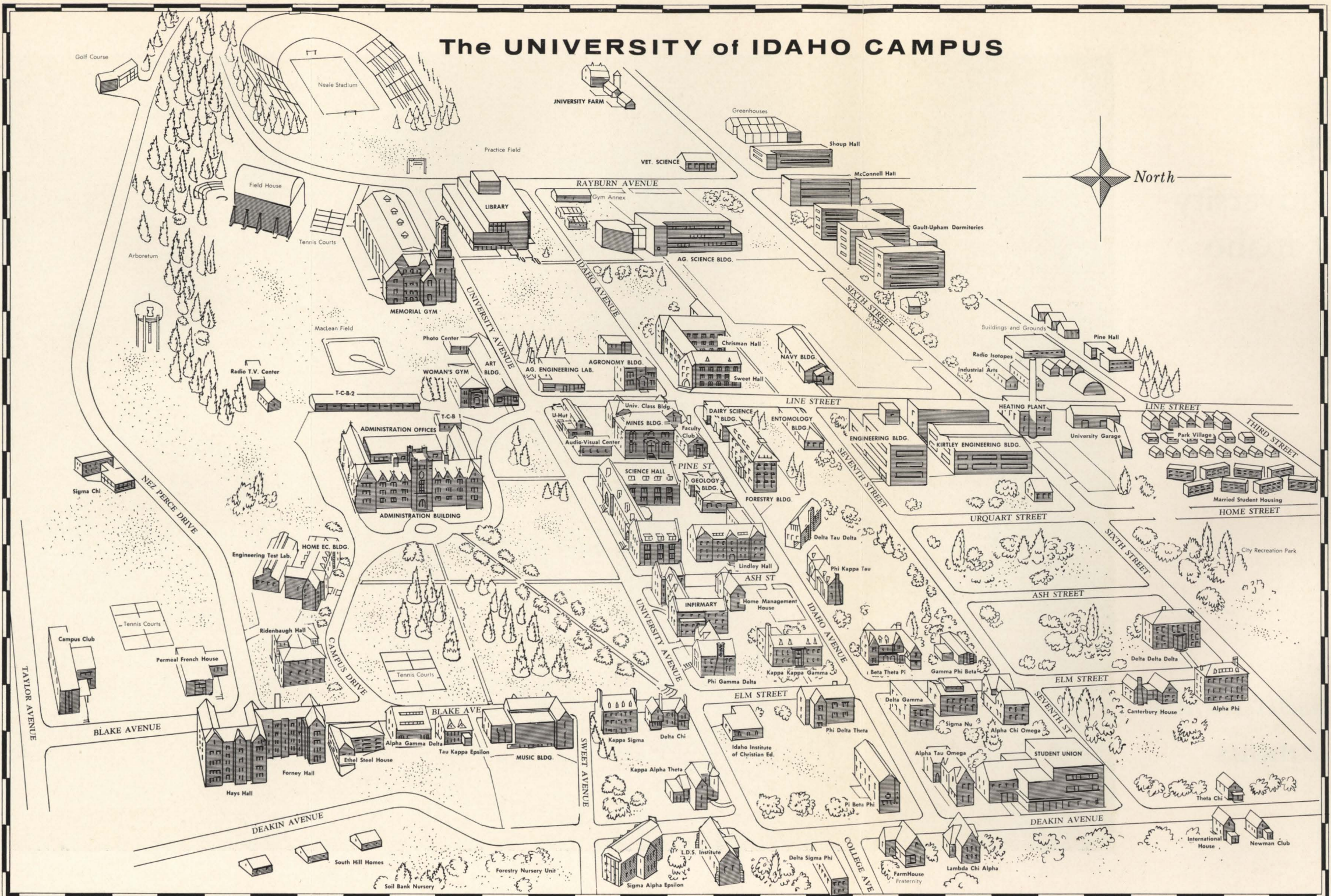
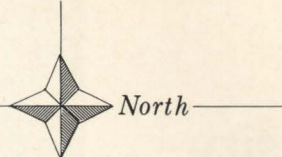


The  
University  
of Idaho

An  
Inspirational  
Campus



# The UNIVERSITY of IDAHO CAMPUS



Golf Course

Neale Stadium

UNIVERSITY FARM

Greenhouses

Shoup Hall

VET. SCIENCE

RAYBURN AVENUE

McConnell Hall

Field House

Tennis Courts

LIBRARY

Gym Annex

AG. SCIENCE BLDG.

Gault-Upham Dormitories

Arboretum

MacLean Field

MEMORIAL GYM

Photo Center

WOMAN'S GYM

AG. ENGINEERING LAB.

AGRONOMY BLDG.

CHRISMAN HALL

NAVY BLDG.

Radio T.V. Center

T-C-2

T-C-1

U-Hall

Univ. Class Bldg.

DAIRY SCIENCE BLDG.

ENTOMOLOGY BLDG.

ENGINEERING BLDG.

HEATING PLANT

University Garage

Pine Hall

Sigma Chi

NEZ PERCE DRIVE

ADMINISTRATION OFFICES

ADMINISTRATION BUILDING

Audio-Visual Center

MINES BLDG.

Faculty Club

FORESTRY BLDG.

KIRTLEY ENGINEERING BLDG.

URQUART STREET

University Garage

Line Street

Park Village

THIRD STREET

Engineering Test Lab.

HOME EC. BLDG.

ADMINISTRATION BUILDING

U-Hall

SCIENCE HALL

PINE ST

GEOLOGY BLDG.

FORESTRY BLDG.

ENTOMOLOGY BLDG.

URQUART STREET

University Garage

Line Street

Married Student Housing

HOME STREET

Tennis Courts

Ridenbaugh Hall

HOME EC. BLDG.

ADMINISTRATION BUILDING

U-Hall

SCIENCE HALL

PINE ST

GEOLOGY BLDG.

FORESTRY BLDG.

ENTOMOLOGY BLDG.

URQUART STREET

University Garage

Line Street

Married Student Housing

HOME STREET

Campus Club

Permeal French House

Ridenbaugh Hall

HOME EC. BLDG.

ADMINISTRATION BUILDING

U-Hall

SCIENCE HALL

PINE ST

GEOLOGY BLDG.

FORESTRY BLDG.

ENTOMOLOGY BLDG.

URQUART STREET

University Garage

Line Street

Married Student Housing

HOME STREET

BLAKE AVENUE

Ridenbaugh Hall

HOME EC. BLDG.

ADMINISTRATION BUILDING

U-Hall

SCIENCE HALL

PINE ST

GEOLOGY BLDG.

FORESTRY BLDG.

ENTOMOLOGY BLDG.

URQUART STREET

University Garage

Line Street

Married Student Housing

HOME STREET

Hays Hall

Forney Hall

Ethel Steel House

Tau Kappa Epsilon

MUSIC BLDG.

U-Hall

SCIENCE HALL

PINE ST

GEOLOGY BLDG.

FORESTRY BLDG.

ENTOMOLOGY BLDG.

URQUART STREET

University Garage

Line Street

Married Student Housing

DEAKIN AVENUE

Hays Hall

Forney Hall

Ethel Steel House

Tau Kappa Epsilon

MUSIC BLDG.

U-Hall

SCIENCE HALL

PINE ST

GEOLOGY BLDG.

FORESTRY BLDG.

ENTOMOLOGY BLDG.

URQUART STREET

University Garage

Line Street

South Hill Homes

Forestry Nursery Unit

Sigma Alpha Epsilon

LDS Institute

Delta Sigma Phi

College Ave

Farmhouse Fraternity

Lambda Chi Alpha

DEAKIN AVENUE

STUDENT UNION

International House

Newman Club

THIRD STREET

# The University

## Teaching—

COLLEGE OF LETTERS AND SCIENCE  
COLLEGE OF AGRICULTURE  
COLLEGE OF ENGINEERING  
COLLEGE OF LAW  
COLLEGE OF MINES  
COLLEGE OF FORESTRY  
COLLEGE OF EDUCATION  
COLLEGE OF BUSINESS ADMINISTRATION  
GRADUATE SCHOOL  
SUMMER SCHOOL  
EDUCATIONAL EXTENSION COURSES AND NON-RESIDENT  
(CORRESPONDENCE) INSTRUCTION

## Research—

AGRICULTURAL EXPERIMENT STATION  
ENGINEERING EXPERIMENT STATION  
BUREAU OF MINES AND GEOLOGY  
(Cooperative with the State of Idaho)  
FOREST, WILDLIFE, AND RANGE EXPERIMENT STATION  
SPECIAL RESEARCH PROGRAM

## Service—

AGRICULTURAL EXTENSION SERVICE  
EDUCATIONAL FIELD SERVICE  
PLACEMENT BUREAU

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THE UNIVERSITY OF IDAHO BULLETIN IS PUBLISHED FIVE TIMES A  
YEAR BY THE UNIVERSITY OF IDAHO AT MOSCOW, IDAHO:  
IN FEBRUARY, MARCH, APRIL, JULY AND NOVEMBER

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Moscow, Idaho, May 21, 1941, under Act of August 24, 1912.

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# Calendar 1959-60

This calendar primarily governs academic activities. Announcements of holidays for administrative and operational personnel will be made in the Staff Letter at appropriate times during the year.

1959

4-H Club Short Course .....	June 14-20
Forestry Summer Camp (Classes) .....	June 9-Aug. 3, Inc.
Geology-Mining Summer Camp (Classes) (Thursday) .....	June 11

## SUMMER SCHOOL 1959

Registration Day (Monday) .....	June 15
University Classes Begin (Tuesday) .....	June 16
Last Date for Removal of Incompletes .....	July 3
Summer School Closes (Friday) .....	Aug. 7

## FIRST SEMESTER

Date for Faculty to Report for Duty (Tuesday) .....	Sept. 8
Official Opening Date for First Semester .....	Sept. 14
University Residence Halls Open for New Students (Sunday) .....	Sept. 13
for Old Students (Wednesday) .....	Sept. 16
General Faculty Meeting (Monday) .....	Sept. 14
New Student Days (Monday to Wednesday, Inc.) .....	Sept. 14-15-16
Registration Days (Thursday, Friday) .....	Sept. 17-18
University Classes Begin (Monday) .....	Sept. 21
Last Day for Grad. Student Registration Without Late Reg. Fee .....	Sept. 21
Last Day for Faculty-Staff Reg. Without Payment of Late Reg. Fee .....	Sept. 25
Last Date to Change Study List Without Penalty for Failing Work .....	Sept. 25
Last Date for Removal of Incompletes (Friday) .....	Oct. 2
Last Day for Adding New Courses for Credit (Friday) .....	Oct. 9
Veterans Day Holiday (Wednesday) .....	Nov. 11
Mid-Semester Reports Due (Monday, 8:00 a. m.) .....	Nov. 16
Thanksgiving Holiday (Thursday) .....	Nov. 26
Christmas Vacation Begins (Friday, 5:00 p. m.) .....	Dec. 18

1960

Christmas Vacation Ends (Monday, 8:00 a. m.) .....	Jan. 4
Final Examinations (Friday to Friday, Inc.) .....	Jan. 22-29

## SECOND SEMESTER

Official Opening Date for Second Semester .....	Feb. 1
Registration Days (Monday, Tuesday) .....	Feb. 1-2
University Classes Begin (Wednesday) .....	Feb. 3
Last Day for Grad. Student Reg. Without Late Reg. Fee .....	Feb. 3
Last Date for Faculty-Staff Reg. Without Payment of Late Reg. Fee .....	Feb. 5
Last Day to Change Study List Without Penalty for Failing Work .....	Feb. 12
Last Date for Filing Applications for 1960 Baccalaureate Degrees .....	Feb. 19
Last Date for Removal of Incompletes (Friday) .....	Feb. 19
Washington's Birthday (Monday) .....	Feb. 22
Last Day for Adding New Courses for Credit (Friday) .....	Feb. 26
Last Date for Filing Applications for 1960 Graduate Degrees .....	Mar. 1
Mid-Semester Reports Due (Monday, 8:00 a. m.) .....	April 4
Spring Vacation .....	April 4-8, Inc.
Field Trips Must be Completed Before .....	May 13
Memorial Day (Monday) (Holiday) .....	May 30
Final Examination (Friday to Saturday, Inc.) .....	May 27-June 4
Baccalaureate and Commencement (Sunday) .....	June 5

## SUMMER SCHOOL 1960

Forestry Summer Camp Classes Begin (Tuesday) .....	June 7
Geology-Mining Summer Camp (Classes) (Thursday) .....	June 9
Summer School Opens (Monday) (Tentative) .....	June 13

# CALENDAR 1960-61

This calendar primarily governs academic activities. Announcements of holidays for administrative and operational personnel will be made in the Staff Letter at appropriate times during the year.

1960

4-H Club Short Course .....	June
Forestry Summer Camp (Classes) .....	June 7-Aug. 1, Inc.
Geology-Mining Summer Camp Classes Begin (Thursday) .....	June 9

## SUMMER SCHOOL 1960

Registration Day (Monday) .....	June 13
University Classes Begin (Tuesday) .....	June 14
Last Date for Removal of Incompletes .....	July 1
Independence Day Holiday (Monday) .....	July 4
Summer School Closes (Friday) .....	Aug. 5

## FIRST SEMESTER

Date for Faculty to Report for Duty (Monday) .....	Sept. 12
Official Opening Date for First Semester .....	Sept. 19
University Residence Halls Open for New Students (Sunday) .....	Sept. 18
for Old Students (Wednesday) .....	Sept. 21
General Faculty Meeting (Monday) .....	Sept. 19
New Student Days (Monday to Wednesday, Inc.) .....	Sept. 19-20-21
Registration Days (Thursday, Friday) .....	Sept. 22-23
University Classes Begin (Monday) .....	Sept. 26
Last Day for Grad. Student Registration Without Late Reg. Fee .....	Sept. 26
Last Day for Faculty-Staff Reg. Without Payment of Late Reg. Fee .....	Sept. 30
Last Day to Change Study List Without Penalty for Failing Work .....	Sept. 30
Last Day for Removal of Incompletes (Friday) .....	Oct. 7
Last Day for Adding New Courses for Credit (Friday) .....	Oct. 14
Veterans Day Holiday (Friday) .....	Nov. 11
Mid-Semester Reports Due (Monday, 8:00 a. m.) .....	Nov. 21
Thanksgiving Holiday (Thursday) .....	Nov. 24
Christmas Vacation Begins (Friday, 5:00 p. m.) .....	Dec. 16

1961

Christmas Vacation Ends (Tuesday, 8:00 a. m.) .....	Jan. 3
Final Examinations (Friday to Friday, Inc.) .....	Jan. 27-Feb. 3

## SECOND SEMESTER

Official Opening Date for Second Semester .....	Feb. 6
Registration Days (Monday, Tuesday) .....	Feb. 6-7
University Classes Begin (Wednesday) .....	Feb. 8
Last Day for Grad. Student Reg. Without Late Reg. Fee .....	Feb. 8
Last Date for Faculty-Staff Reg. Without Payment of Late Reg. Fee .....	Feb. 10
Last Day to Change Study List Without Penalty for Failing Work .....	Feb. 17
Last Day for Filing Applications for 1961 Baccalaureate Degrees .....	Feb. 20
Washington's Birthday (Wednesday) (Holiday) .....	Feb. 22
Last Date for Removal of Incompletes (Friday) .....	Feb. 24
Last Date for Filing Applications for 1961 Graduate Degrees .....	Mar. 1
Last Date for Adding New Courses for Credit (Friday) .....	Mar. 3
Mid-Semester Reports Due (Monday, 8:00 a. m.) .....	April 10
Spring Vacation .....	April 10-14 Inc.
Field Trips Must Be Completed Before .....	May 19
Memorial Day (Tuesday) (Holiday) .....	May 30
Final Examinations (Friday to Saturday, Inc.) .....	June 2-June 10
Baccalaureate and Commencement (Sunday) .....	June 11

## SUMMER SCHOOL 1961

Forestry Summer Camp Classes Begin (Tuesday) .....	June 13
Geology-Mining Summer Camp Classes Begin (Thursday) .....	June 15
Summer School Opens (Monday) (Tentative) .....	June 19

## Attention Prospective New Students

**FINAL DATES FOR MAKING APPLICATIONS.** — All applications for admission to the University of Idaho for the first semester must be received by the Registrar's Office on or before the following dates:

Idaho Residents ..... September 7  
Out-of-state students ..... August 15

Applications received from out-of-state students after the above date will be held and the students will be accepted in order of receipt of their applications only if the University can accommodate them.

The final date for making application for admission for the second semester is January 15 for both resident and out-of-state students.

**ENROLLMENT PROCEDURE.** — Prospective students, both Idaho residents and those in other states, should write to the Registrar, University of Idaho, Moscow, for blanks upon which to apply for admission. With these blanks will come a folder, *How to Enroll in the University of Idaho*. Enrolling in the University is neither difficult nor complex if the steps outlined in this folder are taken in the proper order.

**OUT-OF-STATE STUDENTS.**—Within its capacity after accommodating Idaho students, the University admits out-of-state students on a selective basis. Special consideration is given to sons and daughters of out-of-state alumni. Other factors considered in selecting out-of-state candidates are scholarship, special abilities, and the need of Idaho industries for graduates in certain fields such as forestry, mining and agriculture.

Out-of-state students should write the Registrar, giving the reasons for their interest in the University of Idaho, stating what they desire to study, and indicating their scholastic achievement in high school and any colleges attended.

A \$5.00 Credit Evaluation fee is required of all out-of-state students.

**PERMIT - TO - REGISTER.** — When accepted by the University, an applicant is issued a "Permit-to-Register." This is the student's official authority to enter the University as a student. This permit to register however, *does not carry with it any assurance, direct or implied, of living quarters in a University residence hall.* Finding a place to live is the student's own responsibility.

**LIVING QUARTERS.** — For complete information on "Living Accommodations and How to Get Them" see pages 14-17.

# Part I

## General Information

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### For the Guidance of All Students:

The provisions of this catalog are not to be regarded as an irrevocable contract between the student and the University of Idaho. The University reserves the right to change any provision or requirement at any time within the student's period of attendance. The University further reserves the right, at any time, to ask a student to withdraw when it considers such action to be in the best interests of the University.

## General Information

**S**INCE its founding by Territorial Legislature on January 30, 1889, which Act was later incorporated in the State Constitution, the University of Idaho has had three functions:

1. To train the State's future citizens to their highest usefulness in private life and public service.
2. To conduct research in all fields that promise to assist in development of the State's resources.
3. To carry the fruits of that research and University Service to all parts of the State.

The University of Idaho is the chief unit in the State's higher educational system. The University is composed of eight (8) colleges and a graduate school as follows:

1. College of Letters and Science (the liberal arts college)
2. College of Agriculture and Agricultural Experiment Station
3. College of Engineering and Engineering Experiment Station
4. College of Law
5. College of Mines and Idaho Bureau of Mines and Geology.
6. College of Forestry and Forest, Wildlife and Range Experiment Station
7. College of Education with complete programs for elementary and secondary teachers and school administrators in all common subject-matter fields.
8. College of Business Administration
9. Graduate School with masters' programs in most of the subject matter fields covered by the eight (8) undergraduate colleges, and doctoral programs leading to the Ph. D. and Ed. D. in a number of disciplines.

Through its many research and service agencies, the University extends technical and professional services to every community of the State and reaches hundreds of thousands through Agricultural Extension, Non-Resident Instruction, the Summer School, Education Field Services (see complete description in Part IV), and special short courses. The University also has Army, Navy and Air Reserve officers training corps units, the naval unit

being designated as a regional one to serve surrounding states as well as Idaho.

Created by an Act of the Fifteenth, and last, session of the Territorial legislature in January, 1889, Idaho's State University has the distinction of being eighteen months older than the State itself, which was admitted to the Union July 3, 1890. Control of the University, together with all other public schools of the State, is in the hands of the State Board of Education and Board of Regents of the University of Idaho. This board consists of five members appointed by the Governor, plus the State Superintendent of Public Instruction serving ex-officio. Personnel of this governing board is listed in Part VI of this catalog.

#### LEWIS-CLARK NORMAL SCHOOL

The Thirty-Third Idaho State Legislature established Lewis-Clark Normal School at Lewiston. The State Board of Education and the Board of Regents of the University of Idaho directed that Lewis-Clark Normal School should be operated as "a division of the University of Idaho," and applicable rules and regulations listed in this bulletin also apply to the Lewiston Institution. The Legislative Act establishing the normal school provides for two years of study in the teacher training field.

## Academic Standings and Association Affiliations

### ACCREDITATION

The University of Idaho is a member of the National Commission on Accrediting and is accredited by the Northwest Association of Secondary and Higher Schools. This accreditation embraces the entire University including all its colleges and the Graduate School. In addition to this general accreditation, the following organizations have given additional approval or accreditation:

- American Medical Association—the pre-medical curriculum.
- American Dietetics Association—the home economics food and nutrition curriculum.
- American Chemical Society—the chemistry curriculum.
- State Department of Public Assistance—the social science curriculum.
- Engineers' Council for Professional Development—all the engineering curricula of the College of Engineering and the College of Mines.
- American Bar Association's Committee on Legal Education—the College of Law.
- Society of American Foresters—the College of Forestry.
- American Association of Colleges for Teacher Education (N.C.A.T.E.)—the College of Education.
- American Association of University Women.
- National Association of Schools of Music—the Music Curriculum.

The University of Idaho has long possessed nationally recognized marks of excellence:

1. A chapter of Sigma Xi, national honorary scientific society, since 1922.
2. A chapter of Phi Beta Kappa, national honorary scholarship society, since 1926.
3. Chapters of national honorary and scholarship societies in practically every field.



## ASSOCIATION MEMBERSHIP

The University of Idaho holds memberships in the following organizations:

Agricultural Machinery Research Association  
 American Alumni Council  
 American Association for Health, Physical Education, and Recreation  
 American Association of Colleges for Teacher Education  
 American Association of Collegiate Registrars and Admission Officers  
 American Association of Law Libraries  
 American College Health Association  
 American Concrete Institute  
 American Congress on Surveying and Mapping  
 American Council on Education  
 American Federation of College Women  
 American Institute of Chemical Engineers  
 American Institute of Electrical Engineers  
 American Library Association  
 American Road Builders Association  
 American Shorthorn Breeders Association  
 American Society for Engineering Education  
 American Society for Testing Materials  
 American Society of Agricultural Engineers  
 American Society of Civil Engineers  
 American Society of Mechanical Engineers  
 American Student Health Association  
 American Studies Association  
 American Symphony Orchestra League  
 American Waterworks Association  
 Associated Collegiate Press  
 Association of American Law Schools  
 Association of College Unions  
 Association of Governing Board of State Universities and Allied Institutions  
 Association of Land-Grant Colleges and Universities  
 Association of N.R.O.T.C. Colleges  
 Association of Official Seed Analysts  
 Association of State Geologists  
 Athletic Federation of College Women  
 Champlain Society  
 Eighth-International Management Congress  
 Eno Foundation for Highway Traffic Control  
 Forest Farmers Association Cooperative  
 Hudson Bay Record Society  
 Idaho Academy of Science  
 Idaho Holstein Breeders' Association  
 Idaho State Jersey Cattle Club  
 Idaho State Library Association  
 Inland Empire Amateur Athletic Union  
 Intercollegiate Broadcasting System  
 Intercollegiate Press  
 Midwest Conference on Graduate Study and Research  
 National Archery Association  
 National Association of Student Personnel Administrators  
 National Association of Educational Buyers  
 National Association of Foreign Student Advisors  
 National Association of Schools of Music  
 National Association of Schools of Social Administration  
 National Association of Secondary School Principals  
 National Association of State Universities  
 National Academy of Science (Highway Research Board)  
 National Academy of Science (National Research Board)  
 National Association of College Stores  
 National Collegiate Athletic Association  
 National Commission on Accrediting  
 National Education Association of the United States  
 National Farm Chemurgic Council  
 National Institutional Teachers Placement Association  
 National Purchasing Agents Association  
 National Rifle Association (Women's Rifle Club)  
 National Safety Council  
 National Student Association  
 National University Extension Association  
 Northwest Association of College Placement Officials  
 Northwest Association of Secondary and Higher Schools  
 Northwest College Lectures and Concerts Association  
 Northwest Scientific Association  
 Northwest University Business Administration Conference  
 Northwest Wood Utilization Council  
 Pacific Coast Association of Collegiate Registrars and Admission Officers

Pacific Coast Association of Physical Plant Administrators of Universities and Colleges  
 Pacific Forensic League  
 Pacific Northwest Bibliographic Center  
 Pacific Northwest Conference on Higher Education  
 Pacific Northwest Library Association  
 Pacific Northwest Sewage and Industrial Wastes Association  
 Pacific Northwest Ski Association  
 Potato Association of America  
 Rocky Mountain Science Council  
 Tax Institute, Incorporated  
 U.S. Field Hockey Association (W.R.A.)  
 Utah State Historical Society  
 Western Agricultural Economics Research Council  
 Western Association of Colleges and University Business Officers  
 Western College Book Store Association  
 Western College Placement Association  
 Western Economic Association  
 Western Snow Conference  
 XVIIth International Geographical Congress

## Physical Plant

University land, buildings, and equipment, including 22 student-owned fraternity and sorority residences, represent an original investment of at least \$15,000,000. The replacement value of this large plant at today's prices would total around \$28,000,000. The University campus and college farm total about 1,200 acres. Agricultural branch station farms include an additional 1,800 acres. The University has available approximately 12,200 acres of experimental forest land located from 8 to 40 miles from the University campus. The College of Forestry has received from the Forest Development Company at Lewiston gifts totaling 6,735 acres of forest land. The total holdings of the University in the Moscow Mountain Experimental Forest now amount to 6,943 acres, located 17 miles from the University campus.

