Loma Linda University; 1974.

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HAMMEL, John E.; 1982; #Professor of Soil Science and Soil Physics; Dean, College of Agricultural and Life Sciences; Ph.D.; Washington State University; 1979.

HAMMOND, Darrel L.; 2000; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Idaho; 1995.

HAMMOND, Lawrence A.; 1996; Affiliate Clinical Professor of Medical Science; M.D.; Harvard University; 1984.

HAMPTON, Carol D.; 1999; Associate Extension Professor and Boundary County Extension Educator (Food Safety/Parenting); M.A.; Concordia University; 2003.

HAMPTON, Richard; 1995; Affiliate Professor of Plant Pathology; Ph.D.; Iowa State University; 1957.

HAMPTON, Stephanie E.; 2004; #Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; Dartmouth College; 2001.

HAN, Keonghee T.; 2007; #Assistant Professor of Literacy; Ph.D.; University of Nevada Reno; 2006.

HANG, An; 1990; Affiliate Assistant Professor of Plant Science; Ph.D.; University of Colorado; 1981.

HANN, Wendel J.; 1988; Affiliate Associate Professor of Range Resources; Ph.D.; University of Idaho; 1982.

HANNINEN, Gail E.; 2006; Affiliate Instructor of Counseling and School Psychology, Special Education and Educational Leadership; Ed.D.; University of Idaho; 1989.

HANSEN, James A.; 2005; Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; University of Wyoming; 1998.

HANSEN, Lyle J.; 2005; Assistant Extension Professor and Jerome County Extension Educator (Financial Management); M.S.; Kansas State University; 2004.

HANSON, Clayton L.; 1977; Affiliate Professor of Civil Engineering; Ph.D.; Utah State University; 1967.

HARBOUR, Jerry L.; 1991; Affiliate Assistant Professor of Psychology; Ph.D.; Oklahoma State University; 1988.

HARDY, Ronald W.; 1996; #Professor of Animal Science; Adjunct Professor of Fishery Resources; Director, Aquaculture Research Institute; Ph.D.; University of Washington; 1978.

HARMON, Luke J.; 2007; #Assistant Professor of Biological Sciences; Ph.D.; Washington University; 2005.

HARRIS, Charles C. Jr.; 1984; #Professor of Environmental Management, Policy and Planning; Adjunct Professor of Environmental Science; Ph.D.; University of Michigan; 1983.

HARRIS, John; 1993; Affiliate Clinical Professor of Medical Science; M.D.; Michigan State University; 1988.

HARRISON, Carolyn; 1995; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Idaho; 1994.

HARRISON, Steven N.; 1990; Extension Professor and Caribou County Extension Educator (Farm Management); M.S.; Brigham Young University; 1989.

HARRISON, W. Scott; 1999; #Assistant Professor of Computer Science; Ph.D.; Tulane University; 1999.

HART, Cheryl Turoczy; 2002; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Idaho; 2000.

HART, Kenneth N.; 1989; Extension Professor and Lewis County Extension Educator (Farm/Crop Management); M.S.; University of Idaho; 1992.

HART, Patricia S.; 1976; Assistant Professor of Journalism and Mass Media; Ph.D.; Washington State University; 1997.

HARTMAN, Mimi; 2005; Affiliate Instructor of Family and Consumer Sciences; M.A.; Immaculata University; 1990.

HARTVIGSEN, M. Kip; 2004; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Washington State University; 1980.

HARTZELL, Patricia L.; 1994; #Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; University of Illinois; 1986.

HARVEY, Alan E.; 1980; Affiliate Professor of Forest Resources; Ph.D.; Washington State University; 1968.

HARVEY, Celia A.; 2002; Affiliate Assistant Professor of Forest Resources; Ph.D.; Cornell University; 1999.

HARVEY, Margaret J.; 1999; Adjunct Instructor in Sociology; Director, Women's Center; M.S.; University of Idaho; 1994.

HASKIN, John; 2003; Affiliate Assistant Professor of Conservation Social Sciences; Ph.D.; Antioch New England Graduate School; 2003.

HASKO, John J.; 1997; Associate Professor of Law; Director, Law Library; J.D.; St Marys University; 1980.

HATHAWAY, Wayne G.; 1986; Affiliate Assistant Professor of Adult, Career, and Technology Education; M.S.; Utah State University; 1962.

HATHEWAY DIAL, Karin D.; 2003; Instructor of Accounting; M.Acct.; University of Idaho; 1999.

HAUFLER, Jonathan B.; 2000; #Affiliate Professor of Fish and Wildlife Resources; Ph.D.; Colorado State University; 1979.

HAYES, Steven L.; 1999; #Affiliate Professor of Mechanical Engineering; Ph.D.; Texas A&M University; 1992.

HAYMAN, Warren J.; 1998; Lecturer in English; M.F.A.; Virginia Commonwealth University; 1990.

HAYNES, James B.; 1989; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; University of Idaho; 1989.

HE, Brian (Bingjun); 2001; #Associate Professor of Agricultural Engineering; Adjunct Assistant Professor of Food Science and Toxicology; Ph.D.; University of Illinois; 2000.

HEALY, Beverly A.; 1969; Extension Professor and Ada County Extension Educator (Family Resource Management); M.Ed.; Northwest Nazarene University; 1983.

HECKENDORN, Robert B.; 1999; #Associate Professor of Computer Science; Adjunct Assistant Professor of Bioinformatics and Computational Biology; Ph.D.; Colorado State University; 1999.

HEGGLAND, Sara J.; 2006; Affiliate Associate Professor of Biological Sciences; Ph.D.; Kent State University; 1995.

HEGLUND, Patricia J.; 2003; Affiliate Assistant Professor of Biological Sciences; Ph.D.; University of Missouri; 1992.

HEINSE, Robert; 2008; #Assistant Professor of Soil Physics; M.Sc.; University of Leipzig; 2003.

HENAGER, Charles H. Jr.; 1995; Affiliate Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; University of Washington; 1983.

HENRICH, Kristin J.; 2008; Reference/Instruction Librarian with rank of Assistant Professor; M.L.S.; Indiana University; 2008.

HENSCHEID, Jean; 2006; Lecturer in Core Discovery; Director of Core; Ph.D.; Washington State University; 1996.

HERKES, John W.; 2008; Adjunct Assistant Professor of Biological and Agricultural Engineering; M.Engr.; University of Idaho; 2000.

HERTEL, Karen F.; 2000; Reference Librarian with rank of Assistant Professor; M.L.S.; University of Washington; 1994.

HESFORD, Walter A.; 1979; #Associate Professor of English; Director, Undergraduate Studies; Ph.D.; Harvard University; 1975.

HESS, Herbert L.; 1993; #Professor of Electrical Engineering; Ph.D.; University of Wisconsin; 1993.

HESS, Susan M.; 1994; #Associate Professor of Music (bassoon); Assistant Director, Lionel Hampton School of Music; D.M.A.; University of Colorado; 1996.

HESS, Thomas F.; 1994; #Professor of Biological and Agricultural Engineering (Environmental Engineering); Adjunct Professor of Environmental Science and Civil Engineering; Director, Environmental Engineering; Ph.D.; University of Colorado; 1990.

HESSBURG, Paul F. Sr.; 2009; Affiliate Professor of Forest Resources; Ph.D.; Oregon State University; 1984.

HEYERDAHL, Emily K.; 2004; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of Washington; 1997.

HICKE, Jeffrey A.; 2006; #Assistant Professor of Geography; Ph.D.; University of Colorado; 2000.

HIGGINS, Lorie L.; 2002; #Assistant Professor of Rural Sociology and Rural Community Development; Adjunct Assistant Professor of Environmental Science; Ph.D.; Washington State University; 2001.

HIGUERA, Philip E.; 2009; Assistant Professor of Fire Ecology; Ph.D.; University of Washington; 2006.

HILJE, Luko; 2003; Affiliate Professor of Plant, Soil and Entomological Sciences; Ph.D.; University of California Riverside; 1983.

HILL, Elizabeth K.; 2004; Reference Librarian with rank of Assistant Professor; M.L.I.S.; University of Arizona; 2001.

HILL, Rod; 2002; #Associate Professor of Growth Biology; Ph.D.; Central Queensland University; 1995.

HILL, Susan G.; 1992; Affiliate Assistant Professor of Psychology; Ph.D.; Virginia Polytechnic Institute; 1988.

HINCHEE, Robert E.; 1996; Affiliate Associate Professor of Civil Engineering; Ph.D.; Utah State University; 1983.