Few universities have a more beautiful campus than the University of Idaho. Its buildings offer an attractive architectural harmony. Grouped closely about the campus are 22 student-owned residences, 14 being fraternities and 8 sororities. Many of the student homes are outstanding examples of attractive architecture.

The massive Administration Building is the center of the campus. It houses most of the administrative offices, the College of Letters and Science, College of Law, the College of Business Administration, College of Education, and the auditorium. Other major buildings on the campus include Science Hall, Agricultural Science Building, Memorial Armory-Gymnasium, Women's Gymnasium, Infirmary, Engineering Building, Kirtley Engineering Laboratory, Agricultural Engineering Laboratory Building, Forestry Building, Agronomy Building, Geology Building, Mines Building, Music Building, Home Economics Building, Ridenbaugh Hall, Dairy Science Building, Buildings and Ground Center, Student Union, Library, Mary E. Forney Hall, Gertrude L. Hays Hall, Ethel K. Steel House, Permeal J. French House, women's residences; Edward R. Chrisman Hall, Willis Sweet Hall, Ernest K. Lindley Hall, Franklin B. Gault Hall, Alfred H. Upham Hall, Wm. John McConnell Hall, George L. Shoup Hall, Campus Club, men's residences; Park Village apartments for married students; and more than a dozen buildings on the University farm.

## Fields of Service

### TEACHING

Resident courses on the main campus at Moscow are given by nine colleges and schools—the Colleges of Letters and Science (the liberal arts college), Agriculture, Engineering, Law, Mines, Forestry, Education, and Business Administration, and the Graduate School. Non-resident instruction is provided in more than 150 courses. The University's Summer School brings to the campus some of the nation's foremost educators. For the prac-

tical training of students in forestry, the University maintains a forestry summer camp on Payette Lake, near McCall. Short courses given on the campus are in addition to the regular resident teaching.

### RESEARCH

On the farms and livestock ranges, in the forests and the mines, on the highways and in the industries of the State of Idaho, University of Idaho research has, through the years, contributed greatly to the State's development. Active research agencies at the University include the Graduate School; Agricultural Experiment Station; Engineering Experiment Station; Idaho Bureau of Mines and Geology; Forest, Wildlife, and Range Experiment Station; and the General and Special Research Programs. These are coordinated through the University Research Council. Descriptions of the various research agencies at the University will be found in Part IV of this catalog.

### SERVICE

Through various service divisions, the benefits of University research are carried to every corner of the State. Principal service agencies include the federal-state cooperative Agricultural Extension Service, which conducts educational programs with farmers in every county, and the Educational Field Service division. (See Part IV for details on both these divisions.) Through 4-H clubs, the College of Agriculture and its Agricultural Extension Service serve the State's farm youth. The Idaho Bureau of Mines and Geology at the College of Mines analyzes hundreds of ore samples submitted by miners and prospectors. Thousands of trees go annually to farmers of the State from the University Clarke-McNary nursery operated by the College of Forestry in cooperation with the U.S. Forest Service. The College of Education cooperates with schools of the State in organizing teaching programs. Through music clinics and summer camps, the University's music department performs a special service for thousands of high school musicians. Copies of plays from the dramatics library are sent on loan to schools and groups throughout the State. Motion picture films, slides, etc., are serviced to state organizations by both the Audio-Visual Center on the campus and the Agricultural Extension Service film library in Boise. The Radio Center provides programs and other recordings for radio stations. News stories are serviced to both press and radio by the Publications Office, which also furnishes the press with photographs processed by the Photo Center. Residents of the State continually write to the University for information, making it a large scale question-and-answer agency.

### PUBLICATIONS

UNIVERSITY OF IDAHO PUBLICATIONS include five issues yearly of the University of Idaho Bulletin; the catalog, Summer School announcement, general information for students, pictorial, and one special issue of changing content to meet needs of providing information for the people of the State. *The University of Idaho Reports to the Citizens of the State* presents current progress in the fields of Teaching, Research, and Service. Any citizen of the State may secure this quarterly report by addressing the Department of Publications.

AGRICULTURAL PUBLICATIONS. — The University publishes a quarterly, *Idaho Agricultural Science*, reporting to farmers of the state latest information on all phases of Agricultural research, extension, and field service. One issue of this quarterly constitutes the annual report of the Agriculture Experiment Station. *Agricultural Experiment Station Bulletins* contain full accounts of results of investigations by the Staff of the Experiment Station. *Agricultural Extension Bulletins* are published frequently to make available to farmers the latest agricultural knowledge in non-technical language.

**STUDENT PUBLICATIONS** are *The Idaho Argonaut*, student newspaper; *The Gem of the Mountains*, Associated Students' yearbook, and *The Student Handbook*; *Attica*, year-book of students in Art and Architecture; and *The Idaho Forester* and *The Idaho Engineer*, semi-technical and popular publications of the students of the College of Forestry and of the College of Engineering.

**PUBLIC SERVICE BULLETINS.**—Results of research and field investigations conducted by staff members of the College of Mines are published under the sponsorship of the State Bureau of Mines and Geology. Numerous publications of the College of Agriculture serve the needs of the agricultural industry of the state. Research findings by the College of Forestry and the College of Engineering also have been published in bulletin form.

### ALUMNI ASSOCIATION

The Alumni Association, University of Idaho, is composed of all graduates and former students of the University and such honorary members as may be elected periodically in recognition of service rendered to the University. "The object of the Association shall be to cultivate and maintain good fellowship among its members; to foster a general interest in the welfare and support of the University of Idaho; to own property and do the necessary business in regard thereto; and to develop a constructive program for the building of a greater University each succeeding year."

There are more than thirty active alumni clubs; and files have been built up to over 16 thousand correct names and addresses with an estimated nine thousand yet to locate.

The activities of the Association are under the direction of a full-time alumni secretary and a board of directors of fifteen members elected from the principal sections of the seven major divisions of the State.

## The Library

A new, \$1,500,000 library building of modern construction was completed and occupied in the fall of 1957. This building is completely air-conditioned, has thermopane windows throughout and is lighted by a luminous ceiling that provides for optimum study conditions at all times. It was designed for efficient services with emphasis upon simple beauty and functional unity.

Three separate divisional libraries — Humanities, Social Science, Science Technology — have been organized which conform closely with the setup for the academic divisions. They are almost entirely open stack libraries. Free-standing books stacks are located adjacent to all study areas. There are typing rooms and study carrels. These features as well as many others characterize the building which has won wide attention and make it one of the finest buildings of its kind in the country.

The University Library contains 200,000 volumes. In addition, there are 23,059 volumes in the Law Library. Between 7,000 and 10,000 volumes are added annually. The Library receives regularly 1,464 periodicals many of which are foreign publications, and 85 newspapers. The Library is a depository for United States government documents and for the Army Map Service. Its documents collection of 180,000 volumes and its map collection of over 65,000 maps are among the strongest in the Northwest.

The Library has a special collection of books and documents on the Pacific Northwest, a large segment of which relates to Idaho; some rare books and a number of books in beautiful bindings. Microcard and microfilm projectors are available for graduate work. As a member of the Pacific Northwest Bibli-

ographical Center located at the University of Washington in Seattle, it has access to the collections of other scholarly libraries within the region.

The Library is organized administratively into three main divisions: Administration, Technical Services and Readers' Services. Under Technical Services are the Acquisitions, Catalog and Mechanical Processing Sections; and under Readers' Services are the Loan Section, the Humanities, Social Science and Science Technology Libraries. All materials related to each of these three broad subject divisions are brought together and shelved in these libraries. The only exceptions are federal documents and special collection materials. The divisional subject arrangement provides the scholar and student not only with specific materials related to one discipline but with those in cognate fields.

Library facilities for work on the undergraduate level are excellent while specialized collections required to meet the need of advanced graduate study and research are being constantly strengthened and enlarged. The Library constantly strives to increase the usefulness of its collection and to extend effective support to the curricular program. It provides not only scholarly and research materials for the serious student but endeavors to develop undergraduate reading programs through open stacks, browsing room, book exhibits and book lists.

## Student Affairs

The Office of Student Affairs coordinates the various programs and agencies which contribute directly to the general welfare of students of the University of Idaho. Included in these programs are such activities as: health services; counseling services; financial aids in the form of student loans and emergency aid funds; part-time jobs for students; scholarships and awards; advisory services for fraternities and sororities; advisory services for recreational and social activities; calendar of campus events; student government known as Associated Students of the University of Idaho.

### HEALTH SERVICE

The University Health Service makes medical care available to each student in residence at the University. Students are urged to report to the Infirmary (the student hospital) at the first sign of illness, not only for their own good but to avoid possible spread of a disease in their living groups.

Each student pays \$10.00 a semester (this charge is included in total regular fees described on page 20) for the support of these health services, which include facilities of a modern 40-bed hospital staffed by two full-time physicians, six graduate nurses and a laboratory technician. These services provide practically all types of treatment except the following: major surgery, examinations or care by specialists where indicated, special drugs and certain X-rays. Students are entitled to free hospitalization in the Infirmary for a period of seven days in any one semester. If hospitalized more than seven days in each semester, a fee of \$3.00 a day is charged. The right is reserved to assess extra charges for more than normal services provided any student in any one semester.

A completed physical examination must be filed as part of the admission procedure to the University. This physical examination is *required of each new student* entering the University (see page 48). University physicians are not required to give entrance physical examinations or physical examinations to students who must have such examinations to qualify for jobs. However, the medical staff does give other physical examinations if such are required for the student's University program.

## COUNSELING SERVICES

**Contact With Idaho High School Seniors** — Counselors from the University visit Idaho high schools and provide Idaho high school seniors with general information about the University of Idaho and counsel with them concerning their college plans. This program is accomplished in the following ways: discussions with individual seniors and their parents; conferences with senior classes; use of audio-visual materials; and dissemination of information through printed bulletins.

**Counseling Services for High School Seniors** — The services of the University Student Counseling Center, located on the campus, are available without charge to those high school seniors who are planning to enter the University of Idaho. Through participation in a program of testing and individual conferences, the prospective college student can make more realistic plans for his college academic major and the selection of his vocational goal. This counseling program for students not yet enrolled in the University can best be handled during the summer months and individuals desiring to use the service should make arrangements at least two weeks prior to the time they wish to come to Moscow. Letters of inquiry concerning the program and arrangements for a date to report should be addressed to: Chief Counselor, Student Counseling Center.

**College Student Counseling** — The guidance services provided in the Student Counseling Center are available to all students in the University. Two staff members devote full time to the job of assisting individual students in the thinking through and solving of their problems related to choice of vocational objective, personal problems and adjustment in the academic program. In addition to these specialized counseling services, there are faculty members in each division of the University who devote part of their time to student personnel problems.

A series of tests is given to all entering freshmen before their registration. These tests provide measures of scholastic aptitude, English background and reading skills, general background in social studies, science, mathematics and general indications of interests. The results of these freshman tests are used by student counselors and advisors in helping the student plan for his academic and vocational objectives.

**PART-TIME JOBS FOR STUDENTS** — See page 19.

## RECREATIONAL, SOCIAL, and EXTRACURRICULAR ACTIVITIES

There are many opportunities on the campus for recreational activities. A large proportion of the single University of Idaho students live in residence halls, sororities and fraternities. Each living group carries on a program of exchange dinners, firesides, dances and other social affairs. These activities and group functions assist in the development of a wholesome social life.

The Student Union is the center of campus recreational life and student government activity. The Student Union Building houses many facilities, including eight bowling alleys, ballrooms, cafeteria, meeting and banquet rooms, student government offices and bookstore.

The Associated Students organization has its own radio station, KUOI. For those interested in journalism, there is the twice-weekly campus newspaper, *The Idaho Argonaut*, and the annual, *The Gem of the Mountains*. For those students interested in music, there are many opportunities for participation through such groups as the Vandaleers (choral group), symphony orchestra, concert and pep bands, University Singers and opera workshop. A number of major plays are produced each year under the direction of the Department of Dramatics and there is opportunity for participation in both acting and production activity. The University belongs to the Pacific Coast Forensic

League and there is a full debate schedule. As part of their A.S.U.I. (Associated Students) membership, University students may attend community concerts held in both Moscow and Pullman and thereby have access to seven or eight outstanding musical events each year. Through a public events committee, the University brings to the campus a number of outstanding nationally-known speakers.

A well-rounded athletic and recreational program is available to all who wish to participate. In addition to intercollegiate competition in football, basketball, baseball and track, the University of Idaho has varsity teams in several other sports, including tennis, swimming, golf, cross-country and skiing. There is a strong intramural program under the direction of the Department of Physical Education and more than two-thirds of the student body, both men and women, participate in this year-around intramural program which covers 15 different sports. The Women's Recreation Association provides participation and competition for all women in a wide range of intramural sports and activities and a limited number in extramural sports. The A.S.U.I. maintains an excellent 9-hole golf course adjacent to the campus. There are many other recreational facilities, including tennis courts, bowling alleys and a swimming pool. Skiing is available close to the campus in winter.

### RELIGIOUS ACTIVITIES

All of Moscow's churches promote religious activities for University of Idaho students. Besides the usual services of worship and Sunday school classes, most of the larger churches maintain organizations exclusively for University students. Among such campus religious organizations are the *Associated Students of the L.D.S. Institute*; *Canterbury Club* (Episcopal); *Christian Science Organization*; *Disciples' Student Fellowship* (Christian); *Idaho Christian Fellowship* (University of Idaho chapter of the Inter-Varsity Christian Fellowship); *Kappa Phi* (Methodist national women's honorary); *Lambda Delta Sigma* (L.D.S.); *Lutheran Student Association of America*; *Newman Club* (Roman Catholic); *Roger Williams Club* (Baptist); *Wesley Foundation* (Methodist); and *Westminster Forum* (Presbyterian).

**Inter-Church Council** — Most of the above groups elect representatives to the Idaho Student Inter-Church Council, which serves as an intergroup agency for cooperative, campus-wide religious activities and projects such as the annual Religion-in-Life Week.

**Religious Education** — Because of restrictions in its charter, the University of Idaho does not itself offer courses in religion. However, such courses are made available to University students by three separate, privately sponsored institutes adjacent to the campus. These are the Idaho Institute of Christian Education (Protestant); the L.D.S. Institute of Religion, and the Catholic Institute of Religious Education. While these institutes are not parts of the University, they secure the University's approval when organizing courses and engaging instructors.

The Idaho Institute of Christian Education was incorporated in 1930 to provide courses in religion for Protestant students and a center for the activities of their organizations. The Institute's director serves under a board of trustees representing the Baptist, Brethren, Christian, Congregational, Episcopal, Lutheran, Methodist, Nazarene and Presbyterian churches. Its facilities and services are not restricted to these denominations, however, but are open to any interested student. The director teaches most of the courses but may have qualified assistance.

The L.D.S. Institute of Religion was established in 1928 by the Church of Jesus Christ of Latter-Day Saints in the belief that its members attending the University of Idaho should have the benefit of religious training. It is under the supervision of a director who serves as the religious teacher and advisor of students coming from L.D.S. homes.

The Catholic Institute of Religious Education was inaugurated in 1946. It is closely related to the local Roman Catholic parish, and its courses are taught by a parish priest.

Courses offered by these three institutes are open without charge to regularly enrolled students at the University of Idaho. With the consent of his academic dean, any student may elect a total of eight credits in Religious Education towards a degree. Additional information and circulars concerning courses or facilities may be obtained from the respective directors.

**Religious Centers** — Adjacent to the campus are four buildings which serve as centers for student religious activities. These are the Campus Christian Center (Protestant, operated by the Idaho Institute of Christian Education); Canterbury House (Episcopal); the L.D.S. Institute, and the Newman Center (Roman Catholic).

## Living Accommodations and How to Get Them

The University of Idaho is essentially a residential University; that is, the great majority of its students live on the campus. Single students live in residence halls or in fraternity and sorority houses under the University's supervision. Undergraduate women from out-of-town are required to live in residence halls or sororities unless expressly permitted by the Dean of Women for good reason, to live in a private home in Moscow. Married students live in family units. Many surveys of University housing have commended the University of Idaho for its excellent facilities.

The University has space for 994 men in eight residence halls and 336 women in four residence halls. Also, the University has for student families 64 apartment units (one bedroom).

Students interested in living in University housing should apply as follows:  
 Single students — apply to Director of Dormitories  
 Married students — apply to Director of Family Housing

Applications for housing are listed in the order in which they are received.

Married or single students desiring information concerning off-campus housing in Moscow should contact:

Supervisor of Off-Campus Housing, U-Hut Building

Many students do not live in University housing. Other living places not operated by the University include 16 fraternities for men which house approximately 50 each; nine sororities for women which provide living quarters for approximately 45 each; and the L.D.S. dormitory. In addition, there are numerous rooms and apartments available in the city of Moscow.

### RESIDENCE HALLS

The University residence halls form the background of opportunity and encouragement for healthful social living, thus contributing materially to the educational objectives of the University. Student life in the residence halls is characterized by friendliness, healthfulness, comfort, privacy, and sociability.

Splendid dining rooms and kitchens are an integral part of each University hall and much of the social program is built around the combined use of the dining and lounge facilities.

Excellent guidance is offered groups housed in residence halls through young faculty couples and hostesses who act as proctors and hostesses. These people co-operate in every way with the students to make the living program of the hall educationally and socially attractive.

The University has the following residence halls:



<i>Men</i>	<i>Capacity</i>	<i>Women</i>	<i>Capacity</i>
<sup>1</sup> Campus Club	60	<sup>1</sup> Ethel Steel House	58
Chrisman Hall	107	Forney Hall	98
Gault Hall	143	Hays Hall	120
Lindley Hall	140	<sup>2</sup> Permeal French House	60
<sup>3</sup> McConnell Hall	110		
<sup>3</sup> Shoup Hall	110		
Upham Hall	134		
Willis Sweet	190		

#### † RATES IN UNIVERSITY RESIDENCE HALLS

Room rental in Forney, French House, Hays, Chrisman, Gault, McConnell, Shoup, Upham, and Willis Sweet halls — \$100.00 per semester; Lindley hall — \$80.00 per semester; Ethel Steel House — \$83.00 per semester. Room rental in Campus Club is \$82.50, paid to the University; additional charges are made by the cooperative group for the cost of operation of the building by the group.

Semester rentals are payable in advance to the Bursar, c/o Business Office, University of Idaho.

Any student who fails to make full payment of any delinquent room or board due to the University within seven days of when the payment became due shall be assessed a penalty charge of ten dollars, due and payable with the delinquent payment; and further, if said delinquent payment and penalty charge has not been fully met within fourteen days of when the payment became first due, the registration of the student shall be cancelled automatically and without notice.

All University dormitories will be closed during Christmas vacation. University housing will be available for residence hall students who wish to remain at school during Christmas and Spring vacations. During Christmas vacation the men will be housed at Gault Guest Dormitory. The rate for these periods will be \$4.50 per week.

#### How to Make a Room Reservation in University Residence Halls

If you want a room in a University residence hall, it is your responsibility to write to the Director of Residence Halls, University of Idaho, Moscow, Idaho, requesting a room and enclosing a \$35.00 check or money order payable to the Bursar, University of Idaho. DO NOT SEND CURRENCY. \$25.00 of the above is applied on the semester room rent, the remaining \$10.00 is held as a breakage and key deposit. If you do not occupy the room reserved for you, the \$35.00 reservation prepayment will be forfeited unless cancellation of the reservation is properly made — see "How to Cancel a Room Reservation." See Page 16.

In your application letter please give the following information: full name (the use of initials is confusing); class in college (for example, freshman, sophomore, junior, or senior); permanent home address; and hall preference (first and second choice).

When immediate assignments cannot be made the application is placed on a "reserve" list pending cancellations.

The \$10.00 room deposit is held as guarantee against loss and breakage of hall equipment and furniture and will remain in effect for the following year providing the student makes a written request to have it held over. In May of each year provision is made for the student to make this request by signing posted lists in each hall. Ample notification and publicity is given this process.

Applications for room reservations will be accepted at any time, but students are advised to make their applications early, preferably in the spring or early summer.

<sup>1</sup> Dining Hall operated under a co-operative plan where students assist with work.

<sup>2</sup> Students residing in French House will eat their meals in other women's halls.

<sup>3</sup> No dining facilities available.

† Rental rates are subject to adjustment at any time by action of the Regents.

### How to Cancel a Room Reservation in University Residence Halls

If you are assigned space in a residence hall and decide not to use it you may cancel your reservation and receive a refund PROVIDED YOU SEND A WRITTEN REQUEST WHICH REACHES THE OFFICE OF THE DIRECTOR OF RESIDENCE HALLS POSTMARKED NO LATER THAN AUGUST 20; otherwise the \$25.00 prepayment and \$10.00 deposit will be forfeited.

All room reservations unclaimed by midnight Wednesday, preceeding the first day of registration will be cancelled and the reservation prepayment of \$35.00 will be forfeited unless the holder of the reservation notifies the Director of Dormitories that he will be late in arriving. Such notice may be given by telegraph, telephone, or letter. Vacancies thus arising will be assigned to students on the waiting list in order of deposit.

Room deposits for those without hall assignments but who are on the waiting list will be refunded at any time upon written request to the Director of Dormitories.

### How to Obtain Refund of Room Rent

A refund of room rent will be made only if the student moves from the hall on or before a specified date which is Sunday, (midnight) following the first day of Registration for each semester. The check out must be completed by midnight on these dates. If students occupy rooms longer than this time, **RENTS ARE NOT REFUNDABLE** except in justifiable cases such as those involving sickness or distress, and upon written petition to Operations Council setting forth all pertinent facts.

### Equipment Suggested for Students Who Expect to Live in University Halls

- A. MEN—three pairs of sheets for single bed; three pillow slips; a bedspread; a pillow; suitable bedding; towels; dresser scarfs; drinking glass; broom; dust mop; and a small rug. Each men's hall has a laundry room.
- B. WOMEN—three pairs of sheets for single bed; three pillow slips; a bedspread; a pillow; suitable bedding; towels; bureau covers; mattress pad; drinking glass for room; couch cover; and one small rug about 5'x2½' in size. Each hall has excellent laundry equipment.

Trunks, bedding, etc., sent in advance should be plainly marked and addressed to the owner in care of the transportation company handling your shipment.

### General Residence Hall Regulations

1. All students living in residence halls\* are required to board there unless specifically excused by the Director of Dormitories.
2. Students who reside in residence halls are responsible for providing insurance against loss or damage to their own personal property.
3. Undergraduates are given preference for hall space over graduate students.
4. Firearms must be dismantled at all times when inside a residence hall.
5. Anyone found tampering with any fire and safety apparatus or equipment in any residence hall is subject to immediate dismissal from the residence hall and further action by the University discipline committee.
6. Where individual responsibility for damages to University property can be determined, the individual will be charged. Otherwise the charge will be made against the hall organization through its treasurer.
7. Assignment of specific rooms will not be made until arrival of the student at the building where he has a reservation.
8. Room reservations are not transferable.

\* Except Shoup and McConnell halls.

9. The University reserves the right to change rates, alter the arrangements, or deny hall privilege at any time.

10. The University reserves the right to enter any student's room at any time.

11. Assignment of a room in a residence hall does not imply any obligation on the part of the University to furnish parking space on campus for a student automobile.

12. Occupancy of a hall is a privilege extended to the student by the University. The continuation of this privilege is dependent upon his reasonable and satisfactory personal conduct and observance of all University regulations.

#### **\*Board Rates**

Board in the regular University Halls is payable in advance in full at the beginning of each semester or in four scheduled payments during the semester.

Example — First semester school year 1958-59:

(1)	Total	\$209.15
(2)	September 18	50.00
	October 10	50.00
	November 10	50.00
	December 10	59.15

The total semester charge may vary with prevailing economic conditions and the number of days in the semester.

The meal charge begins automatically and simultaneously with the student room rent schedule and continues until the end of the semester, except as provided for under the credit rules.

THE COMPARATIVELY LOW BOARD RATE IS MADE POSSIBLE ONLY BECAUSE OF THE USE OF EXCELLENT DINING ROOM AND KITCHEN EQUIPMENT, GOOD MANAGEMENT AND LIMITED REFUNDS FOR MEALS MISSED BY STUDENTS. THE AVERAGE RATE FOR THE COUNTRY AS A WHOLE IS APPROXIMATELY \$2.00 PER DAY.

Board is calculated on the full semester basis. In establishing semester rates, full allowance has been made for normal absences on week-ends and holidays. Consequently, additional credit is not given for miscellaneous meals missed or for absences on holidays and between semesters or by virtue of condensed exam schedule at the end of the semester.

Board in co-operatives has been averaging \$38.00 to \$45.00 per month. These lower rates result from the fact that all residents of the co-operatives are required to contribute labor. The contributed labor consists of work in the kitchen and dining room. Co-operatives are the Campus Club and Ethel Steel House.

Men students living off the campus may sometimes arrange for board in University Cafes by applying to the Director of Dormitories.

#### **Board Credit Rules**

Credit for meals not consumed will be given when:

1. At least three consecutive meals are missed on account of illness at the University Infirmary or upon written excuse from a physician.
2. The student is absent four or more consecutive meals on a required University trip during which meals are not furnished.

#### **FRATERNITIES AND SORORITIES**

Sixteen national fraternities and nine national sororities have chapters on the University of Idaho campus. Membership in one of these fraternities or sororities is by invitation from the members of the group. The University does not make arrangements for membership.

\* Board rates are subject to adjustment at any time by action of the Regents.

Women students interested in joining a sorority should write to the Associate Director of Students Affairs for Women for full information. Sorority rush parties are held at the time of opening of school for all women students interested in joining a sorority. Details concerning housing for rushees and rush fees may be obtained from the Associate Director of Student Affairs for Women.

Men who wish information on fraternities at the University of Idaho and the fraternity rush procedure may either write the Associate Director of Student Affairs for Men or consult a member of any University of Idaho fraternity.

The average cost for living in a fraternity or a sorority is \$75.00 per month, which includes board, room, and most social fees. Those who join a fraternity or a sorority pay pledge and initiation fees, but these are paid only once during a college career.

Sororities on the University of Idaho campus are: Alpha Chi Omega; Alpha Gamma Delta, Alpha Phi, Delta Delta Delta, Delta Gamma, Gamma Phi Beta, Kappa Alpha Theta, Kappa Kappa Gamma and Pi Beta Phi. The Panhellenic Council coordinates inter-sorority relationships; formulates policies pertaining to organizations and rushing procedures.

Fraternities on the University of Idaho campus are: Alpha Tau Omega, Beta Theta Pi, Delta Chi, Delta Sigma Phi, Delta Tau Delta, Farm House, Kappa Sigma, Lambda Chi Alpha, Phi Delta Theta, Phi Gamma Delta, Phi Kappa Tau, Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Tau Kappa Epsilon and Theta Chi. All are represented in the Interfraternity Council, uniting them in common service to the University and promoting among the fraternities a spirit of good fellowship and self-government.

#### \*FAMILY HOUSING

The University operates the Park Village housing project for student family accommodations. Nicely furnished one bedroom size apartments rent for \$72.50 per month which includes furniture, heat, hot and cold water and garbage disposal service. Washing facilities are available. Tenants may have television antenna service. Telephone may be installed at tenant's expense. Parking space is adequate but transportation is not necessary because of campus location of the housing.

Size of family is limited to couples and those with one child. **Pets are not permitted.** Tenants should bring china, utensils and linen. Such items as ironing board, radio and floor lamp may be useful.

To apply for an apartment, write to: Director of Family Housing, University of Idaho. A \$10 advance deposit is required.

## Expenses

**ANNUAL EXPENSE.** — Expenses for attending the University of Idaho vary with the taste and financial means of the individual. The University prides itself for its record in providing high quality instruction at low cost.

The largest item in the estimated school expense is board and room; the smallest is for University fixed charges (regular residents of the state pay no tuition). The items of board and room are discussed on pages 14-17. Board and room are made available by the University at exceedingly low rates. This is possible because three-fourths of the students live on the campus in supervised residences. For about \$67.00 a month—\$22.00 for room, approximately \$45.00 for board—or \$300.00 for the academic semester students secure excellent board and room in the University-operated dormitories. The University also maintains cooperative residence halls where students may reduce

\* Rental rates are subject to adjustment at any time by action of the Regents.

this living cost by sharing the work. Here the costs are about \$58.00 a month—\$18.00 for room, approximately \$40.00 for board—or \$260.00 for the academic semester. These figures are based upon current rates which are subject to change depending upon change in food costs.

Students joining fraternities or sororities may pay slightly more than those at the University halls, but the costs are still well below the average for similar living standards at most universities.

Total basic registration charges, including student activities and services, amount to \$65.00 for the semester. Music students pay special fees as described in the Music Department description in Part V of this catalog.

The above general items of expense are outlined in the following tabulation:

Estimated Cost	One Semester	Per Year
Student Activities and Services .....	\$ 33.00	\$ 66.00
Building Fees .....	21.00	42.00
Registration - Laboratory Fee.....	11.00	22.00
Books, Supplies, etc. ....	25.00 to 50.00	50.00 to 100.00
Cooperative Dormitories .....	260.00	520.00
	to	to
Other Dormitories .....	300.00	600.00
<b>Total — Not Including Personal and Incidental Cost .....</b>	<b>\$350.00 to 415.00</b>	<b>700.00 to 830.00</b>

Non-resident students pay an additional charge for tuition, which is \$125.00 per semester.

In forecasting total college costs the individual must estimate and add to the foregoing a variety of miscellaneous costs, which vary widely with individual tastes. These include such items as clothing, laundry, transportation, and incidentals; social and recreational expenditures; fraternal affiliations, and personal needs.

The average minimum annual expense may be estimated at from \$750.00 to \$850.00, including personal expenses while on the campus but excluding transportation costs. Of course, some students may spend more according to their personal habits and tastes. High school teachers can perform a valuable service in advising prospective students by establishing the fact that beyond a certain point college costs depend wholly upon the spending habits of the individual.

*A student coming to the University of Idaho needs about \$250.00 to meet initial payments; out-of-state students need \$125.00 additional because of tuition.* It is suggested that students who come from points outside the State of Idaho bring their funds in the form of money orders, certified bank drafts or travelers checks as these instruments are easily negotiated.

**STUDENT EMPLOYMENT**

**EMPLOYMENT.**—The University maintains a student employment bureau as a clearing house between prospective employers and qualified students. Applications for part-time employment should be addressed to the Student Counseling Center. However, University officials cannot guarantee employment to prospective students. *New students are strongly urged to come prepared to meet all expenses for the first year.*

**STUDENT FEES**

All students who register as regular students for undergraduate or graduate study pay the regular fees set forth in the following schedule.

Special fees are charged under the special conditions indicated. Any person, other than a staff member, who registers for more than six credits, or its equivalent, must pay the full regular fees.

Fees are payable in full at the time of registration on the scheduled registration days. Students registering after the prescribed registration days are subject to a late registration penalty.

Payment of the regular student fees entitles all students registered for academic credit to the services maintained by the University for the benefit of the students, subject to charges for special services. No reduction in fees can be made for students who may not desire to use any part of these services.

The University reserves the right to change the schedule of fees and charges listed herein without notice.

### REGULAR FEES

All regular students who are legal residents of Idaho pay the uniform schedule of fees which amounts to \$65.00 for each semester as scheduled below. This payment includes all laboratory, course, and other charges except special fees for instruction in applied music, (see Music), field trips, special equipment charges and specialized training. All fees are subject to change without notice.

#### ASUI Membership Fee \$ 8.75

This fee is for support of activities sponsored by the Associated Students of the University of Idaho. If the fee is paid for both semesters a student is entitled to a yearbook without additional charge. A small greens-fee is charged those using the golf course.

#### Athletic Events 7.50

#### Building Fees 21.00

#### Service Fees 16.75

This fee entitles the student to free clinic advice from the University physician, the privileges of the Infirmary up to seven days per semester, physical education services, services of the Alumni Secretary, and use of the Student Union Building. Additional charges are made for infirmary meals, X-rays, special medicines and special services. When hospitalization exceeds seven days in any one semester, an additional \$3.00 per day charge is made. Also student accident insurance coverage is provided.

#### Registration Fee 5.00

#### Laboratory and Course Fee 6.00

#### Total Semester Fees \$65.00

An undergraduate student who has not been domiciled in Idaho, more than six months immediately preceding his first enrollment at the University, is required to pay a tuition of \$125.00 a semester in addition to the uniform schedule of fees of \$65.00, making a total of \$190.00. Graduate students do not pay the non-resident tuition.

The legal residence of a student who is a minor shall be considered the same as that of his father (or mother, if the father is not living) or his legal guardian in case of adoption. Any person who is properly classified as a non-resident student retains that status as a student without regard to age or years of attendance at any institution of higher learning in Idaho.

**SPECIAL FEES**

The following special fees are charged under the conditions indicated:

<b>Non-Resident Tuition (per semester)</b> (subject to change)	\$125.00
Not charged for recognized graduate students.	
<b>*Late Registration Fee</b>	\$5.00 to 15.00
To help defray the extra costs involved with late registration procedure, students who complete their registration after the scheduled registration days are charged a late registration fee of \$5.00 for the first day and \$5.00 for each additional day up to a maximum of \$15.00. For Summer School see Summer School Bulletin.	
<b>Part-time Students, Graduate or Under-Graduate (per semester)</b>	
Registration Fee	\$5.00
Credit Hour Fee (per credit)	5.00
Students who register for 6 semester hours or less may pay the above fees in lieu of the regular fees. Payment of these special fees entitles the student to instructional and library privileges only.	
<b>Staff Members and Wives</b>	
Any full-time staff member of the University having an official appointment, the wife of any such full-time staff member, and any Regent-appointed research fellow, service assistant, or teaching assistant may register for instructional courses during any academic year without payment of fees; provided, however, any employee must be under employment during the entire academic period to have the fees waived for that period. If for any reason a person resigns or ceases employment during an academic period for which he has enrolled for academic work without payment of fees, that person must either withdraw from the academic work or make full payment of fees. The above entitles a person to instructional and library privileges only.	
<b>Auditors and Registration in Absentia</b>	
Registration Fee	\$5.00
Credit Hour Fee (per credit)	5.00
All students, except University staff members and wives, who enroll only for courses in absentia or as auditors shall pay the above fee. This special fee for courses in absentia or auditing is not charged if the courses are part of a "normal" registration for a specific semester for which the student already has paid the full semester registration fees.	
<b>Advanced-Standing Examination Fee (per semester hour)</b>	\$1.00
A fee of \$1.00 per semester hour is charged for the privilege of taking an examination for advanced-standing credit.	
<b>Special Examination Fee (per examination)</b>	\$1.00
A fee of \$1.00 is charged for the privilege of taking a final examination at a time other than the scheduled period for the examination.	
<b>Credit Evaluation Fee</b>	\$5.00
This fee applies to all out-of-state students.	

\* See Calendars, Pages 2 and 3.

**Diploma Fee** \$5.00-\$7.50

A diploma fee of \$5.00 is charged all applicants for a degree from the University except Law diplomas which are \$7.50 because of additional costs. The fee is payable at the time of filing the application. An additional fee of \$2.00 is charged when a special diploma insert must be made except for Law which is \$7.50. A penalty fee of an additional \$5.00 is charged if application is made after date specified in catalog.\*

**Thesis Binding Fee** \$3.00

At the time application for the degree is made, every candidate for a Master's degree who is submitting a thesis or composition shall pay this fee for having two copies of his thesis or composition bound.

**Thesis Fee**

The following charges are made for the preparation of a graduate thesis:

Per page, double space typing	\$ .40
Tables	.50
Contact prints	.10 to \$ .50
Graphs	.50 to 1.50

Special pages must be paid for by the student.

**Transcript Fee** \$1.00

The first copy of a student's record is furnished without charge. Thereafter, a fee of \$1.00 per transcript, payable in advance, is charged. If two or more copies are ordered at the same time, the fee is \$1.00 for the first copy and 50 cents for each additional copy.

**Transcript Fee—Extension and Correspondence Courses** \$ .50

The first copy of a student's record is furnished without charge. Thereafter, a fee of 50 cents per transcript, payable in advance, is charged. If two or more copies are ordered at the same time, the fee is 50 cents for the first copy and 25 cents for each additional copy.

**Applied Music** See Music**Field Trips (Ask Instructor of Course)** See Regulations and Procedure Sec. Q**Special Equipment (Ask Instructor of Course)** Varies**Library Fines and Charges** See Librarian**REFUND OF FEES**

Students who withdraw in accordance with the regulations governing withdrawals are entitled to the following refund of fees, except that the \$5.00 registration fee and the charge for accident insurance are non-refundable once registration is completed.

- When withdrawal is accomplished during period of registration and before the beginning of classes: fees (less registration and accident fee) refunded in total.
- When withdrawal is completed after classes have begun but prior to the close of the second week of classes: seventy-five per cent of fees refunded.
- When withdrawal is completed after the close of the second week but prior to the close of the fourth week of classes: fifty per cent of fees refunded.

\* See Calendars, Pages 2 and 3.



- d. When withdrawal is completed after the close of the fourth week of classes: no refund.

To obtain a refund on the ASUI and Athletic fees in accordance with the above schedule the student service card must be surrendered. Refunds are based upon date of application for refund after completion of withdrawal and not from date of last attendance at class, except in cases of illness.

The above schedule does not apply for applied music lessons.

Special fees for individual instruction in applied music may, upon prompt application by the students withdrawing, be refunded according to the following schedule: during the first two weeks of a semester, five-sixths; during the third and fourth weeks, two-thirds; fifth and sixth weeks, one-half; seventh and eighth weeks, one-third; ninth and tenth weeks, one-sixth. Application for this refund should be made to the Head of the Department of Music, who will be responsible for the approval of the application.

## Foundations, Scholarships, Awards

A total of approximately \$50,000 in scholarships is currently being awarded to University of Idaho students. Some scholarships are made possible by income earned by foundation investments; other scholarships result from yearly contributions by donors. Some of the scholarships mentioned in this section are administered by the donors but the funds are sent to the University Bursar and made available to recipients upon order from the Director of Student Affairs. Unless otherwise specified in the catalog descriptions, students who wish to apply for scholarships should write a letter to the Director of Student Affairs requesting application blanks. Applications for all scholarships for the coming school year should be submitted before February 1 of each year.

### FOUNDATIONS

**The Borah Foundation** was established by a grant from Atty. Salmon O. Levinson of Chicago. It is known as the "William Edgar Borah Outlawry of War Foundation." This Foundation honors the priceless contribution of Senator William Edgar Borah to the cause of world peace through his masterly advocacy of the outlawry of war. Out of deep admiration and friendship for him, Levinson gave \$50,000 to the Board of Regents of the University of Idaho to create and endow the William Edgar Borah Outlawry of War Foundation. The purpose of the Foundation is to establish at the University of Idaho a medium for the promotion of better understanding of international relations, of the age-old struggle with the baffling problem of war, and of the vital part played in its solution by William Edgar Borah.

### SCHOLARSHIPS

**ADMINISTRATIVE MANAGEMENT SCHOLARSHIP**—Governor Robert E. Smylie of Idaho has created this scholarship for a student who is planning on a career in public administration. Further, the recipient shall have completed the junior year of college work as a resident of Idaho and must be studying one of the major social sciences. The recipient of this scholarship will serve in the Executive Branch of the State Government during the months of July and August and will be paid \$300.00 per month for two months. It is expected that following graduation, the recipient of the scholarship will seek a junior management position in governmental administration. Applications will be filed with: Dean, College of Letters and Science, University of Idaho.

**ALUMNI ASSOCIATION** (open to entering students)—The Alumni Association of the University of Idaho through its scholarship endowment fund makes several scholarships available annually. These scholarships are awarded to the sons and daughters of alumni of the University of Idaho. Selection of recipients will be made by the University Scholarship Committee and based upon record

of achievement in high school, general aptitude for University academic work and need. Application blanks may be secured by writing: Alumni Secretary, University of Idaho, Moscow, Idaho.

**RALPH M. ALLEY MEMORIAL**—This scholarship has been established by the students of the University of Idaho as a memorial to Ralph M. Alley, M. D., former University Physician. Two \$50.00 scholarships, one for a male student and one for a female student in either sophomore or junior year at the University of Idaho, will be awarded on the basis of the following criteria: need, contribution to the campus, and scholarship. Applications are made through Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**AMERICAN MARIETTA COMPANY** (open to entering students)—This company provides a \$250.00 scholarship called the American Marietta Customers Scholarship for an entering student who plans to major in one of the following four fields: chemistry, chemical engineering, wood utilization (College of Forestry) and high school teaching of science or mathematics. Applications for this scholarship are made through the Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**AMERICAN SMELTING AND REFINING COMPANY** — This company makes available annually to the University of Idaho a \$500.00 scholarship for use during either the junior or senior year by a student majoring in either mining engineering or geology in the College of Mines, University of Idaho. Potential for leadership in the engineering profession, as well as scholastic standing are primary factors considered in the selection of the recipient of the ASARCO scholarship. Nominations for the ASARCO scholarship are made by the faculty of the College of Mines to the University Scholarship Committee which makes the final selection. Applications for this scholarship should be made through: Dean, College of Mines, University of Idaho.

**A. W. S. (ASSOCIATED WOMEN STUDENTS)**—This organization of women enrolled at the University of Idaho provides a \$100.00 scholarship each year to assist an outstanding woman upper-class student. Applications for this scholarship are made with the Dean of Women, Office of Student Affairs, University of Idaho.

**ATTIC CLUB** (open to entering students)—This organization of students majoring in Art and Architecture provides an annual \$200.00 scholarship for students majoring in either Art or Architecture. Applications for this scholarship are made with: Head, Department of Art and Architecture, University of Idaho.

**DESSIE R. BARROWS**—This scholarship is available to members of the University of Idaho chapter of Kappa Alpha Theta sorority. It is made possible by a gift from Mrs. Dessie R. Barrows, an alumnus of the University of Idaho chapter of Kappa Alpha Theta. This scholarship goes to a junior or senior member of the chapter who has definite financial need to complete her education, has high scholarship, good character and whose attitudes have contributed to chapter unity. The amount of the scholarship is based on the extent of the applicant's need. Selections for this scholarship are made by a committee of alumnae of the chapter. Applications are made to this committee.

**BLUE KEY**—This upperclassmen's service honorary provides an annual \$100.00 scholarship which is awarded to a male sophomore who has made a tangible contribution to the University of Idaho. The criteria for selection will include: campus leadership, campus activities, scholarship and financial need. Applications will be filed with the Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho. Blue Key members will select three candidates from the applicants and the final selection will be made by the Committee on Awards and Scholarships.

**BOISE ALUMNI ASSOCIATION** (open to entering students)—The Boise Alumni Association occasionally provides a scholarship for a high school graduate from the Boise area who enters the University of Idaho. The recipient of this award is selected by officers of the Boise Alumni Association. Further information and application materials may be obtained from the current officers of the Boise Alumni group or from Alumni Secretary, University of Idaho, Moscow, Idaho.

**BOISE PANHELLENIC** (open to entering students)—This group awards either one or several scholarships to outstanding women students from the Boise area. Many of the Boise Panhellenic scholarships have been awarded to students entering the University of Idaho. High school senior girls from the Boise area interested in applying for one of these scholarships should contact either the current president of the Boise Panhellenic Association or the girls' advisor in their local high school for further information.

**BOUNDARY COUNTY** (open to entering students)—Scholarships of varying amounts are made available by donors in Boundary County and are awarded to graduates of Bonners Ferry High School. Further information may be obtained from: Superintendent of Schools, Bonners Ferry.

**CARNATION MILK COMPANY** (open to entering students)—The Carnation Milk Company annually awards a number of scholarships valued at \$650 each to sons and daughters of its employees. There are a number of Carnation Milk Company plants located in Idaho and several of these scholarships have been awarded to University of Idaho students. Applications from eligible students are made directly to the Carnation Milk Company located in the local community.

**CHALLENGE CREAM AND BUTTER ASSOCIATION** (open to entering students)—This scholarship in the amount of \$150.00 is available to high school seniors or University of Idaho freshman or sophomore students who plan to major in Dairy Husbandry and take the dairy manufacturing option. The recipient of this scholarship will be selected on the basis of academic record, leadership, and character. This scholarship will be made available in three installments of \$50.00 each at the beginning of the first three semesters provided the student continues each semester to major in dairy manufacturing. Application blanks may be secured from: Head, Department of Dairy Husbandry, University of Idaho; or Chairman, Committee on Awards and Scholarships, University of Idaho.

**CITIZENSHIP CLEARING HOUSE**—The Northern Idaho - Washington State Citizenship Clearing House (which is part of the national Citizenship Clearing House organization) sponsors several major activities on the University of Idaho campus each year, which deal with the problems of practical politics. Under this program, the University places (each election year) one student in the State Central Headquarters of each of the major political parties. Each student receives a \$400.00 stipend for the six months assignment as an intern in the political party headquarters. Applications will be filed with: Dean, College of Letters and Science, University of Idaho.

**CLARK MEMORIAL**—This scholarship was established by the alumni and members of the University of Idaho chapter of Alpha Tau Omega Fraternity in memory of Jack and Tim Clark who lost their lives in airplane crashes. This scholarship amounts to approximately \$300 a year and is awarded to a sophomore member of Alpha Tau Omega. Selection of the person to receive this award is made by the local ATO chapter.

**CROWN ZELLERBACH FOUNDATION**—This Foundation grants the University of Idaho \$800.00 each year to be used for two scholarships for junior and/or senior students in the College of Forestry. The Foundation stipulates that financial need should not be a primary consideration in the selection of the recipients. Candidates for these scholarships are nominated by the faculty of the College of Forestry and the final selections made by the University Schol-

arship Committee. Applications for these Crown Zellerbach scholarships are filed with: Dean, College of Forestry, University of Idaho.

**DANFORTH FOUNDATION**—The Danforth Foundation of St. Louis, Missouri, provides annual scholarships for upperclass majors in Home Economics and Agriculture which cover the cost of two week trips to a leadership training camp at Shelby, Michigan, and two week trips to St. Louis, Missouri, to study Home Economics in business. In addition, the Danforth Foundation awards special two week trips to the leadership training camp to Home Economics and College of Agriculture freshmen. Details concerning this program may be obtained from: Head, Department of Home Economics, or Dean, College of Agriculture, University of Idaho.

**DONALD KIRK DAVID** (available to graduates of the University of Idaho)—Mr. and Mrs. George F. Jewett of Spokane, Washington, have established a foundation which provides fellowships to Harvard University's Graduate School of Business Administration for graduates of the University of Idaho, and six other institutions in Idaho, Washington and Utah. The amount of these grants, which may cover a two-year period, will take into account the applicant's financial resources to assure him of all necessary financial aid for the completion of the two-year graduate course in Business Administration at Harvard University. Applicants will be limited to the graduates and graduating seniors who have been accepted for admission to the Harvard Graduate School of Business Administration. University of Idaho students who are interested in the Donald Kirk David scholarship program should contact: Executive Dean, President's Office, University of Idaho.

**DAVIS BROTHERS**—The four Davis brothers (James E., Tine W., M. Austin and Darius) who formerly lived in Burley and are alumni of the University of Idaho make an annual grant of \$600.00 through the Winn and Lovett Foundation to the University for the purpose of providing scholarships to upper-class students majoring in the College of Business Administration for use during their junior and/or senior years. Selection of winners is based on scholarship, character, and prospects for success with consideration also being given to financial need. Applications should be addressed to: Dean, College of Business Administration, University of Idaho.

**DELTA DELTA DELTA**—The University of Idaho chapter of Delta Delta Delta sorority awards an annual scholarship which ranges in value from \$150.00 to \$200.00 to a girl on the University of Idaho campus. This award is based on high scholarship and need. Generally, this sorority also awards a \$75.00 scholarship to an outstanding member of their own chapter. Applications are made through the Dean of Women, Office of Student Affairs, University of Idaho.

**DELTA GAMMA SCHOLARSHIP FOR BLIND**—This University of Idaho sorority provides a \$100.00 scholarship each year for a blind student attending the University. The funds are made available after the recipient has completed one semester at the University of Idaho. Applications may be made through: Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**EASTERN STAR**—The Grand Chapter of Idaho, Order of Eastern Star, awards \$250 to the student who makes the greatest advancement in music coupled with such qualities of good citizenship as tend to benefit humanity. Selection of this scholarship winner is made by the faculty of the Music Department at the University of Idaho. Applications are filed with: Head, Department of Music, University of Idaho.

**EASTERN STAR TRAINING AWARD IN RELIGIOUS LEADERSHIP** (open to entering students)—This scholarship, in the amount of \$100, goes to students pursuing studies which prepare for full-time religious service. Applications for this scholarship will be made to the following: Lloyd J. Eason, Chairman, ESTARL Committee, Order of Eastern Star, 320 East Galloway, Weiser, Idaho.

**GARY ELDER MEMORIAL** (open to entering students)—This scholarship is made available to graduates of Priest River, Idaho, High School. Further information may be obtained from the Principal of the Priest River High School.

**FIFTH DISTRICT EDUCATIONAL ASSOCIATION** (open to entering students)—Teachers of the Fifth District Educational Association provide scholarship aid to an entering student from the southeastern area of Idaho who plans to major in education and to become a teacher. Students from the following counties are eligible for this scholarship aid: Bannock, Bingham, Bear Lake, Caribou, Franklin, Oneida, Power. Applications for this scholarship aid should be made through high school principals.

**FIRST SECURITY FOUNDATION**—This Foundation, established by the First Security Bank System which operates branches in the intermountain area, annually provides two \$500 scholarships for use at the University of Idaho. These scholarships are awarded at the end of the sophomore year (for use during the junior year) to worthy and needy students in the College of Business Administration. Applications for these scholarships should be filed with: Dean, College of Business Administration, University of Idaho. ,

**FOREIGN UNIVERSITIES**—There are several scholarship programs available for students who desire to study in foreign countries. During the past several years University of Idaho students have studied in foreign countries under the following programs: Fulbright; Mexican Government; College of Europe at Bruges; Rhodes. These types of scholarships are usually available only to advanced students and most of them only to students who are proficient in a foreign language. Interested persons should contact: Prof. W. J. Brockelbank, College of Law, who is chairman of the University's Foreign Scholarship Committee.