HINES, Steven L.; 2000; Associate Extension Professor and Twin Falls County Extension Educator (Crops); M.S.; University of Idaho; 1996.

HINZ, Hariet L.; 2003; Affiliate Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; University of Fribourg; 1999.

HINZ, Susan; 2003; Lecturer in Journalism and Mass Media; M.S.; Iowa State University; 1972.

HINZ, Susan C.; 2003; Lecturer in Journalism and Mass Media; M.S.; Iowa State University; 2003.

HIRNYCK, Ronda E.; 2003; Associate Extension Professor and Extension Educator (Pesticide); M.S.; University of Nebraska; 1983.

HIROMOTO, Robert E.; 2002; #Professor of Computer Science; Ph.D.; California State University Long Beach; 1978.

HODGIN, Jere Lee; 2005; #Associate Professor of Theatre; M.F.A.; University of Georgia; 1973.

HOFF, Raymond J.; 1962; Affiliate Professor of Forest Resources; Ph.D.; Washington State University; 1968.

HOFFMAN, Chad; 2006; Adjunct Instructor of Forest Resources; M.S.; Northern Arizona University; 2005.

HOFFMAN, David L.; 1987; Affiliate Assistant Professor of Plant Science; Ph.D.; Washington State University; 1985.

HOFFMAN, Katie J.; 2008; Assistant Extension Professor and Lemhi County Educator (Youth Development); M.S.; University of Idaho; 2008.

HOFFMAN, Marla; 2002; Affiliate Senior Instructor of Dance; B.S.; Southern Utah University; 1995.

HOLLANDS, Justin G.; 1994; Affiliate Assistant Professor of Psychology; Ph.D.; University of Toronto; 1993.

HOLLENHORST, Steven J.; 1999; #Professor of Protected Area Policy; Adjunct Professor of Environmental Science; Ph.D.; Ohio State University; 1987.

HOLMES, Robert G.G.; 1996; Affiliate Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; University of Manchester; 1975.

HOLTZCLAW, V. Nell; 1995; Affiliate Instructor in Adult, Career, and Technology Education; M.S.; Montana College of Science and Technology; 1991.

HOLYOKE, Laura B.; 2004; #Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Gonzaga University; 2004.

HONDO, Carolyn; 2006; Affiliate Instructor of Counseling and School Psychology, Special Education and Educational Leadership; Ph.D.; University of Idaho; 2005.

HONG, Yang-Ki; 2006; Affiliate Professor of Materials Science and Engineering; Ph.D.; University of Utah; 1981.

HONG, Zonglie; 2005; #Assistant Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; University of Novi Sad; 1990.

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HORMEL, Leontina M.; 2006; #Assistant Professor of Sociology; Ph.D.; University of Oregon; 2004.

HORNING, Janet M.; 2006; Affiliate Instructor of Counseling and School Psychology, Special Education and Educational Leadership; Ph.D.; University of Idaho; 2004.

HOUFF, Bonnie L.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; University of Miami.

HOUGHTON, Madeline Dellwo; 1995; #Associate Professor of Dietetics; Ph.D.; University of Tennessee; 1989.

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HOVEY, Sue Y.; 2000; Affiliate Instructor in Teacher Education; M.A.; University of Idaho; 1978.

HOWE, Steven D.; 2009; Affiliate Professor of Nuclear Engineering; Ph.D.; Kansas State University; 1980.

HRDLICKA, Patrick J.; 2006; #Assistant Professor of Chemistry; Adjunct Assistant Professor of Neuroscience; Ph.D.; University of Southern Denmark; 2006.

HU, Gongshe; 2006; Affiliate Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; Kansas State University; 1995.

HU, Xiao; 2008; Instructor of Architecture; M.S.; University of Nebraska; 2003.

HUBER, Kerry C.; 1998; #Associate Professor of Food Science and Toxicology; Ph.D.; Purdue University; 1998.

HUDAK, Andrew T.; 2004; Affiliate Assistant Professor of Forest Resources, Rangeland Ecology and Management, and Geography; Ph.D.; University of Colorado; 1999.

HUFF, Roy B.; 2003; Affiliate Professor of Adult, Career, and Technology Education; Ph.D.; University of Idaho; 2001.

HUGHES, Robert M.; 2001; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; Oregon State University; 1979.

HUMES, Karen S.; 1999; #Professor of Geography; Adjunct Professor of Environmental Science; Ph.D.; University of Arizona; 1992.

HUNT, Carl W.; 1985; #Professor of Animal Science; Department Head, Department of Animal and Veterinary Sciences; Ph.D.; University of Missouri; 1984.

HUNT, Earle R. Jr.; 2006; Affiliate Associate Professor of Forest Resources; Ph.D.; University of Michigan; 1984.

HUNT, Kristin DeNure; 1997; Affiliate Instructor in Adult, Career, and Technology Education; M.S.; University of Idaho; 1994.

HUNT, Martha K.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; Southern Illinois University.

HUNTER, Benjamin A.; 2006; Reference/Instruction Librarian with rank of Assistant Professor; M.L.S.; University of North Carolina; 2005.

HUNTER, David L.; 1992; Affiliate Associate Professor of Animal and Veterinary Science; D.V.M.; Washington State University; 1976.

HUNTER, Jay A.; 1980; Affiliate Clinical Professor of Medical Science; M.D.; University of Washington; 1977.

HUNTER, Lauren; 2009; Assistant Extension Professor and Blaine County Extension Educator (Crops); M.A.; Appalachian State University; 2008.

HUPP, Jerry W.; 2004; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; Colorado State University; 1987.

HUTCHINSON, Pamela J.; 1999; #Associate Professor of Weed Science; Ph.D.; University of Nebraska; 1991.

HUTCHISON, Sharon J.; 1984; Senior Instructor in Chemistry; Ph.D.; University of Idaho; 1983.

HYINK, David; 2001; Affiliate Professor of Forest Resources; Ph.D.; Purdue University; 1979.

IBRAHIM, Muhammad A.; 2002; Affiliate Assistant Professor of Rangeland Ecology and Management; Ph.D.; Wageningen University; 1994.

ICKES, Lionel C.; 1978; Affiliate Professor of Veterinary Medicine; D.V.M.; Colorado State University; 1960.

IMBERGER, Jorge; 2003; Affiliate Professor of Civil Engineering; Ph.D.; University of California Berkeley; 1970.

INGERMANN, Rolf L.; 1986; #Professor of Zoology; Ph.D.; University of Oregon; 1980.

IRVINE, Kathryn M.; 2009; Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; Oregon State University; 2007.

IRVING, John S.; 1993; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; University of Idaho; 1987.

ISAACSON, Peter E.; 1978; #Professor of Geology; Acting Assistant Department Chair, Department of Geological Sciences; Ph.D.; Oregon State University; 1974.

ISAAK, Daniel J.; 2003; Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; University of Wyoming; 2001.

IVES, Thomas W.; 2008; Affiliate Associate Professor of Mechanical Engineering; Ph.D.; Texas A&M University; 1997.

JACKSON, Eric; 2007; Affiliate Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; University of Arkansas; 2004.

JACOBUS, Frank R.; 2007; Assistant Professor of Architecture; M.Arch.; University of Texas; 2007.

JAIN, Sachin; 2007; #Assistant Professor of Counseling and School Psychology; Ph.D.; University of Wyoming; 2006.

JAIN, Theresa B.; 2001; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of Idaho; 2001.

JAKOBSEN, Christine H.; 2006; Affiliate Assistant Professor of Conservation Social Sciences; Ph.D.; University of Idaho; 2006.

JANKOWSKA, Maria A.; 1989; Research Librarian with rank of Professor; M.L.I.S.; University of California Berkeley; 1989.

JANKOWSKI, Piotr; 2004; Affiliate Professor of Geography; Ph.D.; University of Washington; 1989.

JEFFERY, Clinton L.; 2007; #Associate Professor of Computer Science; Ph.D.; University of Arizona; 1993.

JEFFERY, Dabid J.; 2008; Senior Instructor of Physics; Ph.D.; Mcmaster University; 1988.

JEFFREY, Justin; 2008; Assistant Professor of Philosophy (Ethics); Ph.D.; University of North Carolina; 2007.

JENKINS, Kip W.; 1990; Affiliate Assistant Professor of Religious Studies; Ph.D.; Brigham Young University; 1990.

JENKINS, Kurt J.; 2002; Affiliate Professor of Fish and Wildlife Resources; Ph.D.; University of Idaho; 1985.