**FORESTERETTES**—This organization of the wives of forestry students provides an annual scholarship which ranges in value from \$35 to \$50 for a student majoring in the College of Forestry. The question of need is to be considered above academic record but the recipient is to be a student who shows promise in his field. Preference is for a married student although this is not a restriction. The recipient is selected by the faculty of the College of Forestry and the president of the Associated Foresters. Applications should be made to: Dean, College of Forestry, University of Idaho.

**CAROL HOWE FOSTER**—Dr. Carol Howe Foster, a distinguished alumnus of the University of Idaho and a member of Phi Delta Theta fraternity, established a trust fund to provide a scholarship each year for the member of the local chapter of Phi Delta Theta who with a high standard of character and health maintains the best scholastic average during his sophomore and junior years. The value of this scholarship is currently \$400. Nominations for this scholarship are made by the local University of Idaho chapter of Phi Delta Theta and final selection is made by the Committee on Awards and Scholarships.

**CONSUL GENERAL FOSTER FORESTRY**—Dr. Carol Howe Foster, an alumnus of the University of Idaho and former Dean of the Consular Corps of Sao Paulo, Brazil, provides a \$1,200 scholarship which goes to a graduate of the University of Sao Paulo, Brazil, for two years of study in Forestry at the University of Idaho.

**GAULT HALL** — (Johnson-Knudsen-Shuldberg Memorial) (open to entering students)—The members of Gault Hall have established a memorial scholarship in honor of Paul Frederick Johnson, John Robert Knudsen, and William Clair Shuldberg, three members of Gault Hall who lost their lives in a dormitory fire. This scholarship will be awarded each year to an incoming freshman and cover the annual cost (currently \$200 per year) for a room at Gault Hall. The awarding of the scholarship is based on need, scholarship and amiability, and will be awarded to persons coming from the general home areas of the three students: namely Idaho Falls, Terreton, Idaho, and Daven-

port, Washington. Applications should be made to: Chairman, Committee on Awards and Scholarships, University of Idaho.

**GENERAL MOTORS (College Plan)** (open to entering students)—The General Motors Corporation makes certain scholarship funds available to the University of Idaho. These GM scholarships are awarded to students of exceptional intellectual promise and high leadership potential. The amount of these awards will be at least \$200. A scholarship award above that amount will depend upon demonstrated need and may vary in amount to a maximum of \$2,000 per year. GM scholarships are not limited to any particular field of study. These scholarships are renewable and may extend for four years. Apply through: Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**GENERAL UNIVERSITY**—These scholarships are primarily available for sophomores and juniors at the University of Idaho. The recipients are not limited to any particular field of study and the scholarships go to individuals of outstanding achievement who have definite and demonstrated need. Funds for these scholarships come from several different sources including money received from campus traffic fines paid by students. Applications should be made through: Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**CARL RAYMOND GRAY** (open to entering students)—The Union Pacific Railroad offers a number of \$100 scholarships to boys and girls in 4-H and Future Farmers of America programs from each county served by its lines in the State of Idaho. These scholarships bear the name of Carl Raymond Gray in honor of a former president of the Union Pacific Railroad. Interested persons may secure full information from their county 4-H Club leaders, county agricultural extension agents, or teachers of Vocational Agriculture in their high schools. These scholarships must be used at the University of Idaho.

**HECLA-BUNKER HILL** (open to entering students)—The directors of the Bunker Hill Company and Hecla Mining Company have established a trust fund of \$100,000 to provide educational scholarships. These scholarships are open to employees, or sons and daughters of employees of the above-named companies, and other companies operating within the State of Idaho whose management is under any one or more of these companies. In addition, these scholarships are open to worthy students, regardless of employment of parents, who are majoring in Mining Engineering, Geological Engineering, or Metallurgical Engineering. Applications must be completed by February 1 of each year. Students who wish to apply for these scholarships should write to Mr. William C. Beamer, Hecla-Bunker Hill Scholarship Fund, Box 320, Wallace, Idaho.

**SARAH HUTCHINSON**—This award is in memory of Mrs. Sarah Hutchinson. Because of her interest, appreciation and activity in both music and journalism, the award will be granted alternately to a student in journalism and then music. It will go to a woman student of junior status who has demonstrated real interest in music or journalism and who shows promise of constructive contributions to either of these fields. The award will be made on the basis of need, together with a demonstration of superior ability in either field. If no candidates apply who are in need, then the award will be made entirely on the basis of scholarship. For the 1958-59 school year the award will go to a junior woman in music. Applications should be made to Head, Department of Communications, University of Idaho. For the 1959-60 school year the award will go to a junior woman in journalism. Such applications will be filed with Head, Department of Music, University of Idaho.

**IDAHO ASSOCIATION OF FUTURE HOMEMAKERS OF AMERICA** (open to entering students)—The Idaho Association of Future Homemakers of America provides several \$100 scholarships which are open to freshmen entering either the University of Idaho or Idaho State College. Any high school girl who is a member of an affiliated F.H.A. chapter in Idaho, who is in the upper 25 per

cent of her high school class, and who plans to major in Home Economics, is eligible for the award. Interested persons should contact Miss Martha Graves, State Supervisor of Home Economics Education, 110 South 8th Street, Boise, Idaho.

**IDAHO ALLIED DAILIES**—This \$100 scholarship goes to a major in Journalism at the University of Idaho. It is provided by the Idaho Allied Dailies which is an association of daily newspapers published in Idaho. Applications are made through the Chairman, Department of Journalism, University of Idaho.

**IDAHO ASSOCIATION OF INSURANCE AGENTS**—This Association provides an annual \$100 scholarship for a student in the College of Business Administration who plans to make his career in the field of insurance. Applications should be made to: Dean, College of Business Administration, University of Idaho.

**IDAHO BEEKEEPERS' ASSOCIATION** (open to entering students)—This association provides two \$150.00 scholarships as follows: one scholarship to a high school senior who anticipates taking a major in entomology and the other to a high school senior who plans to major in home economics. The first scholarship is to be awarded to the individual writing the best paper on "The Value of Honey Bees to Agriculture" and the second scholarship for the best paper on "The Nutritional Value of Honey." Further information may be obtained by writing to: Head, Department of Entomology, College of Agriculture, University of Idaho; or Head, Department of Home Economics, University of Idaho.

**IDAHO CONGRESS OF PARENTS AND TEACHERS** (open to entering students)—The Idaho Congress of Parents and Teachers, in 1954, established a fund which provides scholarships in the amount of \$100 each. These scholarships are awarded to qualifying high school graduates or students already in college training who need and seek financial aid to complete their training for the teaching profession. Application blanks may be secured by writing to: Idaho Congress of Parents and Teachers, 614-B State Street, Boise, Idaho.

**IDAHO CONGRESS OF PARENTS AND TEACHERS (Exceptional Child)**—The Idaho Congress of Parents and Teachers has established a grant which varies from \$100 to \$300 to be awarded to qualifying Idaho teachers who wish to continue their training in the field of the exceptional child. Teachers receiving this grant must plan to continue teaching in the State of Idaho. Application forms may be secured by writing: Idaho Congress of Parents and Teachers, 614-B State Street, Boise, Idaho.

**IDAHO DAIRYMEN'S ASSOCIATION** (open to entering students)—This association provides several scholarships valued at \$200.00 each for entering freshmen who plan to major in the field of Dairy Husbandry. These scholarships are awarded on the basis of academic performance and ability, together with indication of high character. Applications for these scholarships may be obtained from the Head, Department of Dairy Husbandry, or Dean, College of Agriculture, University of Idaho.

**IDAHO FARM ELECTRIFICATION COMMITTEE** (open to entering students)—The Idaho Farm Electrification Committee offers a \$100 scholarship to the University of Idaho for the outstanding 4-H Club boy or girl in farm electrification projects. Details may be secured from County Extension Agents.

**IDAHO FEDERATION OF WOMEN'S CLUBS**—The Idaho Federation of Women's Clubs presents several \$150 scholarships to worthy University of Idaho senior students who plan to teach in Idaho schools after the completion of their training. Each student receiving one of these scholarships agrees to teach in Idaho the first year after his or her graduation or to repay the amount of money awarded to the Federation's loan-scholarship fund. Applications for

these scholarships are made to Mrs. V. A. Cherrington, IFWC Scholarship Fund, 327 E. 2nd, Moscow, Idaho.

**IDAHO HEART ASSOCIATION**—This organization provides funds for several scholarships with the objective of stimulating interest in scientific research by undergraduate students. Any undergraduate student registered in the University of Idaho under several fields connected with either the biological or physical sciences is eligible to apply. The recipients are expected to pursue some type of research under the direction of a faculty member in either the biological or physical sciences. Applications may be made through Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**IDAHO ICE CREAM MANUFACTURERS' ASSOCIATION** (open to entering students)—This association provides a \$250.00 scholarship to a student who majors in dairy manufacturing. Selection of the recipient for this scholarship is based on scholarship, character, and prospects for success with consideration for financial need. This scholarship becomes available the second semester of the freshman year or during the sophomore year. The scholarship is extended over three semesters and allotted in the amount of \$50.00, \$100.00 and \$100.00 respectively. Application blanks may be secured from: Head, Department of Dairy Husbandry, University of Idaho; or Dean, College of Agriculture.

**IDAHO MILK PROCESSORS' ASSOCIATION** (open to entering students)—This association provides scholarships valued at \$200.00 to entering freshmen who major in the field of Dairy Husbandry. These scholarships are awarded on the basis of high school record and scholastic potential and character. Applications may be made through Head, Department of Dairy Husbandry, or Dean, College of Agriculture, University of Idaho.

**IDAHO POWER**—The Idaho Power Company provides two \$125 scholarships for students majoring in Agricultural Engineering and who come from the general service area of the Idaho Power Company. Applicants must be enrolled in or have completed the second semester of Engineering and be certified as majoring in Agricultural Engineering. Interested students should contact: Head, Department of Agricultural Engineering, College of Engineering, University of Idaho.

**IDAHO STATE FEDERATION OF LABOR** (open to entering students)—In 1952 the Idaho State Federation of Labor created a scholarship program for high school seniors. The awards are made on the basis of scholastic ratings and a competitive examination on the history of labor and industrial organizations. Details may be obtained by writing: Executive Secretary, Idaho State Federation of Labor, 613 Idaho Street, Boise, Idaho.

**INTERCOLLEGIATE KNIGHTS (Reeb-Van Brunt Memorial)**—This scholarship in the amount of \$100, is made available by the University of Idaho chapter of Intercollegiate Knights in memory of Alan Reeb and Frank Van Brunt, former IKs who were killed in recent accidents. This scholarship is available to either present or past members of IKs who must have been active in the work of the local chapter. The selection will be based on scholarship, need, and campus activities. For application blanks contact: Chairman, Committee on Awards and Scholarships, Office of Students Affairs, University of Idaho.

**KELLOGG FOUNDATION**—The W. K. Kellogg Foundation has made a grant to the University of Idaho part of which is available to provide scholarships for students who are training to be medical technicians. These scholarships may amount to as much as \$300 but are allotted for use during the clinical training period which follows college and academic requirements. Students who are preparing for the field of medical technology and who are interested in scholarship help should contact: Head, Bacteriology Department, University of Idaho.



**LADIES AUXILIARY OF THE IDAHO MUNICIPAL LEAGUE**—This organization provides a \$50 scholarship for a sophomore woman student who is majoring in the field of Political Science. Both the elements of scholarship and need are considered in determining this award. Applicants should contact: Dean, College of Letters and Science, University of Idaho.

**A. E. LARSON**—The Sunshine Mining Company has established a scholarship fund in memory of A. E. Larson, former president of the company. The annual income from this fund is approximately \$400 and provides for one or more scholarships each year for students in the College of Mines. Preference is given to students who come from the Coeur d'Alene mining area. Applications are made to: Dean, College of Mines, University of Idaho, Moscow, Idaho.

**LIVING GROUPS**—Several University of Idaho living groups (residence halls, sororities and fraternities) provide various forms of scholarship aid to foreign students attending the University of Idaho. During the past eight years, ten different fraternities, five different sororities and two residence halls have provided scholarships for 28 students from 13 different foreign countries.

**MACLANE**—John F. MacLane, the first Dean of the University of Idaho's College of Law, provided the University a fund, the income from which is used to finance annual scholarships for students in the College of Law. It is planned that three MacLane Scholarships will be awarded each year. Applications for these scholarships will be judged on the basis of ability, scholarship and need. The specific amount of each award will be based on need. Applications may be made through the Dean, College of Law, University of Idaho.

**MONSANTO CHEMICAL COMPANY**—This scholarship, in the amount of \$600 is awarded to an undergraduate who has completed at least one year of study and has demonstrated his capability and interest in the field of chemical engineering. Applications are made through: Head, Department of Chemical Engineering, University of Idaho.

**MOSCOW FINE ARTS CLUB**—The Moscow Fine Arts Club has established a fund to assist music and art majors. Awards are made in alternate years to a music student and an art student on the bases of ability, scholarship, and financial need. Nominations for these awards are made to the Moscow Fine Arts Club by the University of Idaho Department of Art and Department of Music.

**MOSCOW LIONS CLUB** (open to entering students)—The Moscow Lions Club annually provides \$50 scholarships to the outstanding high school graduates from each of the six high schools in Latah County, located in: Deary, Genesee, Kendrick, Moscow, Potlatch and Troy. Nominations are made by the high school principal in each of these six high schools.

**MUSIC (Applied Music Fees)** (open to entering students)—Fifteen scholarships valued at \$120 each provided by the Regents of the University of Idaho are awarded annually to students majoring in music and represent a waiver of fees for applied music. Ten of these are open to freshmen. Interested persons should write to the Head of the Department of Music, University of Idaho.

**NATIONAL MERIT SCHOLARSHIP CORPORATION** (open to entering students)—This organization sponsors a nationwide competitive scholarship program which has as its underlying purpose the discovery throughout the country of the most valuable youths and to make it possible for such talented young people to get a college education regardless of their financial situation. Interested high school students should contact their high school principal **during their junior year** or write: National Merit Scholarship Corporation, 1580 Sherman Avenue, Evanston, Illinois.

**NEWS-REVIEW** (open to entering students)—The News-Review Publishing Company of Moscow awards a \$125 scholarship to a student majoring in journalism. The basis for the award is achievement in the field of journalism and the need for assistance in meeting college expenses. Applications should be made to: Chairman, Dept. of Journalism, University of Idaho.

**PACIFIC NORTHWEST PLANT FOOD ASSOCIATION**—This Association provides a \$100 scholarship for a student who majors in Agronomy and specializes in the area of soils. Further information and applications may be obtained from: Head, Department of Agronomy, College of Agriculture, University of Idaho.

**POTLATCH FORESTS FOUNDATION** (open to entering students)—Potlatch Forests, Inc., has established a Foundation which has as one of its objectives the provision of educational advantages and the furtherance of sound learning by the financing of scholarships at such colleges and universities and other schools as may be selected. These scholarships are open to students living in the service area of the company which, for purposes of this scholarship program, is generally described as falling between Grangville and Coeur d'Alene. Potlatch Forests Foundation scholarships are not limited to any particular field of study. Students interested in applying for these general scholarships should write to: Mr. Jack Clifford, Executive Secretary, Potlatch Forests Foundation, Lewiston, Idaho. Applications must be filed by February 1 of each year for scholarships which are to be in effect the ensuing school year. In addition to this general scholarship program the Foundation provides a \$100 scholarship to a student who enters the College of Forestry and who is selected by the State Extension Forester on the basis of his activities in 4-H forestry projects. The students interested in this special forestry scholarship should contact their local 4-H leader.

**PRESSER FOUNDATION**—This Foundation provides scholarships valued at \$350 to certain institutions of higher learning in the United States and Canada in order to promote programs for the preparation of teachers of music. One of these awards is available annually at the University of Idaho. The selection of the person to receive this award is made by the faculty of the Department of Music. Applications are filed with the Head of the Department of Music, University of Idaho.

**MARY SUNDERLIN PUGH**—These scholarships cover expenses of attending the annual University of Idaho summer music camp and are made available to St. Maries high school students by Mr. L. R. Pugh of St. Maries in honor of Mrs. Pugh. Interested students should contact the Supt. of Schools, St. Maries, Idaho.

**RALSTON-PURINA**—This company provides a \$500 scholarship which is awarded annually to a senior student in the College of Agriculture majoring in a field closely related to the animal feed industry who has a clearly demonstrable financial need. The individual receiving the scholarship should also meet the following qualifications: be in the upper 25 per cent of his class; have given evidence of leadership; be of moral firmness and vigor in all his relationships; and have a record of demonstrating good citizenship. Applications for this scholarship should be made with: Dean, College of Agriculture, University of Idaho.

**REGENTS FUND**—The Regents of the University of Idaho have established a Scholarship Endowment Fund. The income from this fund will provide scholarships which are primarily available for sophomores and juniors at the University of Idaho. Applicants for these Regents scholarships are not limited to any particular field of study. They must be individuals of outstanding achievement who have a definite need. Applications should be made through: Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**SANDPOINT NEWS BULLETIN** (open to entering students)—This \$125 scholarship is provided by Laurin Pietsch, publisher of the "Sandpoint News Bulletin".

tin," and is open to entering students who plan to major in the field of journalism. Applications should be made to: Chairman, Department of Journalism, University of Idaho.

**SEARS-ROEBUCK FOUNDATION** (open to entering students)—The Sears-Roebuck Foundation makes several different types of awards each year as follows:

- a. A \$200 scholarship to a freshman girl entering the University to study Home Economics. Application materials may be obtained from: Head, Department of Home Economics, University of Idaho.
- b. A number of scholarships valued at \$300 each to entering freshmen who will major in the College of Agriculture. These Sears-Roebuck Foundation scholarships are awarded on the following bases: activity in agricultural affairs such as 4-H groups and Future Farmer groups; enthusiasm for agriculture as a life occupation; need; and scholarship in high school. High school seniors should contact one of the following: High School Principal; County Agricultural Extension Agent; high school teacher of Smith-Hughes Vocational Agriculture courses; or Dean, College of Agriculture, University of Idaho.
- c. A scholarship to an outstanding University of Idaho sophomore who was in the previous year's group of general agriculture scholarship winners (see b above). Information about this scholarship can be obtained from: Dean, College of Agriculture, University of Idaho.
- d. A number of scholarships available each year to outstanding high school seniors who come from communities where Sears-Roebuck and Company has retail store outlets. These scholarships are part of the Sears-Roebuck Foundation program of city scholarships awarded through local high schools. Recipients are selected by their high school faculty on the basis of outstanding character and qualities of leadership, scholarship, and need. High school students in areas where Sears-Roebuck has retail stores should contact their high school principal for further details.

**HOWARD AND LINNIE SHRIVER** (open to entering students)—Mr. Howard Shriver, a pioneer of the Palouse region, established a memorial trust fund, the income from which is used to provide scholarships for University of Idaho students. Usually two scholarships of \$150 each are awarded annually—one to an entering freshman girl and one to an entering freshman boy. Applications for these scholarships are filed with: Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**J. R. SIMPLOT**—The J. R. Simplot Company makes grants-in-aid available to students with demonstrated need and promise majoring in the College of Mines. These grants vary in amount from \$100 to \$400 depending upon need and may be made at any time during the school year. Applications should be made to: Dean, College of Mines, University of Idaho.

**STANDARD OIL FFA AND 4-H** (open to entering students)—The Standard Oil Company of California provides five scholarships for members of Idaho 4-H and five scholarships for members of Idaho FFA organizations. These awards amount to \$300 each and are available to entering freshmen regardless of the major field they select for college training. Applicants must be able to benefit from further education, be in the upper 40 per cent of his or her high school class, should be outstanding in 4-H and FFA work, be in need of some financial help and should have been active in community affairs. Further information about the Standard Oil FFA and 4-H scholarships and procedure for making application may be obtained from: County Agricultural Extension Agent; high school teacher of Smith-Hughes Vocational Agriculture courses or Dean, College of Agriculture, University of Idaho.

**STANDARD OIL LEADERSHIP**—The Standard Oil Company of California provides two scholarships valued at \$400 each for junior and/or senior students at the University of Idaho. Selection of recipients is based upon applicant's character, leadership qualities, financial need, and academic achievement. These scholarships cannot be held two years in succession by the same person. (According to present plans, Standard Oil Company of California will make these scholarships available during the school years of 1958-59; and 1959-60). Applications for Standard Oil Leadership scholarships may be obtained from: Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**STATE OF IDAHO VOCATIONAL REHABILITATION** (open to entering students with physical handicaps)—This program is designed to assist physically handicapped persons in the State of Idaho to prepare for a vocation. Each year there are a number of students attending the University of Idaho who receive scholarship assistance under this program. Details may be obtained by writing: Vocational Rehabilitation Service, State Board for Vocational Education, 308 Statehouse, Boise.

**STATESMAN NEWSPAPERS**—The Statesman Newspapers of Boise, Idaho, annually award two scholarships to students majoring in journalism. One of these in the amount of \$100 goes to a junior and one of \$50 to a senior. Applications are filed with: Chairman, Department of Journalism, University of Idaho.

**ETHEL K. STEEL**—Mrs. Ethel K. Steel, former Regent of the University has established a scholarship fund, the income from which is used to provide an annual scholarship for a girl living in Ethel Steel House, the University's co-operative dormitory for women. This award, in the amount of \$50.00, is made to a girl who has lived in Ethel Steel House a minimum of three semesters prior to the one in which the award is made. Nominations for this award shall be made by the girls in Ethel Steel House and selected by the Scholarship Committee. Criteria for selection will include: contribution to the success and happiness of the group; campus activities; at least a 2.5 cumulative average. Applications may be obtained from Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**DEAN C. STOLL EDUCATIONAL FUND** (open to entering students)—This \$200 scholarship is provided by Mr. and Mrs. H. E. Stoll, Bonners Ferry, Idaho, parents of Dean C. Stoll, a University of Idaho student who was killed in an automobile accident. This scholarship is open to male graduates of the Bonners Ferry High School who are entering the University of Idaho. The applicant must be in the upper 25 per cent of his graduating class and preference will be given to those who major in one of the following fields: science, engineering, mathematics, teaching. Application blanks may be obtained from: Principal, Bonners Ferry High School, Bonners Ferry, Idaho.

**OZ THOMPSON SPORTSMANSHIP AWARD**—This is a \$100 scholarship to be awarded to a member of the Varsity basketball squad on the basis of good scholarship, sportsmanship, need and all-around usefulness as a squad member and performer. This scholarship was presented by Mrs. Thompson in honor of her husband, Oz Thompson, who was a student and former athlete at the University of Idaho.

**TITLE INSURANCE COMPANY**—The Title Insurance Company of Boise provides three scholarships, each of the value of \$350.00, which are awarded to students enrolled in the College of Law at the University of Idaho. These scholarships are awarded on the basis of ability, scholarship, character and need. One of these scholarships will be awarded in each of the three law school classes. Application blanks may be obtained from and filed with: Dean, College of Law, University of Idaho.

**TUITION SCHOLARSHIPS** (open to entering students)—The Board of Regents of the University of Idaho authorizes the granting of a number of awards

to out-of-state students which covers the \$250 out-of-state tuition fee. These awards are made in three categories: (1) students from other states and territories of the U.S.A.; (2) students from foreign countries; (3) students from other states and territories who plan to major in elementary education. Applications should be made to: Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**UPPER SNAKE RIVER VALLEY DAIRYMEN'S ASSOCIATION** (open to entering students)—The Association provides a \$125 scholarship for the outstanding 4-H Dairy Club member in the six counties served by its creamery. These counties include: Bingham, Bannock, Bonneville, Jefferson, Madison and Fremont. The Association also provides for six 4-H Club short course scholarships at the University of Idaho. Interested persons should contact the Agricultural Extension Agent in their county.

**UTAH POWER AND LIGHT COMPANY**—The Utah Power and Light Company makes available an annual \$125 scholarship to University of Idaho students majoring in Agricultural Engineering. The student receiving this scholarship must come from the general territory served by Utah Power and Light. He must also be enrolled in, or have completed, the second semester of engineering and certified as majoring in the field of agricultural engineering. Applications for these scholarships should be filed with: Head, Department of Agricultural Engineering, College of Engineering, University of Idaho.

**R. M. WADE FOUNDATION**—This \$200 scholarship is in honor of Robert M. Wade and goes to outstanding and worthy students majoring in Agricultural Education, thus preparing for Smith-Hughes teaching in high schools. This scholarship goes to juniors majoring in Agricultural Education for use during their senior year. Interested and qualified applicants should contact: Head, Department of Agricultural Education, College of Agriculture, University of Idaho.

**WASHINGTON WATER POWER COMPANY**—Washington Water Power Company provides two \$125 scholarships each year for University of Idaho students majoring in Agricultural Engineering. Applicants for these scholarships must be enrolled in, or have completed, the second semester of Engineering and certified as majoring in the field of agricultural engineering. Applicants must come from the general service area of Washington Water Power Company. Applicants should contact: Head, Department of Agricultural Engineering, College of Engineering, University of Idaho.

**WEST COAST ELECTRONIC MANUFACTURERS ASSOCIATION**—Three scholarships valued at \$250 each are made available to University of Idaho students by the West Coast Electronic Manufacturers Association. Applicants must be working toward degrees in the courses which will prepare them for a career in engineering in the electronic industry. It is the hope of this Association that recipients of these scholarships will be encouraged to pursue their career in the field of electronics in one of the western states. Nominations are made to the University Scholarship Committee by the faculty of the College of Engineering. Applicants should contact: Dean, College of Engineering, University of Idaho.

**WESTVACO (FOOD MACHINERY AND CHEMICAL CORPORATION)** (open to entering students)—The Pocatello plant of the Westvaco Mineral Products Division of the Food Machinery and Chemical Corporation provides four scholarships valued at \$300 each for students attending the University of Idaho. These scholarships are made available, first, to sons and daughters of full-time employees of the Westvaco Mineral Products Division, Idaho installations, who are enrolled in courses leading toward a degree in Engineering, Geology, Chemistry, or Agriculture. In case there are no qualified applicants from sons and daughters of Westvaco employees, then these scholarships will be available to other students majoring in Engineering, Geology, Chemistry, or Agriculture. Criteria for selection shall include the student's personal and pro-

fessional goals, participation in extra-curricular and campus activities, evidence of self-help, and financial need. Applications for these scholarships are made through Chairman, Committee on Awards and Scholarships, Office of Student Affairs, University of Idaho.

**WOMEN'S AUXILIARY OF THE IDAHO CATTLEMEN'S ASSOCIATION**—This organization, which is more commonly known as the Idaho Cow-Belles, provides two annual scholarships of \$100 each for students majoring in Animal Husbandry. Applications for this award may be made through: Head, Department of Animal Husbandry, University of Idaho.

**MARIE K. WORMWARD** (open to entering students)—Marie K. Wormward of Kellogg awards a \$150 scholarship to a student selected by the Kellogg High School staff who intends to enroll in the College of Education to prepare for a career in teaching. Eligible students should apply to: Principal, Kellogg High School.

## Special Awards

**AFROTC DRILL TEAM AWARD**.—This award, which was provided by the Air Force ROTC, is presented to the drill team member contributing most to the success of the organization.

**AFROTC MEDAL AWARDS**.—The Air Force ROTC unit presents gold medals to selected candidates for demonstrated leadership within their respective AFROTC classes.

**AFROTC RIFLE TEAM AWARD**.—A gold medal is presented to the outstanding man of the Air Force Rifle Team. This award is provided by the Air Force unit of the University.

**AIR FORCE ASSOCIATION AWARD**.—This award is presented by the national Air Force Reserve Corps, and is granted annually for demonstrated leadership and outstanding scholastic achievement, to a graduating senior.

**ALPHA ZETA AWARD**.—The agricultural honorary presents each year an award to the sophomore student in the College of Agriculture who attained the highest grade average during his freshman year.

**ALUMNI SCHOLARSHIP CUP**.—This cup is awarded annually to that men's recognized group which attains the high scholastic average of the preceding year, and the majority of whose members share common eating facilities.

**AMERICAN INSTITUTE OF CHEMICAL ENGINEERS AWARD**.—An award consisting of a certificate, two-year subscription to the Institute's Magazine, Student Membership, and Emblem is offered annually by the American Institute of Chemical Engineers to the junior member of the student chapter who has attained the highest academic standing in his freshman and sophomore years.

**AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS AWARD**.—A standard handbook for Electrical Engineers is given to the student writing the best paper which is presented before the Richland section of the American Institute of Electrical Engineers. The Institute also gives a certificate to a member of the Idaho student branch of the American Institute of Electrical Engineers, for outstanding leadership and service to the organization.

**AMERICAN LEGION AWARDS**.—The Dudley Loomis Post No. 6 established an annual award of a complete set of insignia, which will go to the outstanding senior in the advanced Army Reserve Officers Training Corps. In 1949, the post also created an award to be made annually to the out-

standing graduating midshipman of the University Naval Reserve Officers Training Corps.

**AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS**—This society presents a Gold Key and certificate, as an honor award for conspicuous student activity, to senior members of the student chapter.

**AMERICAN SOCIETY OF CIVIL ENGINEERS AWARD**—The Spokane section of the American Society of Civil Engineers awards a junior membership in that organization each year at commencement. The competition consists of the submission of technical papers by senior civil engineering students.

**AMERICAN SOCIETY OF MECHANICAL ENGINEERS AWARDS**—The Inland Empire section of the American Society of Mechanical Engineers awards two junior memberships in the organization to graduating Mechanical Engineering students who present the best papers on Mechanical Engineering subjects before the section.

**ARMED FORCES COMMUNICATIONS ASSOCIATION AWARD**—The Armed Forces Communications and Electronics Association awards a gold medal to outstanding senior ROTC students (in either the Navy, Army or Air Force ROCT) with Electrical Engineering as the major course.

**ARMY ROTC DRILL TEAM AWARD**—This award, which is provided by the Army ROTC, is presented to the drill team member contributing most to the success of the organization.

**ARMY ROTC GOLD MEDAL AWARDS**—The Army ROTC unit presents gold medals to selected candidates for demonstrated leadership and scholastic achievement within their respective Army ROTC classes.

**ASSOCIATION OF THE U.S. ARMY AWARD**—The Infantry ROTC medal is presented to the Infantry ROTC graduate who has been outstanding in scholarship, leadership, attitude, and achievement by the Association of the U.S. Army.

**PHILO SHERMAN BENNETT PRIZE**—A first prize of \$20 and a second prize of \$15 are awarded annually to the first and second best essays on the subject dealing with "The Principles of Free Government." The specific title is announced each year. Competition is limited to students registered in American Government.

**BOYER PLAQUE**—Given by Katy Rae Boyer for the graduating woman major in Physical Education with the highest four-year scholastic average.

**NATHAN BURKAN MEMORIAL COMPETITION**—The American Society of Composers, Authors, and Publishers awards each year a first prize of \$150 and a second prize of \$50, for the best and next best paper by senior students in the College of Law on some phase of copyright law.

**THE CHAPPELL AWARD**—Captain C. A. Chappell, U.S.N., formerly professor of naval science at the University, presented the University with an ancient two-handed Chinese sword. This sword is to be used as a trophy for the outstanding drill team from the University of Idaho or Washington State College. There are no stipulations as to permanent possession.

**CHIPMAN SIGMA CHI IMPROVEMENT AWARD**—This award is in the form of a wrist watch or other suitable memento which is presented each year to the junior member of the Sigma Chi Chapter who showed the greatest scholastic improvement during his sophomore year. The foundation also provides a plaque upon which is recorded the name of the winners.

**CONVAIR AWARD**—The Convair Division of General Dynamics Corporation awards a trophy to the graduating senior NROTC student who has demonstrated the greatest interest in, and aptitude for, naval aviation.

**BEULAH GARRARD DALE SCHOLARSHIP CUP.**—This cup, which was presented by Mrs. H. C. Dale, is awarded each year to the women's group which attains the highest scholastic average for the preceding year, and the majority of whose members live in the same house or hall. A group winning the award three years in succession is given permanent possession of the cup.

**DAUGHTERS OF THE AMERICAN REVOLUTION NROTC AWARD.**—This Award is made by the State society of the Daughters of the American Revolution to the graduating senior midshipman who, by his leadership and officer-like qualities, has contributed most to the advancement of the University and the University NROTC program. The award is in the form of a plaque upon which each year is attached the name of the midshipman so honored.

**DAVID TROPHY.**—Mr. Earl David, Moscow, provided a bronze trophy for the winner of the drill team competition between the Inland Empire colleges. The annual competition is held in May of each year.

**DELTA SIGMA RHO DEBATE CUPS.**—Delta Sigma Rho, Debate honorary, presents each year intramural debate cups to the women's group house and to the men's group house winning the round robin debate tournament.

**EAGLE AND ANCHOR KEY.**—If chosen by the intramural manager, the athletic chairman for Eagle and Anchor (NROTC honorary) teams is eligible for the award of a key.

**EDMONDSEN AWARD.**—Provided by Kappa Sigma in honor of "Hec" Edmondson. This award goes to the most inspirational member of the varsity football squad.

**MARY E. FORNEY SCHOLARSHIP CUP.**—Each year the name of the Forney Hall girl having the most outstanding qualifications of scholarship, integrity, leadership, social adaptability and physical development is inscribed on this cup.

**ANNA H. HAYS MEMORIAL AWARD.**—The Idaho Congress of Parents and Teachers awards each year the interest from the Anna H. Hays Memorial Fund to a worthy student in the education field. This award amounts to approximately \$25.

**MAUDE COSHO HOUSTON SCHOLARSHIP PLAQUE.**—To promote scholarship among freshman women, Mrs. Houston presented a plaque upon which is inscribed the name of the girl having the highest scholastic average during her freshman year. The plaque hangs in the office of the Dean of Women.

**HUMMEL AWARDS.**—The firm of Hummel, Hummel and Jones of Boise provides cash awards to students in the Department of Art and Architecture in honor of the late Charles Hummel, early Idaho architect. The awards are grants for outstanding work in design.

**IDAHO CONGRESS OF PARENTS AND TEACHERS.**—This state educational organization makes an annual award of a certificate of merit to outstanding graduates in Education.

**IDAHO EDUCATION ASSOCIATION.**—This association has presented a permanent plaque to the College of Education. Each year there is to be engraved upon it the name of an outstanding graduate in Education who is a member of the Student National Education Association.

**IDAHO PRESS WOMEN'S AWARD.**—The Idaho Press Women's organization provides a membership in the National Federation of Press Women and a gold pin to the outstanding woman graduate in journalism.

**IDAHO SCHOOL TRUSTEES ASSOCIATION.**—This organization of Idaho school trustees each year make an award of \$100 to the graduate from the College



of Education who is exceptionally promising as a teacher and who will be teaching in Idaho next year.

**IDAHO SOCIETY OF CERTIFIED PUBLIC ACCOUNTANTS AWARD.**—This society provided a plaque upon which is inscribed the name of the outstanding senior majoring in accounting. The association also presents a key to the winner of this award.

**IDAHOIAN ATHLETIC MERIT AWARDS.**—The Daily Idahonian presented the University with a plaque upon which is inscribed annually the name of the athlete who has contributed most to the good of the team and the sport in which he participated.

**INTERFRATERNITY SCHOLARSHIP CUP.**—This award is made each semester to the men's fraternity having the highest scholastic average for the previous semester. It shall become the permanent possession of the chapter which wins it three consecutive times.

**JUNIOR PANHELLENIC TROPHY.**—In 1952 the Junior Panhellenic of the University of Idaho provided a traveling trophy which will be awarded to the first semester sorority pledge class with the highest grade.

**GLEN KNUTSON MEMORIAL TROPHY.**—This trophy was presented by the students in Willis Sweet Hall. The award is based on scholarship and demonstrated leadership ability and is awarded to the outstanding sophomore majoring in Dairy Husbandry.

**LAW WEEK AWARD.**—The Bureau of National Affairs each year gives a year's subscription to Law Week to the graduating student in the College of Law who has made the most scholastic progress in his senior year.

**MACHINERY MAGAZINE AWARD.**—The annual Machinery Award for excellence in machine design consists of a copy of Machinery Handbook inscribed with the recipient's name in gold together with a year's subscription to the Machinery magazine.

**MARINE CORPS GAZETTE AWARD.**—This award consists of a one-year subscription to the Marine Corps Gazette and membership in the Marine Corps Association. The award goes annually to the outstanding graduating Marine candidate.

**MARKSMANSHIP AWARD.**—An individual trophy is presented annually to the outstanding marksman from the three ROTC services.

**MERCK CHEMICAL COMPANY AWARD.**—Copies of the "Merck Index" are awarded to outstanding senior chemistry majors.

**MORTAR BOARD PLAQUE.**—Mortar Board recognizes scholarship among women by engraving the name of the most outstanding sophomore woman on a plaque which is hung in the office of the Dean of Women.

**NAVAL INSTITUTE AWARD.**—A one-year membership in the Naval Institute, with subscription to the "Proceedings" is awarded annually to the graduating regular midshipman and the graduating contract midshipman who have stood highest in the senior class in Naval Science.

**NROTC DRILL TEAM AWARD.**—This award, which is provided by the NROTC Unit, is presented to the Drill Team member contributing most to the success of the organization.

**NROTC GOLD MEDAL AWARD.**—The NROTC Unit gives an annual award consisting of a gold medal to the graduating midshipman who has the highest scholastic average during his senior year.

**NROTC RIFLE MARKSMANSHIP AWARD.**—A gold medal is awarded to the midshipman with the highest average small-bore rifle score in matches throughout the year.

**O'CONNELL AWARD.**—This award consists of a plaque on which is engraved annually the name of the freshman, sophomore, and junior NROTC students who have stood number one in the course in Navigation. The award is presented by Mr. J. J. O'Connell of Lewiston.

**PHI ALPHA DELTA AWARD.**—This national professional legal fraternity engraves each year on the William E. Borah Memorial Plaque the name of the member of the graduating class who has made the highest scholastic average during the first five semesters of the law course.

**PHI BETA KAPPA AWARD.**—The University of Idaho chapter of Phi Beta Kappa, national scholastic honorary, presents an annual gift which consists of an award of books to be made at the beginning of their junior year to outstanding students in the College of Letters and Science.

**PHI CHI THETA AWARD.**—This honorary presents a key to the senior woman in the College of Business Administration, who ranks highest in scholarship, personality, and character.

**PHI DELTA KAPPA.**—The University of Idaho chapter of this national professional fraternity in Education makes an annual award of \$50 to two graduating men in education, (including agricultural education), one to a candidate for the bachelor's degree and one to a candidate for the master's degree. The award is made on the basis of scholastic record, interest in teaching as a profession, personality and participation in campus activities.

**PHI ETA SIGMA SCHOLARSHIP CUP.**—Each year the name of the freshman with the highest scholastic average for his first year at the University is engraved on a cup provided by the organization.

**PHI UPSILON OMICRON AWARD.**—The name of the freshman woman in home economics, outstanding in scholarship, activities, cooperation and interest in home economics, is inscribed on a plaque which hangs in the Department of Home Economics.

**PMST GOLD MEDAL AWARD.**—The professor of Military Science and Tactics presents a Gold Medal Award to the outstanding member of the Pershing Rifle Company, University of Idaho.

**POWELL RIFLE.**—Mr. H. D. Powell of Moscow provided a Civil War rifle with suitable engraving to the winner of the Idaho, Oregon State, University of Washington shoulder-to-shoulder rifle match. This is a rotating award.

**SIGMA ALPHA IOTA AWARD.**—This award is given to the graduating senior girl in Sigma Alpha Iota, women's national music fraternity, with the highest cumulative grade point for her college career.

**SIGMA CHI FOUNDATION SCHOLARSHIP TROPHY.**—In May of 1951 the Sigma Chi Foundation presented to the University a scholarship trophy which had been donated by Carl P. Clare, '27, to be used to encourage better scholarship among fraternities. This trophy is given into the custody of the fraternity making the greatest scholastic improvement over the previous year.

**SIGMA DELTA CHI "CITATION FOR ACHIEVEMENT".**—The national journalism fraternity of Sigma Delta Chi designates a graduating male student to receive a certificate of merit for outstanding achievement in the field of journalism.

**SIGMA DELTA CHI SCHOLARSHIP AWARD.**—This award, which consists of a certificate of merit, is made to those men or women graduates in the chapter who stand in the upper 10 percent scholastically of their graduating class. The entire college record in all subjects is considered.

**SIGMA TAU AWARD.**—This national engineering honorary presents each year an award to the sophomore in the College of Engineering who attained the highest grade average during his freshman year.

**J. R. SIMPLOT AWARD.**—The J. R. Simplot Company makes available a \$100.00 cash award and certificate which is presented annually to the student in the College of Mines showing the greatest promise and achievement. Nominations for this award are made by the faculty of the College of Mines, University of Idaho, and announced each May.

**SONS OF THE AMERICAN REVOLUTION TROPHY.**—This trophy is a bust of Washington and is held for a year by the group house or hall whose representatives presented the best thesis the previous year in the course in American History. The students winning first, second, and third places receive, in addition, silver and bronze medals and have their names engraved on the pedestal of the bust.

**ARTHUR L. SWIM AWARD.**—This award, which was provided by the Swim foundation, is in the form of a silver bowl especially designed for the purpose. The award is presented each year to a senior showing outstanding "creative" scholarship throughout his college career.

**W. A. TARR AWARD.**—Sigma Gamma Epsilon, national professional earth science society, presents a certificate known as the W. A. Tarr Award to the student graduating in one of the earth sciences who is outstanding in scholarship, leadership and personality.

**TILE COUNCIL OF AMERICA AWARD.**—The Tile Council of America provides \$50 for prizes for Architectural students for a design embodying use of ceramic tile.

**U.B.E.A.—SMEAD PROFESSIONAL AWARD.**—The United Business Education Association in cooperation with the Smead Manufacturing Company offers an "Award of Merit for Outstanding Achievement in Business Education" to the outstanding graduating senior in Business Teacher Education.

**VETERANS OF FOREIGN WARS AWARD.**—Hawley Jamison Post No. 2095 of the Veterans of Foreign Wars awards a prize of \$25 to the graduating midshipman who, through his leadership and loyalty, has contributed most to the Naval ROTC Unit.

**WALL STREET JOURNAL AWARD.**—The Wall Street Journal provides a medal and a one-year subscription to the publication to a graduating senior in the College of Business Administration. The award is made on the basis of outstanding achievement in college work.

**ROLAND WHITE BASKETBALL AWARD.**—In memory of Roland White, who was accidentally killed while on a basketball trip with the Idaho squad, the Idaho chapter of Sigma Nu presented the University with a plaque upon which is inscribed the name of the most outstanding basketball player of each year's squad.

**XI SIGMA PI AWARDS.**—Xi Sigma Pi, national forestry honorary, annually places on a plaque which hangs in the Forestry Building, the name of the forestry student in each of the four classes attaining the highest scholarship for the year.

## Loan Funds

Twenty-four separate loan funds, from which worthy students may borrow, have been established at the University of Idaho. Six of these funds are administered by the organizations which established them. Eighteen are administered by the University Bursar. These funds now exceed \$70,000. Loans may be had at a very reasonable rate of interest and students may defer payment for a reasonable length of time after graduation. In some instances, the donors requested that loans be made only to students in a specific field. For example, loans from certain funds are restricted to students enrolled in agriculture.

### *Policy With Respect to Administration of Student Loan Funds*

The loan funds which are available to regularly enrolled and qualified students of the University of Idaho are administered by a Student Loan Committee composed of five members representing the instructional and administrative staff of the University. Applications for loans are made through the Chief Counselor in the Student Counseling Center.

Student Loans fall into two general categories: (a) short-term, emergency type; and (b) long-term loans:

- a. Short-term loans are those granted for short periods of time usually not extending over 60 days or until the end of the semester in which the loan is made—whichever is the shorter period of time.
- b. Long-term loans are usually limited to those students nearing the completion of their degree programs (juniors, seniors.) It is the policy of the Student Loan Committee to encourage repayment of loans at as early a date as possible. Payment of loans in monthly installments starting as soon as possible after graduation is recommended.

The following rules generally govern the granting of student loans. Under unusual personal circumstances, exceptions may occasionally be made to points 4, 5, 8, and 9 below.

1. The applicant should have attended the University of Idaho for at least one semester.
2. Graduate students who are on appointment by the University as Fellows or Assistants are not eligible for student loans.
3. The interest rates on student loans are as follows: 3 percent per annum from date of note until date of initial maturity and 5 percent per annum after maturity. **However**, there will be a **minimum service charge** (which includes interest) for each loan as follows: 50 cents for loans of \$50 or less; \$1.00 for loans over \$50.
4. The applicant must have demonstrated scholastic ability and seriousness of purpose by achieving a cumulative grade point average of 2.00 or better.
5. Loans are generally made only to cover the basic University expenses (tuition, fees, room, board, and books).
6. It is the policy of the committee to reject applications for loans which may be used to finance, directly or indirectly, the operation of a car.
7. The applicant shall indicate reasonable and satisfactory plans for repayment of the loan. The Committee will not approve loans of an amount which appears out of line with the applicant's ability to repay. In some cases the Committee may request a detailed budget of the applicant's expenditures and receipts. These actions are for the student's own protection, and to be of help to him in his over-all planning.

8. In some cases, dependent upon the nature and amount of the loan, the committee will request that the note be co-signed by a parent or a responsible property owner.
9. Applicants under 21 years of age normally will be requested to obtain written permission of their parents before consideration is given to the loan application.
10. Applications for long-term loans must be made at least 7 days before the time the funds are required in order to allow time for processing the applications.

**AMERICAN LEGION LOAN FUND.**—Established by Dudley Loomis Post No. 6, Department of Idaho, of the American Legion for loans to students who are veterans.

**JOSEPH WESLEY BARTON LOAN FUND.**—Established by friends of the late Dr. J. W. Barton of the College of Education.

**CLARA RANSOM DAVIS LOAN FUND.**—Established by friends of the late Clara Ransom Davis in memory of her to assist needy students.

**JEROME J. DAY LOAN FUND.**—The late Jerome J. Day of Wallace established in the College of Mines a loan scholarship to be awarded each year to seniors in the College of Mines who are graduates of Idaho high schools and who, in the opinion of the President of the University and the Dean of the College of Mines, are the most deserving applicants, as demonstrated by their college records.

**VERNON P. FAWCETT MEMORIAL FUND.**—A \$1,000 loan fund was established in 1921 by Mrs. W. H. Fawcett of Spokane in memory of her son, Vernon P. Fawcett, '14, who was drowned at Seaside, Oregon, August 15, 1921, while attempting to save the life of a young woman companion.

**COLLEGE OF FORESTRY ALUMNI MEMORIAL LOAN FUND.**—Established by the alumni of the University in memory of the Idaho Foresters who gave their lives in World War II, and made available to students in the College of Forestry.

**W.K. KELLOGG FOUNDATION LOAN FUND.**—Established in 1943 by the W. K. Kellogg Foundation of Battle Creek, Michigan, in the amount of \$3,000 to encourage and facilitate the training of medical technologists. Loans up to \$300 are available to students taking courses in medical technology and pre-nursing as approved by the heads of the departments of Bacteriology and Home Economics.

**FRANCIS BAKER LANEY LOAN FUND.**—Established by friends of the late Dr. F. B. Laney of the College of Mines for loans to students in that division.

**PREN MOORE LOAN FUND.**—Established in 1958 by the Idaho Poultry Improvement Association in honor of Pren Moore for many years Extension Poultryman with the University of Idaho Extension Service. Available to students specializing in Poultry Husbandry.

**PINE HALL LOAN FUND.**—To assist their fellow students, the ex-students of Pine Hall in June, 1953, donated the balance of their association fund, \$267.78, to the University to establish a general loan fund.

**NATIONAL DEFENSE STUDENT LOAN PROGRAM.**—The University is cooperating with the Federal Government under the National Defense Act of 1958 in administering this program. Loans are available to those qualified to the extent that funds are appropriated by the Federal Government.

**ISABELLE PRICE MEMORIAL LOAN FUND.**—Established in 1941 by M. Juanita Noble for loans to junior or senior students in the College of Forestry.

**EDWARD FRANK RINEHART LOAN FUND.**—In 1952, the Idaho Woolgrowers Association created a \$500 loan fund in recognition of the outstanding work done by Edward Frank Rinehart with the Idaho sheep industry. Loans from this fund are restricted to students majoring in Animal Husbandry, with preference given to those specializing in the sheep industry.

**ROTHROCK LOAN FUND.**—Established from proceeds from the sale of pure-bred Shorthorn steer calves given annually by F. M. Rothrock of Spokane, Washington, for several years and from contributions in memory of F. M. Rothrock. Available to sophomores, juniors and seniors in the College of Agriculture. Loans made to the most deserving applicant as demonstrated by his college record.

**STEPHENS MEMORIAL LOAN FUND.**—Established by friends of the late W. L. Stephens, for 19 years northern district extension agent with the University of Idaho College of Agriculture, in memory of his leadership in the development of 4-H Club work in Idaho and the Pacific Northwest. Loans from this fund will be available to former 4-H Club boys and girls in the junior or senior year in the College of Agriculture or Department of Home Economics.

**SURGICAL LOAN FUND.**—A surgical loan fund of \$300 was established in 1922 by Dr. E. R. Edson of Seattle, for the use of students who might need financial assistance in providing for surgical treatment. In 1930 the Board of Regents established a similar fund of \$500.

**GROVER DEAN TURNBOW STUDENT LOAN FUND.**—Established for the purpose of giving financial assistance to both men and women undergraduate students majoring in courses of study in the College of Agriculture during the sophomore, junior and senior year.

**UNIVERSITY LOAN FUND.**—In 1921 the Moscow Chamber of Commerce contributed \$100 to the University, which, with donations from the Chambers of Commerce of Coeur d'Alene, Kellogg and Wallace, initiated the first loan fund. During the years this fund has been increased by donations from various sources.