JENNINGS, Michael D.; 2004; Affiliate Assistant Professor of Geography; Ph.D.; University of California Santa Barbara; 2003.

JENSEN, Jennifer L.; 2009; Assistant Extension Professor and Boundary County Extension Educator (Agriculture and Community Development); M.S.; University of Idaho; 2004.

JENSEN, K. Scott; 2000; Associate Extension Professor and Owyhee County Extension Educator (Livestock and Range); M.S.; University of Idaho; 2000.

JENSEN, Kirstin D.; 2009; Assistant Extension Professor and Idaho County Extension Educator (Health and Nutrition); M.A.; Pacific Lutheran University; 1999.

JENSEN, Ross T.; 1999; Affiliate Assistant Professor of Mechanical Engineering; Ph.D.; Utah State University; 1972.

JENTSCH, Teresa S.; 1992; Lecturer in Curriculum and Instruction; M.Ed.; University of Oregon; 1980.

JIN, Xiao; 1999; Affiliate Professor of Chemical Engineering.

JOHANSEN, Harley E.; 1981; #Professor of Geography; Department Chair, Department of Geography; Ph.D.; University of Wisconsin; 1974.

JOHN, Cameron R.; 2004; Affiliate Assistant Professor of Adult Education; Ph.D.; University of Arizona; 1997.

JOHNSON, Aaron J.; 2007; #Assistant Professor of Agricultural Economics; Ph.D.; Purdue University; 2001.

JOHNSON, Brian K.; 1992; #Professor of Electrical Engineering; Department Chair, Department of Electrical & Computer Engineering; Ph.D.; University of Wisconsin; 1992.

JOHNSON, Craig A.; 2006; Affiliate Assistant Professor of Adult, Career and Technology Education; Ph.D.; Purdue University; 2004.

JOHNSON, E.G.; 1978; Affiliate Professor of Veterinary Medicine; D.V.M.; Washington State University; 1966.

JOHNSON, Gary S.; 1990; #Professor of Hydrogeology; Adjunct Associate Professor of Biological and Agricultural Engineering and Environmental Science; Ph.D.; University of Idaho; 1991.

JOHNSON, Georgia; 1992; #Associate Professor of Education; Ph.D.; University of Utah; 1992.

JOHNSON, Gregory L.; 1994; Affiliate Assistant Professor of Biological and Agricultural Engineering; Ph.D.; North Carolina State University; 1991.

JOHNSON, James B.; 1981; #Professor of Entomology; Department Head, Department of Plant, Soil and Entomological Sciences; Ph.D.; University of California Berkeley; 1982.

JOHNSON, Janis A.; 2004; Assistant Professor of English; Ph.D.; Tulane University; 1999.

JOHNSON, Jill L.; 2002; #Associate Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; Mayo Graduate School; 1994.

JOHNSON, Keith A.; 2001; Affiliate Professor of Fish and Wildlife Resources; Ph.D.; Oregon State University; 1975.

JOHNSON, LaMar J.; 1980; Affiliate Instructor in Physics; Ph.D.; Colorado State University; 1969.

JOHNSON, Michael J.; 2006; #Assistant Professor of Educational Leadership; Ph.D.; University of Oregon; 1980.

JOHNSON, Richard W.; 1999; #Affiliate Associate Professor of Mechanical Engineering; Ph.D.; UMIST; 1984.

JOHNSON, Shelly L.; 1999; Associate Extension Professor and Kootenai County Extension Educator (Nutrition/ENP); M.S.; University of Montana; 1998.

JOHNSON, Timothy R.; 2000; Associate Professor of Statistics; Ph.D.; University of Illinois; 2001.

JOHNSON-LEUNG, Jennifer M.; 2007; #Assistant Professor of Mathematics; Ph.D.; California Institute of Technology; 2005.

JOHNSON-MAYNARD, Jodi; 2000; #Associate Professor of Soil and Water Management; Adjunct Associate Professor of Environmental Science; Ph.D.; University of California Riverside; 1999.

JOHNSTON, Kevin; 2004; Senior Instructor of Recreation; M.S.; University of Idaho; 2003.

JOHNSTONE-YELLIN, Jason N.; 2003; Lecturer in Philosophy; M.A.; University of Aberdeen; 2000.

JOKI, Russell A.; 2000; #Professor of Teacher Education; Department Chair, Department of Counseling, School Psychology, and Educational Leadership; Ph.D.; University of Idaho; 1980.

JONES, Jeffrey P.; 2008; Lecturer in English; M.F.A.; University of Idaho; 2005.

JONES, Jeffrey R.; 2002; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of California Los Angeles; 1980.

JONES, Wayne B.; 1993; Associate Extension Professor and Bonneville County Extension Educator (Potatoes/Urban Horticulture); M.S.; Utah State University; 1982.

JORCYK, Cheryl L.; 2006; Affiliate Associate Professor of Biological Sciences; Ph.D.; Johns Hopkins University; 1991.

JORGENSEN, Nickolas E.; 2006; #Assistant Professor of Political Science; Ph.D.; University of Michigan; 2005.

JOYCE, Paul; 1991; #Professor of Mathematics and of Statistics; Adjunct Professor of Bioinformatics and Computational Biology; Ph.D.; University of Utah; 1988.

JUDGE, Mary Ann; 1988; Senior Instructor in English; Director of the Writing Center; M.A.; University of Idaho; 1990.

JUNG, S.J.; 1990; #Professor of Geological Engineering; Ph.D.; West Virginia University; 1989.

KALTENBORN, Bjorn P.; 1995; Affiliate Associate Professor of Conservation Social Sciences; Dr.Scient.; University of Oslo; 1991.

KANG, Hejun; 2008; Assistant Professor of Geography; Ph.D.; Mcmaster University; 2008.

KAPPLER-CROOKSTON, Irina A.; 1985; Senior Instructor in Foreign Languages and Literatures (Spanish); M.A.; Washington State University; 1988.

KARASEV, Alexander V.; 2006; #Assistant Professor of Plant Pathology; Adjunct Assistant Professor of Bioinformatics and Computational Biology; Ph.D.; Moscow State University; 1984.

KARSKY, Thomas J.; 1977; Extension Professor of Agricultural Engineering; Extension Farm Safety Specialist; M.S.; North Dakota State University; 1974.

KATTENHORN, Simon A.; 1998; #Associate Professor of Geology; Ph.D.; Stanford University; 1998.

KAVANAGH, Kathleen L.; 1999; #Associate Professor of Forest Resources; Adjunct Associate Professor of Environmental Science; Ph.D.; Oregon State University; 1993.

KEANE, Robert E.; 2000; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of Idaho; 1994.

KEARNS, Richard; 1994; Affiliate Associate Professor of Adult, Career, and Technology Education; Ed.D.; University of Idaho; 1991.

KEHOE, Sharon; 1997; Affiliate Assistant Professor of Religious Studies; Ph.D.; California Institute of Integral Studies; 1997.

KEIM, Delphine D.; 1997; #Associate Professor of Art and Design; M.F.A.; Kent State University; 1995.

KELLIHER, Kevin R.; 2006; #Assistant Professor of Neurobiology, Biological Sciences and WWAMI; Adjunct Assistant Professor of Neuroscience; Ph.D.; Boston University; 2001.

KENADY, Reid M.; 2008; Affiliate Associate Professor of Forest Resources; M.S.; University of Washington; 1962.

KENDRICK, David M.; 1997; Affiliate Clinical Professor of Medical Science; M.D.; University of Colorado; 1977.

KENNEDY, Brian P.; 2005; #Assiatant Professor of Fishery Biology and Ecology; Adjunct Assistant Professor of Biological Sciences; Ph.D.; Dartmouth College; 2000.

KENNEDY, J. Rory; 2007; Affiliate Assistant Professor of Chemistry; Ph.D.; Northwestern University; 1987.

KENT, Amanda K.; 2009; Assistant Extension Instructor and Blaine County Extension Educator (4-H Youth Development); B.S.; University of Idaho; 2007.

KERN, Anne L.; 2007; #Assistant Professor of Curriculum and Instruction; M.S.; Portland State University; 1995.

KETCHUM, Robert G.; 1994; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Washington State University; 1985.

KHERICHA, Soli; 2005; Affiliate Professor of Mechanical Engineering; Ph.D.; Iowa State University; 1987.

KHRISTOFOROVA, Nadezhda K.; 2000; Affiliate Professor of Environmental Sciences; D.Sc.; Institute of Evolution Morphology & Ecology of Animals; 1985.

KIE, John G.; 2001; Affiliate Professor of Fish and Wildlife Resources; Ph.D.; University of California Berkeley; 1977.

KIMSEY, Mark J.; 2009; Adjunct Assistant Professor of Forest Resources; Ph.D.; University of Idaho; 2006.

KINCAID, Dennis C.; 1981; #Affiliate Professor of Biological and Agricultural Engineering; Ph.D.; Colorado State University; 1970.

KINDER, Cynthia A.; 1999; Associate Extension Professor and Camas/Gooding County Extension Educator (4-H/Alfalfa); M.S.; University of Idaho; 1999.

KINGERY, James L.; 1977; #Associate Professor of Range Resources; Adjunct Associate Professor of Environmental Science; Ph.D.; University of Idaho; 1985.

KINLOCH, Bohun; 2001; Affiliate Professor of Forest Resources; Ph.D.; North Carolina State University; 1968.

KINZIGER, Michael L.; 1993; #Associate Professor of Recreation; Ph.D.; University of New Mexico; 1992.

KITCHEL, K. Allen; 1998; #Assistant Professor of Adult, Career and Technology Education; Ph.D.; University of Idaho; 2006.

KITTELL, Ellen E.; 1993; #Associate Professor of History; Ph.D.; University of Illinois; 1983.

KITZROW, Martha A.; 1989; Professor of Adult, Career, and Technology Education; Adjunct Professor of Psychology; Licensed Psychologist, Counseling and Testing Center, with rank of Professor; Ph.D.; Oregon State University; 1990.

KLOPFENSTEIN, Ned B.; 1999; Affiliate Assistant Professor of Forest Resources; Ph.D.; Iowa State University; 1985.

KNOLL, Dana A.; 2009; Affiliate Professor of Mechanical Engineering; Ph.D.; University of New Mexico; 1991.

KNOWLTON, William B.; 2004; Affiliate Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; University of California Berkeley; 1988.

KNUDSEN, Guy R.; 1987; #Professor of Plant Pathology; Adjunct Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; Cornell University; 1984.

KNUDSON-FIELDS, Barbara S.; 1988; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Idaho; 1988.

KOK, Hans; 2006; #Affiliate Associate Professor of Plant, Soil and Entomological Sciences; Ph.D.; University of Idaho; 1989.

KOLODY, Rita C.; 2003; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ed.D.; Montana State University; 1997.

KRAUSE, Jerry V.; 2003; Affiliate Professor of Health, Physical Education, Recreation, and Dance; Ed.D.; University of Northern Colorado; 1967.

KRAUT, Marla A.; 1991; #Associate Professor of Accounting; Department Chair, Department of Accounting; Ph.D.; University of Arizona; 1991.

KRINGS, Axel W.; 1995; #Professor of Computer Science; Ph.D.; University of Nebraska; 1993.

KRISHNAPPAN, Bommanna G.; 2001; Affiliate Associate Professor of Civil Engineering; Ph.D.; Queens University; 1972.

KRONE, Stephen M.; 1995; #Professor of Mathematics; Adjunct Professor of Bioinformatics and Computational Biology; Ph.D.; University of Massachusetts; 1990.

KROTH, Michael S.; 2005; #Assistant Professor of Adult and Organizational Learning; Ph.D.; University of New Mexico; 1997.

KRUMPE, Edwin E.; 1979; #Professor of Wilderness Management; Interim Department Head, Department of Conservation Social Sciences; Director, Wilderness Research Center; Ph.D.; Colorado State University; 1979.

KUBIC, William L. Jr.; 1993; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; Lehigh University; 1986.

KUHL, Joseph C.; 2009; Assistant Professor of Plant, Soil and Entomological Sciences; Ph.D.; University of Wisconsin; 2000.

KUHLMAN, Kimberly R.; 2002; Affiliate Assistant Professor of Geological Sciences; Ph.D.; University of Wisconsin; 1998.

KYTE, Michael D.; 1986; #Professor of Civil Engineering (P.E.); Director, National Institute for Advanced Transportation Technology; Ph.D.; University of Iowa; 1986.

LABORIE, Marie-Pierre G.; 2008; Affiliate Associate Professor of Forest Products; Ph.D.; Virginia Polytechnic Institute; 2002.

LACAVA, Gerald J.; 1995; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; University of Kansas; 1971.

LAFLIN, Maureen E.; 1991; Professor of Law; J.D.; St Louis University; 1982.

LAMOREAUX, Mark E.; 2008; Lecturer in Art and Design; B.F.A.; University of Idaho; 1975.

LAMOREY, Gregg W.; 2002; Affiliate Assistant Professor of Geological Sciences; Ph.D.; University of Nevada Reno; 1994.

LANDIS, Thomas D.; 2009; Affiliate Professor of Forest Resources; Ph.D.; Colorado State University; 1974.

LANG, Jerome P.; 1991; Affiliate Clinical Professor of Medical Science; M.D.; Case Western Reserve University; 1982.

LANINGA, Tamara; 2008; #Assistant Professor of Sustainable Land Use Planning; Ph.D.; University of Colorado; 2007.

LANTING, Rhea K.; 1994; Extension Professor and Twin Falls County Extension Educator (Nutrition, Health and Food Safety/4-H); M.S.; University of Idaho; 2001.

LAPATRA, Scott E.; 1997; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; Oregon State University; 1989.

LARIVIERE, Sara; 1995; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ed.D.; University of La Verne; 1989.

LARKIN, John A.; 1998; Affiliate Assistant Professor of Art and Design; B.F.A.; University of Idaho; 1984.

LASSAHN, Gordon D.; 1992; Affiliate Associate Professor of Physics; Ph.D.; Iowa State University; 1970.

LATORELLA, Kara A.; 2006; Affiliate Assistant Professor of Psychology and Communication Studies; Ph.D.; SUNY at Buffalo; 1997.

LAUMATIA, Laura A.; 2004; Extension Instructor and Extension Indian Reservation Program Extension Educator-Coeur d'Alene Reservation (Ag and Natural Resources); M.S.; Kansas State University; 2004.

LAUNCHBAUGH, Karen L.; 1996; #Associate Professor of Range Resources; Department Head, Department of Rangeland Ecology and Management; Ph.D.; Utah State University; 1992.

LAURIOLA, Rosanna; 2008; Assistant Professor of Foreign Languages and Literatures (Classics); Ph.D.; University of Florence; 2002.

LAW, Joseph D.; 1989; #Associate Professor of Electrical Engineering; Ph.D.; University of Wisconsin; 1991.

LAWRENCE, John J.; 1993; #Professor of Production/Operations Management and of Statistics; Ph.D.; Penn State University; 1993.

LAWRENCE, Torrey E.; 1998; #Associate Professor of Music (tuba, euphonium, bands); M.Mus.; Northwestern University; 1996.

LAZZARINI, Donald F.; 2002; Adjunct Senior Instructor of Health; M.Ed.; University of Idaho; 2002.

LE, Yen H.; 2006; Research Assistant Professor of Conservation Social Sciences; Ph.D.; University of Idaho; 2005.

LEACH, David B.; 2002; Affiliate Clinical Professor of Medical Science; M.D.; University of Kentucky; 1997.

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LEE, Jungmin; 2007; Affiliate Assistant Professor of Food Science and Toxicology; Ph.D.; Oregon State University; 2004.

LEE, Stephen S.; 1993; #Associate Professor of Statistics; Adjunct Associate Professor of Neuroscience, and of Bioinformatics and Computational Biology; Ph.D.; Florida State University; 1991.

LEE, Tracie; 2007; Instructor of Production/Operations Management; M.I.M.; Thunderbird School; 1997.

LEE-PAINTER, J. David; 1995; #Professor of Theatre and Film; M.F.A.; Illinois State University; 1991.

LEFF, Wenzel A.; 1989; Affiliate Clinical Professor of Medical Science; M.D.; South Dakota State University; 1957.

LEHRSCH, Gary A.; 1989; Affiliate Professor of Soil Science; Ph.D.; Mississippi State University; 1985.

LENTZ, Rodrick D.; 1997; Affiliate Assistant Professor of Soils; Ph.D.; University of Minnesota; 1991.

LEU, Matthias; 2006; Affiliate Assistant Professor of Fish and Wildlife Resources; Ph.D.; University of Washington; 2000.

LEWIS, Gregory S.; 2002; Adjunct Associate Professor of Animal and Veterinary Science; Ph.D.; West Virginia University; 1978.

LEWIS, Leroy C.; 1982; Affiliate Instructor in Chemistry; Ph.D.; Oregon State University; 1968.