**RICHARD GARRIGUS WHITE MEMORIAL LOAN FUND.**—A \$1,000 loan fund established in 1948 by Mr. Frederick G. White in memory of his son, Richard Garrigus White, who was a student at the University and a member of Mu Iota Chapter of Phi Gamma Delta. An additional \$50.00 was added to this loan fund by Mr. L. C. Garrigus. Available to students in the College of Forestry accepted for junior schedules or above with preference to members of Phi Gamma Delta.

#### *Loan Funds Privately Administered*

Several organizations provide loan funds which are privately administered and to whom requests for loan should be made directly. The two larger loan funds are described below. Information on others may be secured from the Office of Student Affairs.

**FEDERATION OF WOMEN'S CLUBS LOAN FUND.**—In October, 1906, the Idaho State Federation of Women's Clubs established a loan fund for the University. Approximately \$13,500 is now available. This money is loaned to junior and senior students, on note security, and is to be returned with interest at 6 percent from the time the borrower leaves college. The applicant must also be recommended by a State Federation Club and by his dean. Students interested should apply to the Director of Student Affairs.

**KNIGHTS TEMPLAR EDUCATIONAL FOUNDATION.**—Created by the Masons belonging to the Commandaries of Knights Templar of Idaho for the purpose of assisting worthy young people of this state to finish their education. Loans are made to seniors, to those working on their master's degrees, and

to juniors on exception. Edward D. Sanman, 1324 15th Street, Lewiston, Idaho, chairman; C. Merton Winegar, 533 South Main St., Moscow, secretary.

## Student Organizations

All student organizations function under the general jurisdiction of the Student-Faculty Council and new organizations must petition this Council for recognition and approval. Each organization must have a faculty advisor. The name of the advisor, a current list of the organization's officers and a copy of its constitution and by-laws must be on file in the Office of Student Affairs. Failure to comply with these regulations may result in withdrawal of permission for the group to function. Students who participate in unauthorized organizations which are judged to be detrimental to the general welfare of the University may become subject to disciplinary action.

### Student Government

Associated Students of the University of Idaho is the student government. Its activities include publication of a twice-weekly student newspaper, publication of an annual, financial support of debate, dramatic productions, agricultural judging, student radio station, pep band, Vandaleers (a choral group), homecoming and dad's day celebrations and campus chest campaigns. ASUI is under the general direction of the General Manager, a student body president and a nine-member executive board.

### All-Campus Organizations for Women

Associated Women Students, an organization of all women enrolled in the University of Idaho, seeks to regulate matters pertaining to the student life of its members and to promote high standards of University life. Other women's organizations include: Alpha Lambda Delta (national scholastic honorary for freshman women); Mortar Board (senior women's national honor society); Panhellenic Council (representatives of each sorority governing rush and intersorority affairs); Spurs (national service organization for sophomore women); Women's "I" Club; Women's Recreation Association.

### All-Campus Organizations for Men

Blue Key (national service fraternity for junior and senior men); "I" Club (varsity lettermen); Intercollegiate Knights (upperclassmen's national service organization); Interfraternity Council (representatives of each fraternity on the campus); Phi Eta Sigma (national scholastic honorary for freshman men); Silver Lance (local honorary for senior men).

### College and Departmental Organizations

**AGRICULTURE**—Ag Club (students in the College of Agriculture); Agronomy Club; Alpha Zeta (national agricultural honorary); Dairy Science Club.

**BUSINESS**—Alpha Kappa Psi (national professional organization for men majoring in business); Associated Business Students (organization for all business majors); Beta Epsilon Chi (students in business education and secretarial studies); Phi Chi Theta (national professional organization for women majoring in business).

**EDUCATION**—Kappa Delta Pi (national education honorary); Phi Delta Kappa (men's national education honorary); student chapter National Education Association.

**ENGINEERING**—Associated Engineers of the University of Idaho (includes student chapters of the American Society of Agricultural Engineers, American

Society of Automotive Engineers, American Institute of Chemical Engineers, American Society of Civil Engineers, American Institute of Electrical Engineers, American Society of Mechanical Engineers); Sigma Tau (national honorary society for engineers).

**FORESTRY**—Associated Foresters (students and faculty in the College of Forestry); Xi Sigma Pi (national forestry honorary).

**GRADUATE**—Graduate Journal Club.

**LAW**—Bench and Bar Association (law students); Phi Alpha Delta (national professional organization for law students).

**LETTERS AND SCIENCE**—Alpha Epsilon Delta (national pre-medical honor society); American Institute of Architects (Student Chapter); Attic Club (students in art and architecture); Curtain Club (students in dramatics and dramatic production); Delta Sigma Rho (national honorary for debaters); French Club (students interested in French language and literature); Home Economics Club (affiliated with the American Home Economics Association); Idaho Chemistry Club (for chemistry majors); Mathematics Club; Phi Beta Kappa (national scholastic honorary); Phi Upsilon Omicron (national home economics honorary); Phi Gamma Mu (national social science honorary); Sym-Bot (botany); Pre-Nursing Club; Theta Sigma Phi (national women's journalism honorary); Sigma Delta Chi (national men's professional journalism honorary); Radio-TV Guild.

**MILITARY**—Arnold Air Society (national Air Force ROTC honorary); Eagle and Anchor Society (outstanding Navy midshipmen); Military Choir; Pershing Rifles (honorary company of basic Army ROTC students); Scabbard and Blade (national honorary for all military students).

**MINES**—Associated Miners (affiliated with the American Institute of Mining and Metallurgical Engineers); Sigma Gamma Epsilon (national professional organization for geology, mining and metallurgy majors).

**MUSIC**—Madrigal Singers; Opera Workshop; Phi Mu Alpha-Sinfonia (men's national professional fraternity); Sigma Alpha Iota (women's national professional fraternity); University Concert and Marching Bands; University Singers (men and women); University Symphony Orchestra; Vandaleers (mixed chorus-choir).

**PHYSICAL EDUCATION AND RECREATION**—Alpha Phi Chi (intramural athletic managers organization); Gymnastics Club; Hell Divers Club (national society sponsoring swimming and lifesaving for men and women); Idaho Orchesis (upperclassmen interested in modern dance); Idaho Pre-Orchesis (freshmen interested in modern dance); PEM Club (majors and minors in physical education); Phi Epsilon Kappa (physical education professional club); Ski Club; Vandal Riders Club.

### **Other Student Organizations**

Amateur Radio Club; Cosmopolitan Club (foreign and American students); Dames Club (wives of married students); Future Farmers of America (collegiate chapter); Greek Caucus; Independent Caucus; International Relations Club; University 4-H Club; Vandal Flying Club; Young Democrats; Young Republicans.

**Religious Organizations** (see pages 13-14).



# Part II

## Admission Requirements Regulations and Procedure

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### Admission to the University

Students entering the University for the first time should write to the Registrar requesting a copy of the folder, "How to Enroll in the University of Idaho." This publication gives full detailed information concerning procedure on admission.

#### FINAL DATES FOR MAKING APPLICATION FOR ADMISSION

To be assured of admission to the University of Idaho for the first semester each year applications for admission must be filed in the Registrar's Office on or before August 15 for out-of-state students and September 7 for resident's of Idaho.

All academic credentials should also be on file by the above dates so that Permits to Register can be sent to the student before registration days.

For the second semester final dates for receiving applications is January 15 for both resident's of Idaho and out-of-state students.

Out-of-state applications received after the above dates will be accepted in the order of their receipt only as long as additional new students may be accommodated. Acceptance will be determined by our ability to accommodate such students in the division in which they wish to register.

**A**PPPLICANTS for admission to the University must present satisfactory evidence of good moral character.

Students are classified as graduates and undergraduates. Undergraduates are classified as regular students (freshmen, sophomores, juniors, and seniors) transient and special students.

**CREDENTIALS.**—Students applying for admission to the University are required to furnish credentials as follows:

- (a) Personal data on the regular application-for-admission blank. Failure to list on the application blank all institutions attended is considered fraud and subjects the applicant to immediate cancellation of registration by the Registrar.
- (b) An official signed transcript of high school credits to be sent direct to the University by the principal.
- (c) Official transcripts and statements of honorable dismissal to be sent direct to the University from each institution attended after high school graduation.

- (d) Blanks for furnishing personal data and high school records may be obtained on application to the Registrar. University, college and other collegiate level school records should be furnished on the transcript blank of the institution at which the work was taken. All transcripts must be official. They must be made out and signed by the Registrar, superintendent, principal, or some other official of the school and mailed by him directly to the Registrar, University of Idaho. Transcripts will not be accepted from the student. *Prompt attention to these details will avoid delay in registration and the additional expense of telegraphing.*
- (e) Each new student (either freshman or transfer) entering the University for the first time is required to file with the University a complete physical examination report. This report must be filed before registration is considered complete. This physical examination should be accomplished by the individual's own physician before coming to the University and special forms are provided by the University for this purpose. If the required physical examination is not completed before coming to Moscow, the new student may obtain this examination from a local physician. *University physicians do not make entrance physical examinations.* The University may require other or further physical examinations if deemed necessary.
- (f) All new out-of-state students are required to pay a \$5.00 credit evaluation or application fee at the time their application is filed in the Registrar's office.

**PERMITS TO REGISTER.**—Applicants for admission whose credentials have been accepted in time will be mailed permits to register. Applicants will be saved much inconvenience and uncertainty if all their credentials are received by the Registrar in sufficient time for the settlement of any question through correspondence before registration days.

If credentials are not sent in advance, or are not available at the time of registration, this does not necessarily mean that the application for admission will be refused. It may mean, however, that the applicant will be admitted on a provisional basis pending receipt of official credentials. The provisional admission will be subject to cancellation if the credentials, on their arrival show the applicant does not meet all of the requirements for admission to the university.

#### **ADMISSION OF NEW NON-RESIDENT STUDENTS**

The university reserves the right to limit the admission of new non-resident students on the basis of their previous academic achievements.

#### **ADMISSION AS REGULAR STUDENTS**

**ADMISSION BY CERTIFICATE.**—Admission to the University by certificate is based upon credentials showing:

- (a) Graduation from an accredited three-year or four-year high school. In cases of graduation from three-year high schools units earned in the ninth grade in junior high school may be included in the 15 required and acceptable units (see table page 49).

A "unit" represents a high school subject taught five times a week in periods of not less than 40 minutes' duration (laboratory 80), for a school year of at least 36 weeks. A certificate of secondary school record should be filled out and signed by the superintendent, principal, or other official of the school in which the work was done. It should show the length of each course in weeks, the number of recitations a week, the length of each reci-

tation, and the grade of scholarship attained, including a record of all failures and conditions. All certificates accepted toward admission to the University become the property of the University, and are permanently filed among its records. They cannot be returned to the student.

Academic units shall be defined as English (composition and literature), foreign language, mathematics, social science, and natural science.

Elective units may be taken from the academic subjects named as well as from vocational and other subjects commonly given in high schools, except that no credit will be given for the following:

- (a) Spelling, penmanship, reviews, project work unless in conjunction with regular courses, and work which primarily is of the nature of extracurricular activities.
- (b) Less than one year in a foreign language, shorthand, typewriting, or bookkeeping.
- (c) Less than one-half unit in any subject.
- (d) More than one unit in each of physical education and military drill.

The specific requirements and apportionment of required and elective units for entrance to the various divisions of the University are shown below. For admission with deficiencies in group requirements see page 50.

Requirements for admission to the various divisions of the University are shown below.

HIGH SCHOOL UNITS IN	COLLEGES OF THE UNIVERSITY						
	Letters and Science (Law)	Agriculture	Engineering	Mines	Forestry	Education	Business
English .....	3	3	3	3	3	3	3
Social Science .....	2	2	2	2	2	2	2
Mathematics: Algebra .....	1	1	1	1	1	1	1
Plane Geometry .....	1	1	1	1	1	-	1
Advanced Algebra .....	-	-	1/2	1/2	-	-	-
Other .....	-	-	1/2*	-	-	1	-
Natural Science (unspecified) .....	2	2	1	1	2	2	2
Physics .....	-	-	1	1†	-	-	-
Unspecified Academic Units .....	2	-	-	-	2	2	2
Total Academic Units .....	11	9	10	9 1/2	11	11	11
Additional Academic, Vocational or Elective Units .....	4	6	5	5 1/2	4 ‡	4	4
Total Units Required .....	15	15	15	15	15	15	15

‡ It is desirable for students planning to enter the College of Forestry to submit one additional unit each in mathematics and physics.

\* One-half unit of Solid Geometry, one-half unit of Trigonometry, or, preferably, an additional one-half unit of Advanced Algebra is required.

† In the College of Mines 1 unit physics required for mining, metallurgical or geological engineering curricula but not required for geology or geography where 2 units of natural science (unspecified) is required.

**ADMISSION WITH DEFICIENCIES**

**ADMISSION WITH DEFICIENCY IN GROUP REQUIREMENTS.**—Students who qualify for admission to the University by certificate or by examination but whose preparatory work fails to follow the pattern of units specified by the division which they wish to enter may in most cases be admitted to that division with deficiencies. Entrance deficiencies should be made up before the beginning of the sophomore year. Opportunity to make up deficiencies is provided by the university.

Students admitted to the University, who present the specified number of academic units but are deficient in academic group requirements may make up the deficiency by college courses and without loss of college credit. Shorthand and bookkeeping up to a maximum of one unit in each may be counted in lieu of academic units for this purpose by students in the College of Business Administration. Students who enter the College of Engineering or College of Mines with deficiencies in advanced algebra, solid geometry, or physics may make up the deficiencies in remedial classes of certain college courses to which the high school work is prerequisite. Other deficiencies are, in general, made up without college credit.

**ADMISSION OF NON-HIGH SCHOOL GRADUATES**

**NON-HIGH SCHOOL GRADUATES.** — Students from accredited secondary schools who have completed 15 acceptable units in an accredited 4-year high school or 12 acceptable units in an accredited 3-year senior high school, but have not graduated, may be admitted upon special written recommendation of the principal, subject to the same grade regulations as graduates.

**ADMISSION BY EXAMINATION.** — Applicants for admission who have graduated from non-accredited high schools and non-high school graduates over 21 years of age who do not meet admission requirements may be admitted to the University as regular students upon satisfactory completion of suitable tests selected by the University. Persons to whom this provision applies should write to the Registrar for detailed information and should send all available credentials regarding their previous work.

This regulation does not pertain to students transferring from accredited institutions of higher learning who have completed 30 or more semester hours of work with a cumulative average of 2.00 or over. These students will be admitted to the University with the provision that they will be required to make up any high school deficiencies and/or foundation training which might be required by the dean of the division in which they register.

**ADMISSION WITH ADVANCED STANDING**

**FROM UNIVERSITIES AND COLLEGES.**—Students who have completed work in other universities and educational institutions of fully accredited standing with a satisfactory scholarship record, and who present certified statements of their records and honorable dismissal from each of the institutions attended may be admitted to advanced standing.

These students must have the following credentials sent direct to the Registrar of the University of Idaho; a certificate of secondary school record giving full information regarding the applicant's high school record, and separate transcripts from each of the other institutions attended. These should be sent direct to the Registrar by the issuing institutions at least one month before the student expects to enter the University. Transcripts from other institutions cannot be given to the student or be forwarded to another institution.

Students admitted to the University of Idaho from other collegiate educational institutions must have complied with the scholarship regulations

for continuance in the institution or institutions which they have attended in addition to those scholarship regulations which are applied to students enrolled in this institution. (See University Regulations, Secs. L and M). Petitions for exceptions to these regulations should be presented to the Administrative Council. Students entering the College of Education must have an average of "C" (2.00) or better. (See also special requirements for admission to the College of Law.)

**FROM NORMAL SCHOOLS.**—Students from approved normal schools who present a satisfactory scholastic record are allowed credit for work which corresponds to University courses and given a class standing according to the number of their credits which may be applied as required or elective credits in the curriculum chosen.

**FROM JUNIOR COLLEGES.**—By action of the State Board of Education and the Board of Regents of the University of Idaho, in accordance with Idaho statutes, the acceptance of credits from Junior Colleges is to be uniform for both certification and transfer purposes effective September 1, 1950.

This action provides that after a student has attained full junior standing by the completion of 64 semester hours, (96 quarter-hours), or one half of the total credit requirements for a specific degree curriculum at any institution or institutions, he may not transfer for credit to the University of Idaho subsequent work taken at a junior college.

#### **ADMISSION AS TRANSIENT STUDENTS**

A student in good standing in any recognized college or university who wishes to take work at the University of Idaho to be transferred back to the institution last attended may be admitted as a Transient student. He will only be required to have a statement of honorable dismissal and of his scholastic average sent direct to the Registrar from the institution he last attended.

Transient students may register for a full study load during summer sessions but cannot register for more than six hours during a regular semester. Students taking more than six hours during a regular semester must register as regular students and fulfill all of the regular admission requirements.

If, at the end of the semester or summer session, a Transient student wishes to remain in the University for further work he must then furnish complete transcripts from schools previously attended and fulfill all other requirements for admission as a regular student.

#### **ADMISSION AS SPECIAL STUDENTS**

Persons over 21 years of age, who are unable to meet the admission requirements for regular students and who desire to take special studies, may be admitted as special students upon presentation of satisfactory evidence that they are fully qualified to enter upon the work. Students will not be admitted directly from the secondary schools to the status of special students.

Graduates of accredited high schools are not admitted as special students, but are expected to qualify for regular undergraduate standing in accordance with the general rules.

A special student is not eligible for any degree. Before being admitted to candidacy such student must attain regular standing and be in residence carrying a regular schedule of work for at least two years thereafter. Registration in any semester is dependent upon the record thus far made in the University.

#### **ADMISSION TO THE COLLEGE OF LAW**

After gaining admission to the University additional requirements for admission to the College of Law are set forth in the section dealing with the College of Law, page 101.

**ADMISSION TO GRADUATE STANDING**

A bachelor's degree from an accredited college or university is required for admission to graduate work. In addition the student must meet any academic standards set up by the university. A complete certified transcript from the school awarding the bachelor's degree listing the degree awarded is necessary. If you have taken graduate work at any school after receiving your degree, transcripts and statements of honorable dismissal are also required from these schools. These transcripts must be sent directly to the Registrar of the University and should arrive some time prior to registration days so that they may be checked to determine your eligibility for admission. For admission as a Transient student see information above.

For further regulations concerning graduate work see the statement of the Graduate school in Part III of this catalog.

**Degrees Granted****FIRST DEGREES**

The following baccalaureate degrees are conferred upon those who have completed successfully the prescribed courses of study and who have complied with other requirements laid down by the University.

**COLLEGE OF LETTERS AND SCIENCE:**

- Bachelor of Arts, B.A.
- Bachelor of Science, B.S.
- Bachelor of Science in Pre-Medical Studies, B.S.(Pre-Med.)
- Bachelor of Science in Home Economics, B.S.(H.Ec.)
- Bachelor of Science in Pre-Nursing, B.S.(Pre-Nurs.)
- Bachelor of Music, B.M.
- Bachelor of Naval Science, B.N.S.
- Bachelor of Architecture, B.Arch.

**COLLEGE OF AGRICULTURE:**

- Bachelor of Science in Agriculture, B.S.(Ag.)

**COLLEGE OF ENGINEERING:**

- Bachelor of Science in Civil Engineering, B.S.(C.E.)
- Bachelor of Science in Electrical Engineering, B.S.(E.E.)
- Bachelor of Science in Mechanical Engineering, B.S.(M.E.)
- Bachelor of Science in Chemical Engineering, B.S.(Ch.E.)
- Bachelor of Science in Agricultural Engineering, B.S.(Ag.E.)

**COLLEGE OF LAW:**

- Bachelor of Laws, LL.B.

**COLLEGE OF MINES:**

- Bachelor of Science in Mining Engineering, B.S.(Min.E.)
- Bachelor of Science in Metallurgical Engineering, B.S.(Met.E.)
- Bachelor of Science in Geological Engineering, B.S.(Geol.E.)
- Bachelor of Science in Geology, B.S.(Geol.)
- Bachelor of Science in Geography, B.S.(Geog.)

**COLLEGE OF FORESTRY:**

- Bachelor of Science in Forestry, B.S.(For.)

**COLLEGE OF EDUCATION:**

- Bachelor of Science in Education, B.S.(Ed.)
- Bachelor of Science in Music Education, B.S.(Mus.Ed.)
- Bachelor of Science in Business Education, B.S.(Bus.Ed.)

**COLLEGE OF BUSINESS ADMINISTRATION:**

- Bachelor of Science in Business, B.S.(Bus.)

**ADVANCED DEGREES**

The following advanced degrees are offered by the Graduate School of the University:

- Master of Arts, M.A.
- Master of Science, M.S.
- Master of Science in Home Economics, M.S.(H.Ec.)
- Master of Music, M.M.
- Master of Science in Agriculture, M.S.(Ag.)
- Master of Agriculture, M.Ag.
- Master of Science in Civil Engineering, M.S.(C.E.)
- Master of Science in Electrical Engineering, M.S.(E.E.)
- Master of Science in Mechanical Engineering, M.S.(M.E.)
- Master of Science in Chemical Engineering, M.S.(Ch.E.)
- Master of Science in Agricultural Engineering, M.S.(Ag.E.)
- Master of Science in Metallurgical Engineering, M.S.(Met.E.)
- Master of Science in Mining Engineering, M.S.(Min.E.)
- Master of Science in Geological Engineering, M.S.(Geol.E.)
- Master of Science in Geology, M.S.(Geol.)
- Master of Science in Forestry, M.S.(For.)
- Master of Forestry, M.F.
- Master of Science in Education, M.S.(Ed.)
- Master of Education, M.Ed.
- Master of Science in Music Education, M.S.(Mus.Ed.)
- Master of Music Education, M.Mus.Ed.
- Master of Science in Business Education, M.S.(Bus.Ed.)
- Master of Business Education, M.Bus.Ed.
- Master of Science in Business, M.S.(Bus.)
- Master of Natural Science, M.Nat.S.
- Doctor of Philosophy, Ph.D.
- Doctor of Education, Ed.D.

**PROFESSIONAL DEGREES**

The following professional degrees are offered in engineering and mining:

- Civil Engineer, C.E.
- Mechanical Engineer, M.E.
- Electrical Engineer, E.E.
- Chemical Engineer, Ch.E.
- Agricultural Engineer, Ag.E.
- Engineer of Mines, E.M.
- Metallurgical Engineer, Met.E.
- Geological Engineer, Geol.E.

For conditions of candidacy for an advanced degree, see the Graduate School, in part III.

## Regulations and Procedure

The following rules and regulations of procedure have been promulgated by the faculty. To have any rules or regulations waived it is the responsibility of the student to present a petition to his academic dean, and if necessary, through the dean to the Administrative Council.

The Registrar is responsible only for checking student records for compliance with regulations in the catalog.

**Students are individually responsible for knowledge of and compliance with these regulations and rules of procedure. Failure to be informed or to comply will not excuse a student from his responsibility or from any penalty or difficulty he may encounter.**

Students are advised to check their own records at each registration to assure that they are systematically and progressively meeting degree requirements. Students should insist that all current questions in this respect be reviewed with registration advisor, major professor or dean at each registration and covered by appropriate actions or memoranda at that time.

### A. MATRICULATION

An applicant for enrollment in any course offered by the University for college credit, except correspondence or non-residence courses, files certain personal data and credentials covering all previous academic work. (See pages 47-48). After the University has accepted these credentials and issued a permit to register, the student's registration completes his matriculation.

### B. REGISTRATION

1. **ADMISSION TO CLASSES.**—At the beginning of a University session each student makes out a study list. After receiving his dean's written approval to this study list and paying his fees, as listed on pages 19 to 22, he files his completed registration blank in the Registrar's office together with a class card for each course to be taken for credit, for non-credit, or as an auditor. The class cards are immediately sent to the instructors concerned. Instructors do not admit students to class for whom they have no class cards.

2. **AUDITORS.**—Auditing a course consists of regularly attending without other participation and without credit. Only lectures may be audited. Only regularly enrolled students may audit courses.

3. **COURSES IN ABSENTIA.**—Courses in absentia are those taken in exceptional cases by matriculated students, who, for valid reason, are unable to attend regular classes in such courses and who do the work by appointment with a resident instructor. Permission for taking courses in absentia must be obtained from the instructor and the student's academic dean before beginning the work. Registration for courses in absentia automatically will be cancelled if the course is not completed within four years of the date of registration.

4. **NON-RESIDENT COURSES.**—Students are not permitted to carry extension, non-resident or correspondence work for college credit in this or any other institution while in residence at the University of Idaho. Registration for extension or non-resident courses offered by the University of Idaho is automatically cancelled if a student fails to complete the work before he registers for resident work. This rule may be waived only by the written approval of the student's academic dean.



5. REGISTRATION OF UNDERCLASS STUDENTS IN UPPERCLASS COURSES.—Policy of the University provides that underclassmen shall not take upper-class courses. However, exceptions to this general rule may be made under certain circumstances as follows:

- (1) When an exception is being considered the interest and welfare of the student concerned shall be a prime factor. As a policy, an exception should be made for the student who can meet the prerequisites and who is exceptionally well prepared in a field of study in which continuity of progress is highly desirable. However, unless it is necessary in order to complete degree requirements, such an exception should not postpone the completion of lower division requirements beyond the usual period.
- (2) The academic dean of the student concerned shall be responsible for authorizing an exception only after having assured himself that the student is qualified under (1) above.