LEWIS, Margaret J.; 2002; Affiliate Assistant Professor of Psychology; Ph.D.; Ohio State University; 1998.

LEWIS, Reed S.; 1995; Adjunct Associate Professor of Geology; Ph.D.; Oregon State University; 1990.

LEWIS, Todd F.; 1996; Affiliate Instructor in Adult, Career, and Technology Education; M.S.; Murray State University; 1983.

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LI, Shelly X.; 1997; Affiliate Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; University of Minnesota; 1991.

LIDDIL, Audrey C.; 1988; Extension Professor and Extension Educator (EFNEP/ENP); M.S.; Utah State University; 1987.

LIESZ, Thomas J.; 2005; Instructor of Economics, Finance and Information Systems; Ph.D.; University of Idaho; 1989.

LILLARD, Monique C.; 1987; Professor of Law; J.D.; University of California Los Angeles; 1983.

LINAREZ-ROYCE, Nancy J.; 2000; Affiliate Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; University of Idaho; 2000.

LIND, Douglas; 1991; #Professor of Philosophy; Adjunct Professor of Environmental Science; Department Chair, Department of Philosophy; Ph.D.; University of Pennsylvania; 1991.

LINEHAN, John C.; 2002; Affiliate Associate Professor of Chemistry; Ph.D.; University of California Davis; 1986.

LINK, Timothy E.; 2001; #Associate Professor of Forest Resources; Adjunct Associate Professor of Rangeland Ecology and Management and Environmental Science and Civil Engineering; Ph.D.; Oregon State University; 2001.

LIOU, Chyr Pyng; 1986; #Professor of Civil Engineering (P.E.); Adjunct Professor of Mechanical Engineering; Ph.D.; University of Michigan; 1976.

LIU, Keshun; 2005; Affiliate Associate Professor of Food Science and Toxicology; Ph.D.; Michigan State University; 1989.

LOCKARD, Marsha A.; 2000; Associate Extension Professor and Owyhee County Extension Educator (Nutrition and Health); M.S.; University of Idaho; 1989.

LOCKE, Kenneth D.; 1996; #Professor of Psychology; Department Chair, Department of Psychology and Communication Studies; Ph.D.; Stanford University; 1989.

LOHMAN, L. Kirk; 1993; Affiliate Associate Professor of Fish and Wildlife Resources; Ph.D.; University of Missouri; 1988.

LONERGAN, Wallace G.; 1992; Affiliate Assistant Professor of Educational Administration; Ph.D.; University of Chicago; 1960.

LONG, Daniel S.; 2006; Affiliate Associate Professor of Forest Resources; Ph.D.; Cornell University; 1993.

LONG, Elaine M.; 1992; Affiliate Associate Professor of Family and Consumer Sciences; Ph.D.; University of Idaho; 1991.

LONG, Jerrold A.; 2007; Associate Professor of Law; J.D.; University of Colorado; 2000.

LORENTZEN, Robin M.; 1994; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Loyola University Chicago; 1989.

LOVE, Dennis A.; 1996; Affiliate Assistant Professor of Adult, Career, and Technology Education; J.D.; University of Idaho; 1985.

LOVE, Stephen L.; 1985; #Professor of Urban Horticulture; Ph.D.; Clemson University; 1984.

LOVELACE, Kathi J.; 2008; Assistant Professor of Management and Human Resources; Ph.D.; University of Massachusetts; 2002.

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LOWRY, Michael; 2009; #Assistant Professor of Civil Engineering; Ph.D.; University of Washington; 2004.

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LUCE, Charles H.; 2004; Affiliate Assistant Professor of Civil Engineering; Ph.D.; Utah State University; 2000.

LUCKEY, Brian P.; 2003; Associate Extension Professor and Ada County Extension Educator (4-H Youth Development); M.S.; Oregon State University; 2000.

LUND, William R.; 1988; #Professor of Political Science; Ph.D.; University of Washington; 1983.

LUO, Minhua; 2008; Affiliate Assistant Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; Hunan Medical University; 1999.

LUONG, Tran Dinh; 2009; Affiliate Assistant Professor of Mathematics; Ph.D.; University of Idaho; 2009.

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MAGNUSSON, Kathy R.; 2002; Affiliate Associate Professor of Neuroscience; Ph.D.; University of Minnesota; 1989.

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MEAD, Phillip G.; 2002; #Associate Professor of Architecture; M.A.; University of Texas; 1991.

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MEIER, Lori L.; 2008; Lecturer in Psychology and Communication Studies; M.S.; University of Idaho; 1993.

MEIER, Steven E.; 1987; #Associate Professor of Psychology; Adjunct Associate Professor of Neuroscience; Ph.D.; Washington State University; 1991.

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MIKLAS, Phillip N.; 2006; Affiliate Professor of Plant, Soil and Entomological Sciences; Ph.D.; North Dakota State University; 1990.

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MILLER, Daniel L.; 1994; Affiliate Associate Professor of Forest Resources; Ph.D.; University of Idaho; 1974.

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MILLER, John A.; 2008; Lecturer in Psychology and Communication Studies; M.Ed.; University of Idaho; 1980.

MILLER, John A.; 1988; Professor of Law; L.L.M.; University of Florida; 1987.

MILLER, John S.; 2006; Affiliate Instructor of Counseling and School Psychology, Special Education and Educational Leadership; Ed.D.; University of Idaho; 2004.

MILLER, Jon R.; 1989; #Professor of Economics; Ph.D.; Washington University; 1974.

MILLER, Lance D.; 1994; Affiliate Associate Professor of Geology; Ph.D.; University of Arizona; 1994.

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MILLER, Reid C.; 1992; Affiliate Professor of Chemical Engineering; Ph.D.; University of California Berkeley; 1968.

MILLER, Stanley M.; 1985; #Professor of Geological Engineering (P.E.); Ph.D.; University of Wyoming; 1982.

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MINER, Katie R.; 2006; Senior Instructor of Food & Nutrition; M.S.; University of Idaho; 2004.

MINNICH, Scott A.; 1989; #Associate Professor of Microbiology, Molecular Biology and Biochemistry; Ph.D.; Iowa State University; 1981.

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MOHAN, S. Krishna; 1985; #Extension Professor of Plant Pathology; Ph.D.; Indian Agricultural Research Institute; 1971.

MOLL, Amy J.; 2004; Affiliate Assistant Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; University of California Berkeley; 1994.

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MOMONT, Patrick A.; 1990; #Extension Professor; Director, Cooperative Extension Southern District; Ph.D.; South Dakota State University; 1990.

MONSERUD, Robert A.; 1977; Affiliate Professor of Forest Resources; Ph.D.; University of Wisconsin; 1975.

MONTOTO, Romбn; 2004; #Assistant Professor of Architecture; M.Arch.; University of Wisconsin; 1999.

MOORE, Amber; 2008; #Assistant Professor of Fertility Management and Soil and Water Quality; Ph.D.; North Carolina State University; 2004.

MOREHEAD, Mark D.; 2002; #Adjunct Assistant Professor of Biological and Agricultural Engineering; Ph.D.; University of Colorado; 1999.

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MORRA, Matthew J.; 1986; #Professor of Soil Science (soil biochemistry); Adjunct Professor of Microbiology, Molecular Biology and Biochemistry and Environmental Science; Division Chair of Soil and Land Resources; Ph.D.; Ohio State University; 1986.

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MOSER, Mary L.; 2005; Affiliate Professor of Fish and Wildlife Resources; Ph.D.; North Carolina State University; 1987.

MOXSON, Vladimir S.; 1999; Affiliate Associate Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; Moscow Institute of Steel and Alloys; 1979.

MUEHLBAUER, Frederick J.; 1976; Affiliate Professor of Plant Breeding and Genetics; Ph.D.; Penn State University; 1969.

MUELLER, Susan M.; 2004; Head, Technical Services with rank of Associate Professor; M.L.; Emporia State University; 1975.

MULKEY, Stephen S.; 2008; #Associate Professor of Environmental Science; Director, Environmental Science Program; Ph.D.; University of Pennsylvania; 1986.

MUNSON, John C.; 1994; #Professor of Computer Science; Ph.D.; New Mexico State University; 1970.

MURDOCK, Gordon K.; 2006; Assistant Professor of Animal Physiology; Ph.D.; University of Alberta; 2004.

MURPHY, C. Michael; 1989; Affiliate Clinical Professor of Medical Science; M.D.; University of Kentucky; 1968.

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NAGLER, James J.; 1996; #Professor of Zoology; Ph.D.; Memorial University of Newfoundland; 1991.

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NATALE, Nicholas R.; 1981; #Affiliate Professor of Chemistry; Ph.D.; Drexel University; 1979.

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NEILSON, Robert M. Jr.; 1994; Affiliate Professor of Materials Science and Engineering and Metallurgy; M.S.; SUNY at Stony Brook; 1979.

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NELSON, Nora Lynn Olsen; 1998; #Associate Extension Professor of Plant Science; Ph.D.; Washington State University; 1998.

NELSON, Ross F.; 2009; Affiliate Professor of Rangeland Ecology and Management; Ph.D.; Virginia Polytechnic Institute; 1994.

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NEWMAN, Meredith E.; 1995; Affiliate Assistant Professor of Chemistry; Ph.D.; Clemson University; 1990.

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NOREN, Kenneth V.; 1992; #Associate Professor of Electrical Engineering; Adjunct Associate Professor of Materials Engineering; Ph.D.; Michigan State University; 1992.

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O'BRIEN, Michael H.; 1993; Affiliate Professor of Materials Science and Engineering and Metallurgical Engineering; Ph.D.; Iowa State University; 1987.

OCHS, Jon; 1993; Affiliate Assistant Professor of Art and Design; Ph.D.; Washington State University; 1974.

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PEERY, Christopher A.; 2004; #Assistant Research Professor of Fish and Wildlife Resources; Adjunct Assistant Professor of Environmental Science; Ph.D.; University of Idaho; 1995.

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PELLMYR, N. Olof; 2002; #Professor of Biology; D.Phil.; Uppsala University; 1985.

PENCE, Morgan J.; 2005; Affiliate Instructor of Forest Resources; M.S.; University of Idaho; 2001.

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PLUMLEE, Donald G.; 2008; Affiliate Assistant Professor of Mechanical Engineering; Ph.D.; University of Idaho; 2007.

PODGORNEY, Robert K.; 2008; Affiliate Assistant Professor of Geology; Ph.D.; University of Idaho; 2007.

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POWELL, Lura J.; 2002; Affiliate Professor of Chemistry; Ph.D.; University of Maryland; 1978.

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QUALLS, Russell J.; 1999; #Associate Professor of Agricultural Engineering; Ph.D.; Cornell University; 1994.

QUELLER, Kurt; 1995; Lecturer in English; Ph.D.; Stanford University; 1985.

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ROBERTO, Francisco F.; 1993; Affiliate Professor of Microbiology, Molecular Biology and Biochemistry, and of Plant, Soil and Entomological Sciences; Ph.D.; University of California Riverside; 1985.

ROBERTS, Brooks K.; 1998; #Affiliate Assistant Professor of Mathematics; Ph.D.; University of Chicago; 1992.

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ROBERTSON, Blaine P.; 2003; Affiliate Assistant Professor of Adult Education; Ed.D.; Idaho State University; 1999.

ROBERTSON, Eric P.; 2008; Affiliate Assistant Professor of Chemical Engineering; Ph.D.; Colorado School of Mines; 2005.

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ROBINSON, Andrew P.; 1998; #Associate Professor of Forest Mensuration and Forest Biometrics; Adjunct Assistant Professor of Statistics, and of Bioinformatics and Computational Biology; Ph.D.; University of Minnesota; 1998.

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RUSH, Michael G.; 2003; Affiliate Assistant Professor of Agricultural and Extension Education; Ed.D.; Virginia Polytechnic Institute; 1984.

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SAMMARRUCA-MACHLEIDT, Francesca; 1989; #Professor of Physics; Ph.D.; Virginia Polytechnic Institute; 1988.

SAMPSON, R. Neil; 1997; Affiliate Professor of Forest Resources; M.P.A.; Harvard University; 1974.

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SATTERFIELD, Bruce Kelly; 2004; Affiliate Assistant Professor of Adult, Career and Technology Education; Ph.D.; University of Idaho; 2002.

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SCHULTZ, Irvin R.; 2002; Affiliate Associate Professor of Biological Sciences; Ph.D.; Washington State University; 1990.

SCHURTMAN, Monica; 2000; Associate Professor of Law; J.D.; New York University; 1990.

SCHWANDT, John W.; 1986; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of Idaho; 1979.

SCHWARZLÄNDER, Mark; 2000; #Associate Professor of Entomology; Adjunct Associate Professor of Environmental Science; Ph.D.; Christian Albrechts University; 1999.

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SCOTT, Roger L.; 2005; #Affiliate Assistant Professor of Adult, Career and Technology Education; Ph.D.; University of Idaho; 2002.

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SHERWOOD, Loid; 2006; Affiliate Instructor of Adult, Career and Technology Education; B.S.; Brigham Young University; 2002.

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SHOVIC, John C.; 1995; Affiliate Assistant Professor of Electrical Engineering; Ph.D.; University of Idaho; 1988.

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SHUMWAY, John S.; 1989; Affiliate Assistant Professor of Forest Resources; M.S.; University of Idaho; 1972.

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SORENSON, Kent S. Jr.; 2003; Affiliate Assistant Professor of Civil Engineering; Ph.D.; University of Idaho; 2000.

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SPEZIALE, Thomas; 1997; Affiliate Associate Professor of Physics; Ph.D.; University of Rochester; 1978.

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SPRENKE, Kenneth F.; 1982; #Professor of Geophysics; Ph.D.; University of Alberta; 1982.

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WALKER, John W.; 1992; Affiliate Assistant Professor of Range Resources; Ph.D.; Texas A&M University; 1988.

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WEAVER, Thomas J.; 2003; Assistant Professor of Civil Engineering (P.E.); Ph.D.; University of California San Diego; 2003.

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ZACHARIAS, Mark; 2005; Affiliate Assistant Professor of Environmental Science; Ph.D.; University of Guelph; 2001.

ZACK, Arthur C.; 2000; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of Idaho; 1994.

ZAGER, Peter; 1984; Affiliate Professor of Fish and Wildlife Resources; Ph.D.; University of Montana; 1980.

ZALTZMAN, Arthur; 1989; Affiliate Professor of Biological and Agricultural Engineering; D.Sc.; Byelorussian Academy of Science; 1967.

ZAMBINO, Paul J.; 2006; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of New Hampshire; 1989.

ZAMPICH, Christina; 1991; Affiliate Assistant Professor of Adult, Career, and Technology Education; Ph.D.; Rosemead School of Psych; 1980.

ZAVISLAK, Kay M.; 2008; #Assiatant Professor of Music (Piano); Ph.D.; University of Michigan; 2006.

ZEIGER, Dinah; 2008; Assistant Professor of Journalism and Mass Media; Ph.D.; University of Colorado; 2007.

ZELLER, Joseph R.; 2002; Professor of Art and Design; M.F.A.; New York University; 1970.

ZEMETRA, Robert S.; 1984; #Professor of Plant Breeding and Genetics; Ph.D.; Colorado State University; 1983.

ZHANG, Jianwei; 2004; Affiliate Assistant Professor of Forest Resources; Ph.D.; University of Idaho; 1994.

ZHU, Pingchao; 1996; #Associate Professor of History; Ph.D.; Miami University; 1996.

ZIMMER, Martin J.; 1990; Affiliate Associate Professor of Range Management; M.Ed.; University of Idaho; 1988.

ZOU, Lin; 2007; Assistant Professor of Economics; Ph.D.; Texas A&M University; 2007.

ZUPPERO, Anthony C.; 1993; Affiliate Assistant Professor of Physics; Ph.D.; Case Western Reserve University; 1970.

EMERITI FACULTY

M. Duane Nellis, President; Doug Baker, Provost; John A. Miller, Chair of the Faculty Council (2009-10); Rod Hill, Secretary of the Faculty.

ABLES, Ernest D.; 1973-1996; Professor Emeritus of Wildlife Resources.

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.

ADAMS, Douglas Q.; 1972-2010; Professor Emeritus of English.

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.

ARMSTRONG, Terry R.; 1969-1995; Professor of Education and Adjunct Professor of Resource Recreation and Tourism Emeritus.

AVERY, Jasper R.; 1959-1999; Professor Emeritus of Mechanical Engineering.

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.

BARBER, David S.; 1968-2005; Professor of English and Department Chair Emeritus.

BARBUT, Erol; 1967-1999; Professor Emeritus of Mathematics.

BARNES, William P.; 1957-1987; Professor Emeritus of Mechanical Engineering.

BARTON, Elbert M.; 1960-1981; Professor of Naval Science and Director of Personnel Services Emeritus.