6. REGISTRATION OF UNDERGRADUATE STUDENTS IN GRADUATE COURSES.—Undergraduate students may not register in graduate courses (those numbered above 200) unless they have senior standing (see Sec. P—page 62). Such students will be limited to one graduate course and must have prior written approval of the dean of the Graduate school before registering for the course.

### C. CHANGES IN REGISTRATION

1. CHANGE OF STUDY LIST.—After a student has registered he must follow his study list. Instructors are not authorized to make changes in study-lists. Students may not drop a course by simply staying out of class. (See Regulation E-1). A student wishing to change his study list should confer with his dean.

A student may not change his registration to take up an additional course for credit or increase the number of credits registered for after the end of the fourth week\* of the semester, except upon the approval of the Administrative Council, unless the registration for the additional course or credit is to correct a clerical error made in his original registration.

No petitions to withdraw from a course will be accepted in the Registrar's office after the start of the scheduled final examination period. (See Calendars p. 2-3.)

2. CHANGE OF CURRICULUM.—A student may not change from one curriculum to another except by written permission of the dean concerned on a regulation form which must be filed in the Registrar's office immediately. (See Regulation J-1.)

### D. CREDIT

1. CREDIT DEFINED.—The value of each course is stated in semester credits. A credit normally requires one one-hour class period or one three-hour laboratory period or one two-hour laboratory period with one hour of outside preparation involving a total of three clock hours per week throughout the semester.

2. A student may not register for or earn more than twenty credits in any semester, except upon the prior written approval of his academic dean.

3. CREDIT FOR LESS THAN ONE YEAR'S WORK.—In courses marked "n" (e.g., SS.15n) no credit is given for the first course until a more advanced or related course is completed.

\* See Calendars Pages 2-3 for date.

**4. ADVANCED CREDIT.**

a. *On Credentials.*—Advanced credits are given for work done in accredited higher institutions in accordance with the regulations on page 48.

b. *By Advanced Standing Examination.*—See Sec. H-3 page 57.

5. **REVIEW COURSES.**—Students will not receive credit for courses taken in review.

6. Students will not receive credit for courses completed which are prerequisites for courses for which they have already received credit.

**E. GRADES**

1. Grades for undergraduates are reported as "A", (90-100) superior; "B", (80-89) high; "C", (70-79) average; "D", (60-69) barely passing; "F", (below 60) failure; "P", passed without defining grade (in certain courses only); "Inc.", incomplete work of passing grade, but for acceptable reason not quite completed; "W", withdrawal by permission before a definite record is established or while the student is doing passing work; and "WF", withdrawal by permission while the student is doing failing work. A grade of "F" is reported when a student merely stops attending classes without permission. (See Regulation C-1); "E", condition, is used at midsemester only and usually indicates a grade between 50 and 60.

In the case of graduate students registered in courses numbered above 200, grades of A, B, C, P, or F may be reported. The grade of P (passed) may be reported in place of "A", (90-100); or "B", (80-89) only.

2. A grade of "F" denotes that the work of a student in a given subject is of such poor quality that credit may be obtained only by repeating and passing the course.

3 Except in case of clerical error, a grade which has once been turned into the Registrar's office may not be changed.

4. In computation of scholastic averages the following scale of grade points shall be used: "A" equals 4; "B" equals 3; "C" equals 2; "D" equals 1; and "F" equals 0. Grade points are not given for correspondence, extension, advanced standing examination, Religious Education, required physical education activity or organized music courses.

5. A student who has received a grade below "C" in a given course may repeat that course once in residence to raise his grade, provided he has not in the meantime completed a more advanced course for which the first course is a prerequisite. When a course is thus repeated, the first grade remains on the record, but the second grade only is counted in computing the student's grade points. Courses in which "D's" or "F's" have been received in other institutions may be repeated for the purpose of raising grades only in the same institutions or at the University of Idaho. If such courses are originally taken at the University of Idaho they can only be repeated at the University of Idaho to raise grade points. This regulation is effective for all such repeated courses taken after February 4, 1957.

6. Midsemester as well as semester grades are filed in the Registrar's office. Semester grades of freshmen are reported to their parents for their first semester in residence at the University. Grades of freshmen are reported to their high schools for the first semester of each academic year.

7. Students will be furnished unofficial copies of their complete University records at the end of each academic year if they report to the Registrar's office before June 10 and address an envelope to their summer address.

## F. INCOMPLETES

1. GRADES OF "INC."—An incomplete is given at the end of the semester only in case the student has been in attendance and done satisfactory work to a time within three weeks of the close of the semester, i.e., the end of the examination period, or within one week of the close of the Summer School. It may not be given in the case of withdrawal from the University unless the withdrawal occurs within the last three weeks of the semester. If a final grade of "Inc." is given, the instructor shall indicate in writing on the class card what the student must do to remove the deficiency.

2. REMOVAL OF INCOMPLETES.—Incompletes should be removed within three weeks\* after the beginning of the semester or summer session in which the student next returns to the University. Incompletes not made up before that date automatically become failures unless the student has previously filed in the Registrar's office a "Permit for Extension of Time" card, signed by his dean and the instructor concerned. In case an extension is granted, incompletes not made up before the expiration of the extension automatically become failures. It is the student's responsibility to see that incompletes are made up before the expiration dates. Unless special action is taken in advance, reregistration in a course for which "Inc." has been filed automatically changes the "Inc." to an "F."

A student allowed to register pending removal of incompletes is not entitled to an extension of time.

## G. WITHDRAWAL FROM THE UNIVERSITY

A student who wishes to withdraw from the University obtains an indefinite leave of absence from his dean and files it in the Registrar's office. He then receives a "W" in courses in which he is passing and an "WF" in all courses in which he is deficient. (See Refund of Fees, page 22.)

## H. EXAMINATIONS

1. REGULAR FINAL EXAMINATIONS.—In all undergraduate courses regular final examinations are held at the end of each semester in accordance with the schedule approved by the Interim Committee. An instructor giving a course for which a final examination is not an appropriate test of the work covered may dispense with such examination upon securing the written consent of the head of his department and the dean concerned.

A student who absents himself from a regular or senior final examination without valid excuse receives an "F". If the excuse is valid, and the work of the semester satisfactory, the student receives an "Inc." Final grades for each course must be filed in the Registrar's office within 72 hours after the final examination.

A student who must be absent from a regular final examination shall present in advance to the instructor concerned written permission from his dean to be absent.

2. SPECIAL FINAL EXAMINATIONS.—A student, absent from a regular final examination, by permission of his dean (through sickness or other unavoidable cause), may take a special final examination. He shall satisfy his academic dean as to his reasons for absence. His academic dean will then inform the instructor concerned in writing that the student has permission to take a special final examination. (This does not pertain to early final examinations.)

3. ADVANCED STANDING EXAMINATIONS. — Examinations for advanced credit courses offered by the University but covering work done in non-  
\* See Calendars Pages 2-3 for date.

accredited institutions, private study, or technical employment may be given to resident students registered as candidates for a degree from the University of Idaho under approved regulations on Admissions and Advanced Credit. He must secure the approval of his academic dean and the instructor in charge of the course in which he wishes to take the examination. Complete regulations governing these examinations are printed on the application blanks. Advanced standing examinations may not be taken during the student's last semester in residence. Fees are listed in the special fee section of the catalog, page 21.

### I. MAJOR STUDIES

An undergraduate major consists of 16 to 20 credits of advanced work in one department (courses numbered above 100 except when specifically noted in the departmental statements).

### J. GENERAL UNIVERSITY REQUIREMENTS FOR DEGREES

In addition to the general and specific requirements of his curriculum, as expressed in terms of definite courses and group requirements in subject fields, a candidate for a baccalaureate degree must have met the following general University requirements.

1. *Residence Requirements.*—A candidate must do work of his senior year in residence in the division in which he graduates. In the case of the four-year curricula a year's work is interpreted as one-fourth of the total requirements for the degree sought. \*(In the College of Law 26 semester hours and in the College of Forestry 35 semester hours constitute the senior year's work.)

If, after the fulfillment of the minimum residence requirements, as state above, the candidate finds that he lacks eight or less credits for his degree, these may be made up by non-resident courses or at another institution. (See Regulation J-6.) However students in the combined curricula of Letters and Science and Law and Business must also do the work of the junior year in the College of Letters and Science or the School of Business Administration as the case may be.

In a pre-professional curriculum, for which the required professional courses are not offered at the University of Idaho, the work of the junior year must be done in residence at the University of Idaho.

2. *Subject requirements.*—

- a. English Composition, six credits.
- b. A Military Science. For men, four semesters to be taken during the freshman and sophomore years. See Reserve Officers Training Corps section. (Part V.)
- c. Physical Education.

†For men—one activity course each semester during the freshman and sophomore years.

†For women—one activity course each semester during the freshman and sophomore years. Two credits in Healthful Living, normally to be taken during the freshman year except where specific curricula specify other courses.

Transfer students must meet the requirements of the University of

\* By interpretation of the Administrative Council residence in combined B.A. and Law and Business and Law may be counted in either or both divisions.

† See Physical Education courses in Part V for courses which fulfill this requirement.

Idaho with respect to military science and physical education unless they have completed the requirements of the schools previously attended.

3. *Grade Requirements.*—A grade average of 2.00 in all courses for which the student was enrolled in residence in this or any other institution is required of all candidates for baccalaureate degrees. An exception is made in case a student receives a grade below "C" in a given course and later repeats that course once in residence in which case the first grade remains on record but the second grade only is counted in computing the student's grade point average for graduation. This regulation is effective for all courses repeated after February 2, 1948. Students repeating courses should check with the Registrar for the Administrative Council interpretation of this regulation.

4. *Requirements in Advanced Courses.*—A candidate must present a minimum of 36 semester credits of work in courses numbered above 100.

5. *Credit Limitations.*—A candidate may count toward a degree no more than:

(b) 8 credits in non-sectarian courses in Religious Education, or,

(a) 8 credits in Organized Music.

(c) 32 credits in non-resident, (correspondence and extension courses) if such courses are permitted by the college concerned.

6. *Application for Degrees.*—A candidate for a degree must, at the beginning of his last semester or summer session in residence, file a petition to be admitted as a candidate and must pay the diploma fee of \$5. Final dates for filing applications for degrees are February 20 for undergraduate degrees and March 1 for graduate degrees. If applications are received in the Registrar's office after these dates, there is a penalty fee of \$5.00 if the student wishes to receive his degree with the next graduating class. No applications will be received within the last few weeks preceding commencement. (The Bachelor of Laws diploma fee is \$7.50.)

7. *Catalog Issue for Checking Graduation Requirements.*—A Candidate, having received a class designation upon admission to the University, must fulfill all of the requirements stated in the catalog issue for that class. When curriculum and catalog changes occur during the interval between his admission and graduation his academic dean may approve the appropriate catalog whose requirements he must fulfill. Only catalogs in effect during this interval may be so approved.

8. *Second Baccalaureate Degree.*—A student may qualify to receive a second baccalaureate degree by completing an additional academic year of study and meeting university requirements for that degree. A student who has not completed all requirements for a first baccalaureate degree in a regular four-year curriculum may qualify to receive two baccalaureate degrees by completing an additional year of study and meeting university requirements for the respective degrees. An academic year is defined as one fourth of the total credit requirements for the respective degree.

9. *Advanced and Professional Degrees.*—For the specific requirements for these degrees see the Graduate School section page 137.

## K. HONORS

Since 1907 a system of honors has been in effect in the University except in the Graduate School. High honors are calculated on the student's entire record but are granted only to those who have completed a minimum

of their last two years of work in residence at the University of Idaho, except for students in the College of Law, where honors are based on grades in law courses only. High honors are given to those attaining an average of 3.33 or over. (For Honor Students, see Part VII.)

#### L. SCHOLASTIC PROBATION AND WARNINGS

1. **SCHOLASTIC PROBATION.**—Scholastic Probation is the condition of a student who is permitted under special restrictions to be in residence in the University after failing to meet certain scholastic requirements according to Regulation M, Eligibility to Reregister.

2. **SPECIAL WARNING.**—Instructors are expected to send written warnings for all students who are doing unsatisfactory work or who have excess absences. These warnings should also include one of the following notations:

- a. Student should be notified of this warning.
- b. Student should confer with his dean (or adviser).  
These warnings are routed through the Registrar's Office to the student's dean. In cases where the student should confer with his dean or adviser, the result of the conference is to be reported to the instructor concerned.

#### M. ELIGIBILITY TO REREGISTER

1. Any undergraduate student not making satisfactory progress toward graduation requirements (cumulative gradepoint average of 2.00 or better) is subject to probation or disqualification.

2. A student goes on probation automatically for the first semester he is more than 12 gradepoints deficient from a cumulative 2.0 gradepoint average. If he brings his cumulative gradepoint average within 12 gradepoints of a 2.0 average by the end of any semester he goes off probation automatically.

3. If a student fails to achieve the required cumulative gradepoint average by the end of the semester of probation he receives his first disqualification.

4. If a student passes in less than 10 credits and concurrently fails in more than one course he is disqualified at the end of the semester in which this failure occurs.

5. After any first disqualification a student may be reinstated by one of the following methods.

- a. If he secures his Dean's approval for immediate reinstatement.
- b. If he registers after the lapse of at least one semester.

6. After any second disqualification a student may be readmitted only by petition to and favorable action by the Administration Council.

7. Once a student has been on probation (see No. 2) or has been disqualified once (see No. 3) any subsequent failure to meet the above academic requirements will result in disqualification even though in the meantime he might have removed himself from probation or disqualification by satisfactory work.

8. A student who has been readmitted after a first disqualification may continue to be readmitted without additional disqualifications, with the approval

of his Dean, as long as he attains a 2.0 or better average, or reduces the number of gradepoints he is deficient, for each semester following the first disqualification, even though his accumulative average may be more than 12 gradepoints deficient from a cumulative 2.0 gradepoint average.

9. This regulation does not apply to the College of Law. See page 101 for requirement for registration in the College of Law.

#### **N. ELIGIBILITY FOR EXTRACURRICULAR ACTIVITIES**

1. In order to be eligible to represent the University of Idaho or any student organization in any extracurricular activity (excepting athletics) a student must:

- a. Not be suspended or expelled from the University or be on academic or conduct probation.
- b. Be currently enrolled as a regular student in good standing, carrying at least 12 semester credits.
- c. Have completed at least 12 semester hours of work with at least a 2.00 GPA during his last previous semester at the University.
- d. Must have a cumulative GPA of at least 2.00.
- e. A student must appeal exceptions to the Administrative Council.
- f. Cumulative averages will be calculated on the basis of the procedure followed in allowing for repeated courses.

2. No student may accept an elective or appointive office in any extracurricular or organization activity until he has a certificate of eligibility from the Office of Student Affairs. A student is automatically removed from any such office when he becomes ineligible for this certificate.

3. Before a student may represent the University of Idaho in intercollegiate athletics, he must comply with the eligibility regulations adopted by the Regents of the university in the spring of 1959 or of any conference with which the university by be affiliated.

4. These recommendations regarding eligibility for extracurricular activities will go into effect starting the 1958-59 school year.

#### **O. ATTENDANCE**

1. **GENERAL ATTENDANCE.**—Students are responsible for their attendance in the courses in which they are enrolled. Regular class attendance is expected. Excessive absences are reported through the Registrar's office to the dean of the college in which the student is registered.

2. **CONCERTED ABSENCES.**—Students who participate in any unauthorized, concerted action to absent themselves from class shall have their final grade reduced 10 points in each course affected by such absence.

3. **ABSENCES DUE TO ACTIVITIES.**—All excuses from classes for students participating in extracurricular activities must be approved by the Administrative Council in advance. No student may be absent from the campus in connection with extracurricular activities more than 16 instructional days a semester. No one extracurricular activity may take students away from the campus more than 12 instructional days in any one academic year.

#### **P. CLASS RATING**

The following table is used in determining the class rating of students in the several divisions of the University:

DIVISION:	CREDITS REQUIRED FOR:			
	Graduation	Senior Standing	Junior Standing	Sophomore Standing
Letters and Science .....	128	90	58	26
Agriculture .....	142	100	65	29
(Freshmen beginning Sept. 1952) .....	136	96	62	28
Engineering .....	145	103	66	30
Agricultural Engineering ...	145	103	66	30
*Law: 2 years Pre-legal .....	146	113	86	64
3 years Pre-Legal .....	178	145	18	96
Comb. Curr. (Arts & Law —Bus. & Law) .....	182	149	122	100
Mines—(Min., Met. and Geol. Engr.) .....	144	102	66	30
(Geog., Geol.) .....	135	96	62	28
Forestry .....	151	100	64	29
Education .....	128	90	58	26
Business .....	128	90	58	26

\* For student extracurricular activities, students in the School of Law with two years of pre-legal work will be classed as seniors after they attain 86 semester hours credit. Those with three years of pre-legal work and in combined curricula will be classed as seniors after they attain 96 semester hours credit.

Students enrolled and classified during the first semester are not reclassified at the beginning of the second semester.

#### Q. FIELD TRIPS

Students registered for courses in which field trips are announced in the catalog are required to participate in the field trips, which are considered to be an integral part of the course. Costs involved are part of the educational expense which students are expected to bear.

All field trips must be completed two weeks before the beginning of the scheduled final examination period.

#### R. MISCELLANEOUS

1. **CLASSROOM USE.**—All meetings to be held in classrooms should be cleared with the Registrar's office to avoid conflicts. Student organizations should have faculty sponsors approve the use of classrooms.

2. **MINIMUM NUMBER OF STUDENTS FOR WHICH AN UNDERGRADUATE COURSE MAY BE GIVEN.**—It shall be the policy of the University that undergraduate classes in which less than five students register shall not be offered; except that this policy shall not be applied to undergraduate research project, special problem, senior thesis, Music courses 23-24, 33-34, 43-44, 57-58, 67-68, and 167-168, and courses required for graduation by one or more of those enrolled. This rule may be waived as to any particular course by the Administrative Council.

3. **MILITARY SCIENCE REQUIREMENT.**—Four hours a week are required of all able-bodied citizen male students in the freshman and sophomore classes, and of those who are special students.

4. **STUDENT EVENTS.**—A petition to the Calendar Committee is required in order for any student group or organization to receive approval for events planned by such groups or organizations. Such petitions are to be filed in the Office of Student Affairs at least two weeks prior to the event.

5. **SOCIAL ORGANIZATIONS.**—Student organizations, including fraternities, sororities, and clubs, are under the supervision of the Director of Stu-



dent Affairs with the aid of Student Faculty Council. In order to receive permission to form such an organization or to petition for a charter from a national organization, it is necessary first to petition the Director.

6. **AUDITING OF ACCOUNTS.**—All funds for public purposes within the University (except those of fraternities, sororities, and boarding house organizations) which are contributed to or collected by any students or member of the faculty shall be deposited with the University bursar, subject to withdrawal upon the written approval of the president, or of the bursar in the president's absence, and an accounting of all receipts and expenditures in these funds shall be made by those responsible for their collection immediately after they shall have been disbursed, this accounting to be audited by the bursar.

7. **CONDUCT.**—Students are held responsible for any breach of the recognized rules of conduct. It is the University's attitude that regardless of where they occur, the actions of any currently enrolled student are a matter of University concern. Disciplinary action for misconduct shall be in accordance with the University Charter and Regents' By-Laws. Penalties may include (1) admonition, (2) censure, (3) conduct probation, (4) suspension, (5) expulsion, (6) payment of damages and (7) fines. Notation of penalty shall be placed on a student's permanent record only when specifically ordered, except that notations as to suspensions or expulsion are mandatory. While on conduct probation or under suspension, a student is not eligible to represent the University or any student organization in any extracurricular activity.

Students have the right of appeal to the Discipline Committee for review of any penalty assessed by administrative action. Similarly, they have the right of appeal through the administration to the Regents for review of any penalty assessed upon recommendation of the Discipline Committee.

8. **LIQUOR.**—The University does not sanction the use or serving of any alcoholic beverages by students. Users are subject to strict accountability for any breach of law or propriety including such disciplinary action as may be ordered as a result of any breach. Persons who take alcoholic beverages into University buildings do so in violation of University policy. Any such violations shall be subject to disciplinary action.

9. **AUTOMOBILES.**—A car is *not* necessary for single students attending the University of Idaho unless the student is in poor health or has a physical handicap. Those who operate cars do so subject to strict observance of traffic rules and regulations. Each student owning and/or operating a vehicle on the campus or in Moscow is required to register this vehicle at the time of regular registration in the fall and spring of each year. If, at any time during the school year a student sells his vehicle, acquires a new one, or secures a new license number, it is his responsibility to file such information with the Office of Automobile Registration in Room 102, University Hut, within one week following the transaction. Failure to comply with campus parking and traffic rules will make a student subject to loss of the privileges of operating a car on the University campus and to such other disciplinary action as may be ordered.

10. **SMOKING.**—It is the policy of the University, in the interest of safety, that smoking in University buildings be restricted to designated places.

It is an order of the Regents that in all institutions under the jurisdiction of the State Board of Education and Board of Regents, smoking be limited to places and areas designated by institutional authorities, provided that smoking be prohibited in all student classrooms, laboratories, and corridors.

11. **DEFINITION OF THE TERM CAMPUS.**—The area to be defined by the word "Campus" is that area between the Northern Pacific Railroad right-of-way and Taylor Avenue west of Main Street.

12. **STUDENT ACTIVITY ADMISSION CHARGES.**—Student organizations not sponsored by the A.S.U.I. may charge a maximum fee of 50 cents for any program or activity other than dances. All money from sale of tickets or admissions shall be handled by the A.S.U.I. General Manager's Office, and that office shall be responsible for seeing that Federal taxes are paid.

13. **HOUSING.**—The University establishes such rules and procedures as may be necessary and appropriate to promote and assure acceptable living arrangements for all students living either on or off the campus.

14. **HOUSING OF UNDERGRADUATE WOMEN STUDENTS.**—Single undergraduate women students whose homes are not in Moscow are required to live in University residence halls or sororities at all times they are registered in the University, including summer school, unless expressly permitted in writing by the Associate Director of Student Affairs for Women to live in private homes in Moscow.

# Part III

## The University Colleges and Graduate School with Their Curricula

### College of Letters and Science

**Art and Architecture**  
 Architecture (B.Arch.)  
 General Art  
 Commercial Art  
 Interior Architecture and  
 Decoration

**Biological Sciences**  
 Bacteriology<sup>1</sup>  
 Bacteriology (Medical  
 Technology Option)  
 Biology  
 Botany  
 Pre-Physical Therapy  
 Zoology

**Communications**  
 Audio-Visual Aids  
 Journalism  
 Radio-TV

**Home Economics**  
 General  
 Food and Nutrition  
 Pre-Nursing Studies

**Humanities**  
 Dramatics  
 English  
 Languages  
 French  
 German  
 Greek  
 Italian  
 Latin  
 Russian  
 Spanish  
 Speech

**Mathematics**

**Music (B.A. and B.M.)**

**Physical Sciences**  
 Chemistry  
 Chemistry (Technical  
 Literature Option)  
 Geology<sup>2</sup>  
 Physics  
 Pre-Dental Studies  
 Pre-Medical Studies

**Social Sciences**  
 Economics<sup>3</sup>  
 History  
 Law (Combined B.A. and  
 LL.B.)<sup>4</sup>  
 Philosophy  
 Political Science  
 Public Administration  
 Psychology<sup>5</sup>  
 Sociology  
 Anthropology

<sup>1</sup> The College of Letters and Science offers a major in this field but the courses and teaching staff are under the College of Agriculture.

<sup>2</sup> The College of Letters and Science offers a major in geology, but the courses and teaching staff are under the College of Mines.

<sup>3</sup> The College of Letters and Science offers a major in economics but the courses and teaching staff are under the College of Business Administration.

<sup>4</sup> During the fourth, fifth, and sixth years, the student takes courses in the College of Law.

<sup>5</sup> The College of Letters and Science offers a major in psychology but the courses and teaching staff are under the College of Education.

BOYD A. MARTIN, Ph.D. .... *Dean of the College*  
 EARL J. LARRISON, M.S. .... *Secretary of the College Faculty*

**T**HE COLLEGE of Letters and Science is the oldest division of the University, having been established in 1900. Its aim is to provide opportunities for a liberal education, as well as for specialization in many fields, such as languages, literature, social sciences, natural sciences, and fine arts.

DEPARTMENTS.—The academic departments in this division include Art and Architecture, Biological Sciences, Communications, Home Economics, Humanities, Mathematics, Music, Physical Sciences, and Social Sciences.

DEGREES.—Curricula are offered in the College of Letters and Science leading to the degrees of Bachelor of Arts, B.A.; Bachelor of Science, B.S.; Bachelor of Science in Home Economics, B.S.(H.Ec.); Bachelor of Science in Pre-Medical Studies, B.S.(Pre-Med.); Bachelor of Architecture, B.Arch.; Bachelor of Music, B.M.; Bachelor of Naval Science, B.N.S.; and Bachelor of Science in Pre-Nursing Studies, B.S.(Pre-Nurs.).

GRADUATE STUDY.—Students who intend to work toward advanced degrees must fulfill the requirements of the Graduate School (see page 137) and of the department in which they intend to study.