BATTAGLIA, Richard A.; 1991-2010; Professor Emeritus of Animal Science.

BAUER, LeRoy O.; 1956-1982; Professor Emeritus of Music.

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.

BETTS, Edith; 1951-1983; Professor Emerita of Physical Education.

BIGGAM, William R.; 1959-1984; Professor and Chair of Industrial Education Emeritus.

BIKKIE, James A.; 1973-1995; Professor Emeritus of Vocational Teacher Education.

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.

BOBISUD, Larry E.; 1967-2002; Professor Emeritus of Mathematics.

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.

BRANNON, Ernest L.; 1988-2002; Professor Emeritus of Fishery Resources and Animal Science.

BRIDGES, George; 1985-2001; Professor Emeritus of Foreign Languages and Literatures.

BROCKWAY, Charles E.; 1965-1998; Professor Emeritus of Agricultural Engineering and Civil Engineering.

BROWNE, Michael E.; 1967-1995; Professor Emeritus of Physics.

BULL, Richard C.; 1967-1979; Professor Emeritus of Animal Science.

BUNDERSON, Marlene M.; 1957-1990; Extension Professor Emerita of Home Economics.

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.

CHAPIN, Zaye; 1968-1987; Professor Emerita of Sociology.

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.

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.

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, Bert C.; 1962-1985; Professor of Journalism and Department Chair Emeritus.

CROSS, Virgil S.; 1940-1967; Extension Professor Emeritus.

CURTIS, Mary Lee; 1984-2003; Extension Professor Emerita.

CURTIS, Nelson S.; 1969-1993; Professor Emeritus of Art.

CZUCHAJOWSKI, Leszek; 1986-2005; Professor Emeritus of Chemistry.

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, 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.

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.

DIXON, John E.; 1954-1990; Professor Emeritus of Agricultural Engineering.

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.

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DUNHAM, Charles S.; 1959-1989; Extension Professor Emeritus of Agriculture.

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DUPREE, Mary H.; 1971-2008; Professor Emeritus of Music.

DUREN, Edward P.; 1960-1998; Extension Professor Emeritus of Animal Science.

DWELLE, Robert B.; 1976-2003; Research Professor Emeritus of Plant Physiology.

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EDER, Sid; 1984-1998; Professor of Education and Director of Summer Programs and Extended Learning Emeritus.

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EHRENREICH, John H.; 1971-1999; Professor Emeritus of International Forest and Range Resources.

EROSCHENKO, Victor P.; 1973-2003; Professor Emeritus of Zoology.

EVERSON, Dale O.; 1962-1996; Professor Emeritus of Statistics.

EXON, Jerry H.; 1984-2007; Professor Emeritus of Food Science and Toxicology and Department Head Emeritus.

FAIRCHILD, Thomas N.; 1974-2007; Professor Emeritus of Counseling and School Psychology.

FALK, Dean E.; 1974-2002; Extension Professor Emeritus.

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FARLEY, Melvin W.; 1953-1980; Professor of Education and Director of Clinical Experiences in Teacher Education Emeritus.

FASOLINO, Rosario P.; 1977-1986; Professor of Architecture and Department Chair Emeritus.

FAZIO, James R.; 1974-2010; Professor Emeritus of Conservation Social Sciences.

FEELEY, Joseph J.; 1983-2004; Professor Emeritus of Electrical Engineering.

FIEZ, Edward A.; 1970-1999; Extension Professor Emeritus of Animal Science.

FINN, Calvin L.; 1980-2001; Professor Emeritus of Electrical Engineering.

FINNIGAN, Brian F.; 1980-2002; Extension Professor Emeritus.

FITZSIMMONS, Delbert W.; 1959-1991; Professor of Agricultural Engineering and Department Chair Emeritus.

FLETCHER, Max E.; 1958-1984; Professor of Economics and Department Head Emeritus.

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FORCE, Ronald W.; 1982-2006; Dean Emeritus of Library Services with rank of Professor.

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FORSTER, Robert L; 1975-2002; Extension Professor Emeritus.

FOSBERG, Maynard A.; 1949-1989; Professor Emeritus of Soil Science and Soil Morphology.

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FRITZ, Marlene A; 1980-2010; Extension Professor Emerita.

FROES, Francis H.; 1989-2007; Professor Emeritus of Material Science and Engineering and Metallurigical Engineering and Department Chair Emeritus.

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GARDNER, Max A.; 1961-1999; Extension Professor Emeritus.

GARRARD, Richard M; 1979-2010; Extension Professor Emeritus.

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GENTRY, N. Dale; 1977-2002; Professor of Special Education and Dean Emeritus.

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GIBSON, Gene W.; 1966-2002; Extension Professor Emeritus.

GIER, Nicholas F.; 1972-2003; Professor Emeritus of Philosophy.

GILLIS, Candida; 1987-2009; Professor Emerita of English.

GOETSCHEL, Roy H. Jr.; 1969-1997; Professor Emeritus of Mathematics.

GORTSEMA, Stanley R.; 1976-2010; Extension Professor Emeritus.

GRAY, Earl E.; 1962-1992; Professor Emeritus of Electrical Engineering.

GRIEB, Merland W.; 1956-1984; Professor Emeritus of Chemistry.

GRIFFITHS, Peter R.; 1989-2008; Professor Emeritus of Chemistry and Department Chair Emeritus.

GUENTHNER, Harold R.; 1976-1997; Extension Professor Emeritus.

GUILFOYLE, Karen; 1989-2010; Professor Emertia of Education.

HABER, Donald F.; 1969-1999; Professor Emeritus of Civil Engineering and Statistics.

HACKMANN, Wm. Kent; 1967-1999; Professor of History and Secretary of the Faculty Emeritus.

HAGGART, Peter A.; 1963-1995; Professor of Communication and Director and Secretary of the Faculty Emeritus.

HAHN, Richard R.; 1967-1999; Professor of Music and Director Emeritus.

HALDERSON, James L.; 1977-1995; Research Professor Emeritus of Agricultural Engineering.

HALL, Grant B.; 1950-1981; Extension Professor Emeritus.

HALL, William B.; 1965-1991; Professor Emeritus of Geology.

HALLAQ, John H.; 1970-1995; Professor Emeritus of Business.

HAMILTON, George; 1968-2002; Extension Professor Emeritus.

HAMILTON, Joel R.; 1970-2002; Professor Emeritus of Agricultural Economics and Statistics.

HAMILTON, Lee W.; 1952-1979; Extension Professor Emeritus.

HANSON, D. Jay; 1968-2001; Extension Professor Emeritus.

HANSON, Donna M.; 1981-2001; Science Librarian Emerita.

HARDCASTLE, Peggy J.; 1968-2000; Professor Emerita of Family and Consumer Science.

HARDING, Gale W.; 1974-2010; Extension Professor Emerita.

HARKINS, Jeffrey L.; 1983-2009; Professor Emeritus of Accounting.

HATCH, Charles R.; 1973-2007; Professor Emeritus of Forest Resources and Vice President Emeritus.

HATHAWAY, Cecil W.; 1955-1991; Professor Civil Engineering and Director of Engineering Outreach Emeritus.

HAUTALA, Robert; 1983-1999; Professor of Mining Engineering and Associate Dean Emeritus.

HAWKINS, James N.; 1970-2008; Extension Professor Emeritus.

HAYNES, Robert C.; 1955-1979; Extension Professor Emeritus of Agricultural Education and Agricultural Engineering.

HAZEN, William F.; 1970-2006; Extension Professor Emeritus.

HEFFRON, Florence A.; 1974-2004; Professor Emeritus of Political Science.

HEIMSCH, Richard C.; 1972-2006; Professor Emeritus of Microbiology.

HELTON, Audus W.; 1951-1986; Professor Emeritus of Plant Science.

HEMSTROM, Morris L.; 1959-1981; Professor Emeritus of Animal Science.

HENDEE, John C.; 1985-2002; Professor Emeritus of Wilderness Management.

HENDERSON, Joann P.; 1975-2005; Professor Emerita of Law.

HENRY, John A.; 1963-1993; Extension Professor Emeritus of Agriculture.

HESPELT, George G.; 1957-1991; Professor Emeritus of Electrical Engineering.

HILLMAN, Russell G.; 1950-1981; Extension Professor Emeritus.

HINMAN, Dan D.; 1974-2003; Professor Emeritus of Nutrition.

HOAG, Kenneth; 1935-1967; Professor Emeritus of English.

HOFSTRAND, Arland D.; 1959-1986; Professor Emeritus of Forest Products.

HOLE, Dorothy S.; 1957-1979; Extension Professor Emerita.

HOLUP, John P. Jr.; 1971-1995; Professor Emeritus of Marketing Education.

HOMAN, Hugh W.; 1965-1995; Extension Professor Emeritus of Entomology.

HOOK, Robert D.; 1968-2007; Reference Librarian Emeritus with rank of Professor.

HOPKINS, Ivan C.; 1959-1997; Extension Professor Emeritus.

HOVEY, Bette A.; 1968-1999; Extension Professor Emerita.

HULTSTRAND, Bonnie J.; 1975-1999; Professor Emerita of Physical Education.

HUNGERFORD, Kenneth E.; 1942-1978; Professor Emeritus of Wildlife Resources.

HUNT, John D.; 1991-1999; Professor Emeritus of Sustainable Tourism.

JACOBSEN, Richard T.; 1963-2006; Professor Emeritus of Mechanical Engineering.

JENNESS, Tom E.; 1969-1999; Professor Emeritus of Communication.

JENSEN, Alfred W.; 1969-1999; Professor Emeritus of Foreign Languages and Literatures.

JENSEN, Eric L.; 1976-2009; Professor Emeritus of Sociology.

JOHANNESEN, Erling J.; 1945-1981; Extension Professor Emeritus.

JOHNSON, Donald R.; 1968-1995; Professor Emeritus of Zoology.

JOHNSON, Frederic D.; 1952-1990; Professor Emeritus of Forest Ecology.

JOHNSON, Kendall L.; 1988-2002; Professor of Range Resources and Department Head Emeritus.

JOHNSON, Leonard R.; 1974-2007; Professor Emeritus of Forest Engineering.

JOHNSON, Maurice E.; 1958-1994; Extension Professor and Adjunct Professor of Family and Consumer Sciences Emeritus.

JOHNSTON, Lawrence H.; 1967-1988; Professor Emeritus of Physics.

JOKISAARI, Allan; 1984-2002; Senior Instructor Emeritus of Cartography; Manager, Cart-O-Graphics Lab.

JONAS, Arlene T.; 1971-1987; Professor Emerita of Home Economics.

JONES, James R.; 1975-2003; Professor Emeritus of Agricultural Economics; Agricultural Economist.

JONES, Robert W.; 1958-1990; Professor Emeritus of Geology.

JUNK, Virginia W.; 1986-2008; Professor Emerita of Family and Consumer Sciences.

JUNK, William S.; 1980-2008; Professor Emeritus of Computer Science.

KAMBITSCH, R. Loren; 1946-1979; Extension Professor Emeritus.

KAUFMAN, Jack J.; 1976-1999; Extension Professor Emeritus of Adult, Counselor, and Technology Education.

KEARNEY, Robert J.; 1964-1998; Professor Emeritus of Physics.

KEELER, Carolyn; 1990-2010; Professor Emerita of Education Administration.

KEENAN, Richard M.; 1980-2003; Professor of Foreign Languages and Literatures and Department Chair Emeritus.

KEETCH, Gordon C.; 1985-2010; Extension Professor Emeritus.

KELLY, Gwendolyn N.; 1972-2001; Professor Emerita of Education.

KELLY, Joseph T.; 1970-1997; Professor Emeritus of Education.

KESSEL, Elizabeth M.; 1965-1987; Professor Emerita of Home Economics.

KESSEL, Robert M.; 1957-1986; Professor Emeritus of Business Education.

KIEHN, Shirley O.; 1968-1986; Professor Emerita of Home Economics.

KINDSCHY, Dwight L.; 1947-1977; Professor of Agricultural Education and Department Head Emeritus.

KIRCHMEIER, Robert L; 1987-2005; Research Professor Emeritus of Chemistry.

KLEINKOPF, Gale E.; 1975-2003; Research Professor Emeritus of Plant Physiology.

KLIMKO, Ronald J.; 1968-1999; Professor Emeritus of Music.

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KNUDSEN, John W.; 1972-1998; Professor Emeritus of Economics.

KOCHAN, Walter J.; 1955-1987; Professor Emeritus of Plant Physiology/Horticulture.

KOESTER, Edward F.; 1950-1983; Extension Professor Emeritus.

KOHL, Fred E.; 1950-1983; Extension Professor Emeritus.

KOLAR, John J.; 1956-1986; Research Professor Emeritus of Agronomy.

KORUS, Roger A.; 1978-2008; Professor Emeritus of Chemical Engineering and Department Chair Emeritus.

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.

LARSEN, Dorrell C.; 1956-1990; Extension Professor Emeritus of Agriculture.

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.

LAW, John; 1975-1995; Professor Emeritus of Electrical Engineering.

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.

LETOURNEAU, Duane J.; 1953-1991; Professor of Biochemistry and Chemistry and Secretary of the Faculty Emeritus.

LEWIS, D. Craig; 1975-2007; Professor Emeritus of Law.

LINCOLN, Stuart D.; 1976-1996; Professor Emeritus of Veterinary Science.

LIU, Chia-Tsang; 1976-1999; Extension Professor Emeritus of Crop Science.

LOCKERY, Glen R.; 1947-1981; Professor Emeritus of Music.

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.

MACPHEE, Craig; 1957-1981; Professor Emeritus of Fishery Resources.

MAHONEY, Ron; 1983-2010; Entension Professor Emeritus.

MAKI, Gary; 1969-2009; Professor of Electrical and Computer Engineering and Director of CAMBR Emertus.

MANKIN, J. D.; 1971-1988; Extension Professor Emeritus of Animal Science.

MARLER, Frankie L.; 1974-1999; Extension Professor Emerita.

MAROUSEK, Gerald E.; 1962-1999; Professor Emeritus of Agricultural Economics.

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.

MCCROSKEY, William B.; 1964-1992; Professor Emeritus of Architecture.

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.

MCMASTER, Galen M.; 1955-1987; Research Professor of Agricultural Engineering & Superintendent of the Aberdeen Research & Extension Center Emeritus.

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, John C.; 1970-2008; Professor Emeritus of Animal Science.

MILLER, Laura J.; 1970-1990; Professor Emerita of Home Economics.

MILLER, Maynard M.; 1975-1997; Professor of Geology and Dean Emeritus.

MILLER, Robert W.; 1986-2001; Professor Emeritus of Music.

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.

MONTOURE, John E.; 1961-1998; Extension Professor Emeritus of Food Science.

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.

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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.

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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.

OSBORNE, Harold L.; 1972-2003; Extension Professor Emeritus of Forest Resources and Forest Manager.

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.

PARISH, William R.; 1947-1983; Professor Emeritus of Electrical 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.

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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.

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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.

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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.

REID, Rolland R.; 1955-1994; Professor of Geology, Department Head, and Dean Emeritus.

RENFREW, Malcolm M.; 1959-1976; Professor of Chemistry and Department Head 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.

ROBERTS, Florence; 1976-1993; Professor Emerita of English.

ROBERTS, George H.; 1957-1992; Professor Emeritus of Art.

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.

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, LaMont; 1955-1983; Extension Professor Emeritus.

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.

SNYDER, William H.; 1956-1985; Professor of Landscape Architecture and Department Chair Emeritus.

SOUTH, Peter J.; 1976-1990; Professor Emeritus of Veterinary Science.

SPEVACEK, Robert J.; 1968-1998; Professor Emeritus of Music.

SPIDAHL, Ruth W.; 1971-1981; Extension Professor Emerita.

SPOMER, George G.; 1972-1999; Professor Emeritus of Botany.

SPRAGUE, Roderick; 1967-1997; Professor Emeritus of Anthropology.

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.

SULLIVAN, John H.; 1966-1986; Professor Emeritus of Foreign Languages and Literatures.

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.

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.

WAI, Lily; 1970-2005; Head Emerita, Government Documents with rank of Professor.

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.

WALTON, Charles W.; 1961-1996; Professor Emeritus of Music.

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.

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, Doris K.; 1983-1999; Professor Emerita of Family and Consumer Sciences.

WILLIAMS, Larry G.; 1956-1990; Professor Emeritus of Agricultural Engineering.

WILLMES, Henry; 1969-2002; Professor Emeritus of Physics.

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.

WOOLUMS, Edward C.; 1962-1991; Professor Emeritus of Education.

WRAY, George T.; 1969-2002; Professor Emeritus of Art.

WRIGGLE, Larry K.; 1965-1993; Professor Emeritus of Education.

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