Graduate study leading to the master's degree is available in the fields of art, architecture, bacteriology, botany, chemistry, economics, English, French, geology, German, history, home economics, mathematics, music, philosophy, physics, political science, psychology, sociology, Spanish, and zoology.

Graduate study leading to the degree of Doctor of Philosophy is available in the fields of botany, chemistry, history, mathematics, political science, and zoology.

CURRICULA.—Majors are offered in Architecture (Structural Option, Design Option), General Art, Commercial Art, Interior Architecture and Decoration, Bacteriology, Bacteriology (Medical Technology Option), Botany, Chemistry, Chemistry (Technical Literature Option), Dramatics, Economics, English, French, Geology, German, History, Home Economics (General), Home Economics (Food and Nutrition), Journalism, Latin, Mathematics, Applied Mathematics, Music, Philosophy, Physics, Political Science, Pre-Medical Studies, Pre-Nursing Studies (General), Pre-Physical Therapy, Psychology, Radio-TV, Sociology, Spanish, Speech, and Zoology.

SPECIAL CURRICULA.—Special curricula are offered in Anthropology, Pre-Dental Studies, Pre-Legal Studies, and Public Administration.

HONORS.—The College of Letters and Science offers an Honors Program to superior students intended primarily to provide more advanced and more individual training than normally available to undergraduates. Those successfully completing the requirements of this program are awarded special recognition upon graduation.

HONORS PROGRAM.—The Honors Program consists of two courses, Honors I and II. Students are admitted to Honors courses only by invitation of the Honors Committee. Admission to the program will normally be at the beginning of the junior year. Students are encouraged to make their interests in Honors known to their instructors. Instructors are expected to recommend candidates for the Honors Programs to the Honors Committee. It is stressed that the Honors Program is highly selective and completely voluntary.

Honors work consists of a directed program of study offered by the various departments individually or collectively. The work offered by the participating departments is approved in consultation with the Honors Committee.

The Honors Committee is responsible for continuous supervision of the Honors Program and of the work of individual honors students and makes the final decision as to the awarding of honors at graduation.

NON-DEGREE PROGRAM.—The College of Letters and Science offers a Non-Degree Program in which each student's course of study is worked out to meet his special needs. The program is intended primarily for students (1) who do not plan to obtain degrees at the University of Idaho, (2) who plan to transfer to other institutions, and (3) whose objectives are not pro-

vided for by any of the established curricula in the College of Letters and Science. Characteristic examples of these students are those who plan to become pharmacists, optometrists, dental technicians, or dental hygienists.

**ADMISSION.**—For a statement of general admission requirements, see Part II of the catalog. Graduates of a four-year accredited high school ordinarily are eligible for admission to the College of Letters and Science.

**BUREAU OF PUBLIC AFFAIRS RESEARCH** — The Bureau of Public Affairs Research is a unit of the Department of Social Sciences which conducts advanced research studies in public affairs and administration and provides research and consultative services for state and local agencies.

**A. GENERAL REQUIREMENTS FOR GRADUATION.**—(Old plan. See B, below). The general requirements of the College of Letters and Science for the Bachelor of Arts and Bachelor of Science degrees, which should be completed by the end of the sophomore year, include the following:

1. English—6 credits, English Composition.
2. Science—8 credits.  
The science group includes Bacteriology, Biology, Botany, Chemistry, Geography, Geology, Mathematics, Physics, Psychology, and Zoology.
3. Social Science—6 credits.  
The social science group includes Economics, History, Philosophy, Political Science, and Sociology.
4. Foreign Language—8 credits.  
The language group includes French, German, Greek, Italian, Latin, Russian, and Spanish. One full year of the same language is required.
5. Military Science and Physical Education—  
Men—Four semesters Military and 2 credits P.E.  
Women—6 credits P.E.

(See general University requirements, page 58.)

Each student must select a major subject (curriculum) not later than the beginning of his junior year. The major requirements usually include twenty or more semester credits in courses numbered above 100, and generally about the same number of credits in 100's courses in related fields. The departmental requirements are stated under the respective curricula.

A total of 128 semester credits is required for a degree except as otherwise stated. Thirty-six semester credits must be taken in courses numbered above 100.

**B. GENERAL REQUIREMENTS FOR GRADUATION (NEW PLAN).**—These requirements shall become effective for entering freshmen in 1959-60, shall apply in 1960-61 to freshmen and sophomores, in 1961-62 to freshmen, sophomores, and juniors, in 1962-63 to students in all classes. These requirements need not be completed by the end of the sophomore year. The general requirements for graduation are waived in the area of the major. Each student must select a major subject (curriculum) not later than the beginning of the junior year. The major requirements usually include twenty or more semester credits in courses numbered above 100, and generally about the same number of credits in related fields. The departmental requirements are stated under the respective curricula.

A total of 128 semester credits is required for a degree, except as otherwise specified for particular curricula. Thirty-six semester credits must be taken in courses numbered above 100.

1. English—6 credits, English Composition.
2. Humanities—7-9 credits.  
History of, or appreciation of, Art, Architecture, Drama, Literature, Music.
3. Science—12 credits, to be taken in two or more of the following fields: Bacteriology, Biology, Botany, Chemistry, Geology, Mathematics, Physics, and Zoology.
4. Social Science—7-9 credits, to be taken in two or more of the following fields with at least 6 credits from the first five fields:  
Economics, History, Philosophy, Political Science, Sociology, Geography (except Geog. 3, 101, 110), and Psychology (except Psych. 1, 55-56, 75-76, 105).
5. Foreign Language—0-16 credits.  
The basic requirement is proficiency in one foreign language, equivalent to that gained by the completion of four semesters of college courses. This requirement may be satisfied by four high school units of one foreign language. A student with two high school units may fulfill the requirement by completing a second year of the same language in the University. The language group includes French, German, Greek, Italian, Latin, Russian, and Spanish.
6. A Military Science—For men—four semesters to be taken during the freshman and sophomore years. (See Reserve Officers Training Corps Section in Part V.)
7. Physical Education.  
For men—one activity course each semester during the freshman and sophomore years. (See Physical Education Courses Part V.)  
For women—one activity course each semester during the freshman and sophomore years. Two credits in Healthful Living, normally to be taken during the freshman year except where specific curricula specify other courses.

**CERTIFICATION OF TEACHERS.**—Students in this college intending to enter the teaching profession must meet requirements for certification. In order that they may have fulfilled the certification requirements at the time of graduation, such students should declare their intention as early as possible. In working for the teaching certificate students may expect to take credits in addition to the 128 minimum.

(Note: Registrants for student teaching should assure themselves through consulting their advisors or the state teacher certification officials that they are registering for sufficient credits to meet state certification requirements. These requirements change from time to time and from state to state.)

## Curricula

### ARCHITECTURE (B.ARCH.)

REQUIRED		Credits	Course	Credits
Art	1-2	Drawing I .....	Art 63-64	Design II .....
Arch.	11-12	Elements of Arch. ....	Art 161-162	Pro-Seminar .....
Arch.	13	Shades and Shadows .....	Arch. 131-132	Bldg. Constr. II .....
Arch.	14	Arch. Perspective .....	Arch. 135	Constr. Prob. ....
Arch.	53-54	Arch. Design I .....	Arch. 136	Mech. Plants of Bldgs. ....
Arch.	55-56	Bldg. Construction I .....	Physics	3
Arch.	57-58	Arch. History .....		Gen. Physics .....
Arch.	115-116	Arch. Design II .....		
Arch.	117-118	Arch. Design III .....		
Arch.	165-166	Thesis .....		
Arch.	167-168	Office Practice .....		
C.E.	51	Surveying .....		
Math.	1-2	Fundamentals of Math. ....		
		or		
Math.	11-12	Elem. Math. Analysis .....		
		and		
		one of the following options:		
		<b>A. STRUCTURAL</b>		
E.S.	66	Mechanics (Statics) .....	Art 61-62	Painting I .....
E.S.	103	Mechanics of Materials ....	Art 101-102	Water Color .....
C.E.	120	Theory of Structures .....	Bus. 165-166	Bus. Law .....
Arch.	136	Mech. Plants of Bldgs. ....	C.E.	153
Math.	51-52	Calculus .....	C.E.	154
Physics	51	Engr. Physics .....		Contracts and Specif. ....

Candidates for the degree Bachelor of Architecture will complete 144 credits including the above requirements. They will complete all the requirements for the B.S. degree page 67, with the exception of foreign languages, and in addition 9-12 credits of approved related course work outside the department.

### GENERAL ART

(For general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED		Credits	Course	Credits
Art	1-2	Drawing I .....	Art 123-124	Composition .....
		or	Art 129-130	History of Painting .....
Art	5-6	Life Drawing .....		
		and		
Art	3-4	Design I .....		Select three from the following four:
Art	41-42	Art Appreciation .....	Art 101-102	Water Color .....
Art	75-76	Drawing II .....	Art 107-108	Painting II .....
Art	63-64	Design II .....	Art 127-128	Drawing III .....
			Art 141-142	Painting III .....

### COMMERCIAL ART

(For general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED		Credits	Course	Credits
Art	1-2	Drawing I .....	Art 121-122	Commercial Design I .....
Art	3-4	Design I .....	Art 123-124	Composition .....
Art	41-42	Art Appreciation .....	Art 147-148	Commercial Design II .....
Art	63-64	Design II .....		
Art	75-76	Drawing II .....		
Art	101-102	Water Color .....		
Art	107-108	Painting II .....		
				<b>SUGGESTED ELECTIVES</b>
			Art 81	Photography .....
			Bus. 175	Prin. of Adv. ....
			Bus. 176	Retail Adv. ....

## INTERIOR ARCHITECTURE AND DECORATION

(For general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED			Course		Credits	
Course						
Art	1-2	Drawing I .....	Art	129-130	History of Painting .....	4
		or	Art	145-146	Interior Archit'l Design .....	8
Art	5-6	Life Drawing .....	Arch.	11-12	Elements of Architecture ...	4
		and	Arch.	53-54	Arch. Design I .....	6
Art	3-4	Design I .....	H.Ec.	144	Advanced Home Furnishings	2
Art	41-42	Art Appreciation .....	<b>SUGGESTED ELECTIVES</b>			
Art	63-64	Design II .....	Art	101-102	Water Color .....	4
Art	75-76	Drawing II .....	H.Ec.	23	Textiles .....	3
Art	107-108	Painting II .....				

## BACTERIOLOGY

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED			Course		Credits	
Course						
Bact.	51	General Bacteriology .....	Chem.	51	Qualitative and Gravimetric Analysis .....	4
Bact.	102	Food & Applied Microbiol... 4	Chem.	52	Quantitative Analysis .....	4
Bact.	104	Pathogenic Bacteriology .....	Chem.	171-172	Organic Chemistry .....	8
Bact.	106	Dairy Bacteriology .....	Phys.	3-4	General Physics .....	8
Bact.	109	Immunology and Serology ..	Women students enrolled in this curriculum need not take P.E. 1, Healthful Living.			
Bact.	111-112	Bacteriological Literature ..	<b>ELECTIVES</b>			
Bact.	114	Clinical Lab. Methods .....	A wide choice of electives may be exercised in consultation with the head of the department.			
Chem.	1-2	General Chemistry .....				

## BACTERIOLOGY (MEDICAL TECHNOLOGY OPTION) †

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED			Course		Credits	
Course						
Bact.	51	General Bacteriology .....	Chem.	75	Carbon Compounds .....	8
Bact.	102	Food & Applied Microbiol... 4	Eng.	115	Technical Writing .....	3
Bact.	104	Pathogenic Bacteriology .....	Zool.	1	General Zoology .....	4
Bact.	109	Immunology and Serology ..	Zool.	118	Parasitology .....	3
Bact.	111-112	Bacteriological Literature ..	Women students enrolled in this curriculum need not take P.E. 1, Healthful Living.			
Bact.	114	Clinical Lab. Methods .....	<b>ELECTIVES</b>			
Chem.	1-2	General Chemistry .....	A wide choice of electives may be exercised in consultation with the head of the department.			
Chem.	51	Qualitative and Gravimetric Analysis .....				
Chem.	52	Quantitative Analysis .....				

† OPTION I: Twelve months' hospital training in an approved school of medical technology is required to qualify for registration with the American Society of Clinical Pathologists. A maximum of 32 semester credit can be obtained, following the junior year, for the satisfactory completion of this work in hospitals affiliated with the University of Idaho. Under this plan the student becomes a candidate for the B.S. degree when the internship is completed. Hospitals now affiliated with the University include St. Luke's in Boise and the Deaconess and St. Luke's in Spokane, Washington. Students electing Option I must consult the head of the Department of Bacteriology before the end of their freshman year.

† OPTION II: Those students, who wish to receive the B.S. Degree before entering hospital training may do so by completing 32 credits during the senior year in courses approved by the head of the Department of Bacteriology.



## BOTANY

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED			ELECTIVES				
Course		Credits	Course		Credits		
Bot.	1-2	General Botany .....	8	Bot.	101	Plant Physiology .....	3
		or		Bot.	103	Plant Anatomy .....	4
Bot.	2	General Botany .....	4	Bot.	104	Microtechnique .....	3
		and		Bot.	107	Agrostology .....	3
Bot.	3	Principles of Botany .....	4	Bot.	111	Mycology .....	4
Bot.	53	Systematic Botany .....	4	Bot.	117	Morphology of Angiosperms	3
Bot.	102	Plant Physiology .....	4	Bot.	119	Phycology .....	4
Bot.	105	Plant Ecology .....	3	Bot.	121-122	Plant Morphology .....	8
Chem.	1-2	General Chemistry .....	8	Bot.	128	Plant Cytology .....	3
Zool.	1	General Zoology .....	4				
Zool.	58	Genetics .....	3				

Twenty credits of botany courses numbered above 100.

(Electives must include at least two of the courses listed above.)

## CHEMISTRY

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED			ELECTIVES				
Course		Credits	Course		Credits		
Chem.	1-2	General Chemistry .....	8	Chem.171-172	Organic Chemistry .....	8	
Chem.	51-52	Qualitative and Quantitative Analysis .....	8	Chem.	175	Qualitative Organic .....	3
Chem.105-106		Physical Chemistry .....	8	Math.	11-12	Elementary Mathematical Analysis .....	10
Chem.	109	Pro-Seminar .....	1	Math.	51-52	Calculus .....	8
Chem.	154	Instrumental Analysis .....	3	Phys.	51-52	Engineering Physics .....	10
				Phys.	3-4	General Physics .....	8

## ELECTIVES

The choice of electives must receive the approval of the head of the department.

## CHEMISTRY (Technical Literature Option)

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED			ELECTIVES				
Course		Credits	Course		Credits		
Chem.	1-2	General Chemistry .....	8	French	1-2	Elementary French .....	8
Chem.	51-52	Qualitative and Quantitative Analysis .....	8	German	1-2	Elementary German .....	8
Chem.105-106		Physical Chemistry .....	8	German	51-52	Scientific German .....	6
Chem.	109	Pro-Seminar .....	1	Math.	11-12	Elementary Mathematical Analysis .....	10
Chem.171-172		Organic Chemistry .....	8	Math.	51-52	Calculus .....	8
Chem.	192	Thesis .....	2	Phys.	3-4	General Physics .....	8
Eng.	115	Technical Writing .....	3	Phys.	51-52	Engineering Physics .....	10

## ELECTIVES

The choice of electives must receive the approval of the head of the department.

## DRAMATICS

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED			ELECTIVES			
Course		Credits	Course		Credits	
Dram.	5	Interpretation .....	2	Dram.167-168	The Theatre .....	6
Dram.	63-64	Stagecraft .....	6	Dram.171-172	Advanced Play Prod. ....	6-12
Dram.	71-72	Play Production .....	6			
Dram.105-106		Advanced Interpretation ....	4-8			

Twenty credits in related fields, including English 132, Shakespeare, 3 credits.

## ECONOMICS

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED		Credits	Course	Credits	
Bus.	31-32	Principles of Accounting	Bus. 193-194	Business Conditions	6
Bus.	83	Statistics	Bus. 198	Advanced Statistics	3
Math.	1	Fundamentals of Math.	Econ. 109	Public Finance	3
		or	Econ. 141	Labor Economics	3
Math.	11	Elem. Math. Analysis	Econ. 174	International Economics	3
Econ.	51-52	Principles of Economics			
Econ.	103	Money and Banking			
Econ.	152	Intermediate Economic Theory			
Econ.	153	Income and Employment			
		Choice of 12 credits from			
Bus.	168	Government Regulation of Business			

Fifteen credits as follows:

Fifteen credits in the following subjects to be chosen with the approval of the adviser, 9 credits to be in one field: History, Philosophy, Political Science, Sociology, English, Mathematics, and Natural Sciences.

## ENGLISH

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED			One or more courses in great authors:
Six credits selected from the following:			Eng. 131 Chaucer or
Eng. 65	Introduction to Literature		Eng. 132 Shakespeare
Eng. 66	Introduction to Literature		
Eng. 67	Survey of English Literature		One or more period courses in English literature:
Eng. 68	Survey of English Literature		Eng. 163 The Renaissance or
Eng. 75	Modern Literature		Eng. 164 The Eighteenth Century or
Eng. 76	Modern Literature		Eng. 165 The Romantic Period or
			Eng. 166 The Victorian Period
Twenty or more credits in English courses numbered above 120, including the following:			One or more period courses in American literature:
One or more courses in types of literature:			Eng. 175 Survey of American Literature
Eng. 121	The Novel or		or
Eng. 123	The Drama or		Eng. 176 Survey of American Literature
Eng. 124	The Drama or		Twenty credits in related fields.
Eng. 126	Poetry		

## FRENCH

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED		Credits	
Course			Fr. 143-144 The Eighteenth Century
French 13-14	Intermediate French	8	Fr. 145-146 Contemporary Literature
A reading knowledge of another foreign language.			Fr. 161-162 Directed Reading
Twenty additional credits in French, chosen from among the following:			Fr. 181-182 Free Composition and Conversation
Fr. 101-102	Advanced French		Fr. 191-192 French for Teachers
Fr. 121-122	Survey of French Literature		Fr. 195-196 Thesis
Fr. 135-136	The Nineteenth Century		
Fr. 141-142	The Seventeenth Century		

At least 6 credits must be chosen from among Fr. 101-102, Fr. 181-182, or Fr. 191-192.

Twenty credits in related fields, including History 173-174 or History 102-103, and at least 6 credits in upper-division courses in English.

The choice of specific courses in the above groups must receive the approval of the head of the department.

RECOMMENDED PREPARATION: Humanities 1-2 or English 85-86 is recommended as a sophomore course; a second foreign language should, if possible, be begun in the same year.

GEOLOGY

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED			Course			Credits
Course			Course			
Chem.	1-2	General Chemistry .....	Geol.	103	Stratigraphy and Sedimentation .....	3
C.E.	53	Fundamentals of Surveying	Geol.	112	Invertebrate Paleontology ..	3
Engr.	1-2	Engineering Drawing .....	Geol.	121	Structural Geology .....	3
Econ.	51	Principles of Economics ....	Geol.	130	Geological Field Methods ..	1
Geog.	110	Physical Geology .....	Geol.	131	Field Geology .....	3-6
Geol.	11	Cartography .....	Geol.	157	Ore Deposits .....	3
Geol.	14	General Mineralogy .....	Geol.	163	Optical Mineralogy .....	4
Geol.	51	Rock Study .....	Geol.	164	Petrography and Petrology..	4
Geol.	52	Historical Geology .....	Math.	1-2	Fundamentals of Math. ....	8
Geol.	101	Geomorphology .....	Phys.	3-4	General Physics .....	8

*Recommended Preparations:* Advanced Chemistry, or Mathematics, or Physics; Biological Sciences; Met. 101; Min. 101; Geog. 101.

GERMAN

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED					
Course		Credits	Course		
German	13-14	Intermediate German ....	Ger.	121-122	Survey of Ger. Literature
A reading knowledge of another foreign language.			Ger.	135-136	The Nineteenth Century
Twenty additional credits in German, chosen from among the following:			Ger.	137-138	Modern German Literature
Ger.	52	Scientific German	Ger.	141-142	The Eighteenth Century
Ger.	101-102	Advanced German	Ger.	143-144	Goethe
			Ger.	161-162	Directed Reading
			Ger.	191-192	German for Teachers
			Ger.	195-196	Thesis

Twenty credits in related fields, including History 173-174, and at least 6 credits in upper-division courses in English.

The choice of specific courses in the above groups must receive the approval of the head of the department.

*Recommended Preparations:* Humanities 1-2 or English 85-86 is recommended as a sophomore course; a second foreign language should, if possible, be begun in the same year.

HISTORY

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED				
Course		Credits		
Twelve credits from the following:			Twenty credits in History in courses numbered above 100.	
Hist.	3-4	History of Civilization .....	Twenty credits in related fields.	
Hist.	9-10	Introduction to United States History .....	The choice of specific courses in the above groups must receive the approval of the head of the department.	
Hist.	57-58	History of England .....		

*Recommended Preparation:* Choice of at least 6 credits from introductory courses in any two of the following fields: Political Science, Philosophy, Sociology, Economics."

## UNIVERSITY OF IDAHO

## HOME ECONOMICS

## (GENERAL)

REQUIRED		Credits	
Course			
Chem.	7-8	Elements of Chemistry .....	8
Eng.	1-2	English Composition .....	6
H.Ec.	6	Elementary Nutrition .....	2
H.Ec.	8	Introduction to Foods .....	4
H.Ec.	9	Introd. to Home Ec. ....	1
H.Ec.	11-12	Art Structure and Design ...	4
H.Ec.	23	Textiles .....	3
H.Ec.	24	Elementary Clothing .....	2
H.Ec.	65	Costume Design .....	2
H.Ec.	73	Food Prepar. and Serving ..	3
H.Ec.	82	House Construction .....	2
H.Ec.	106	Problems in Nutrition .....	2
H.Ec.	124	Advanced Clothing .....	2
H.Ec.	130	Family Relations .....	2
H.Ec.	135	Child Development .....	3
H.Ec.	141	Home Furnishings .....	2
H.Ec.	146	Home Management Lectures	2
H.Ec.	147	Home Mgt. House Residence	3
P. E.		.....	4
Psych.	1	General Psychology .....	3
Social Studies		.....	6
Soc.	51	Introduction to Sociology ..	3
Soc.	121	The Family .....	3
Zool.	1	General Zoology .....	4
Zool.	6	Physiology .....	3
		+ 8 elective credits in Home Economics, or one of the following options:	

Course	Credits
A. Home Economics Education*	
Ag. Ed. 151	Principles of Voc. Ed. .... 2
Bact. 54	Public Health and Hygiene 3
H.Ec. 152	Meth. in Teach. Hmkg. .... 3
H.Ec. 153	Prob. in Teach. Hmkg. .... 2
H.Ec. 156	Meth. in Adult Hmkg. Ed. 2
H.Ec. 157	Stud. Teach. in Hmkg. Cl. 6-9

\* Additional credits in education to complete Idaho state certification requirements.

B. Home Economics Extension			
Course	Credits		
Ag.Ed.	150	Extension Meth. in Ag. .... 2	
H.Ec.	61	Tailoring .....	2
H.Ec.	132	Household Equipment .....	2
H.Ec.	156	Meth. in Adult Hmkg. Ed. 2	
Soc.	145	Rural Sociology .....	3

Women students enrolled in this curriculum need not take P.E. 1, Healthful Living.

Candidates for the degree of B.S. (H.Ec.) are required to complete 60 credits in academic subjects.

## HOME ECONOMICS

## (FOOD AND NUTRITION)

REQUIRED		Credits	
Course			
A.H.	105	Principles of Nutrition .....	3
Bact.	51	General Chemistry .....	4
Chem.	1-2	General Chemistry .....	8
Eng.	1-2	English Composition .....	6
H.Ec.	6	Elementary Nutrition .....	2
H.Ec.	8	Introduction to Foods .....	4
H.Ec.	9	Introd. to Home Ec. ....	1
H.Ec.	11-12	Art Structure and Design ...	4
H.Ec.	23	Textiles .....	3
H.Ec.	24	Elementary Clothing .....	2
H.Ec.	73	Food Prepar. and Serving ...	3
H.Ec.	104	Dietetics .....	4
H.Ec.	107	Investigation of Foods .....	2
H.Ec.	135	Child Development .....	3
H.Ec.	146	Home Management Lectures	2
H.Ec.	147	Home Mgt. House Residence	3
P.E.		.....	4
Psych.	1	General Psychology .....	3
Social Studies		.....	6
Soc.	51	Introduction to Sociology ...	3
Zool.	1	General Zoology .....	4
Zool.	6	Physiology .....	3

Course	Credits	
and one of the following options:		
A. Dietetics and Institution Management		
Chem. 71-72	Elementary Organic Chem. 6	
Chem. 180	Physiological Chemistry ... 4	
Econ. 56	Basic Economics .....	3
H.Ec. 182	Quantity Cookery .....	3
H.Ec. 183	Institution Administration ..	4
H.Ec. 185	Institution Food Buying ....	2
Psych. 151	Educational Psychology .....	3
B. Food and Nutrition Research		
Bact. 102	Food & Applied Microbiol... 4	
Chem. 51	Qual. and Grav. Anal. .... 4	
Chem. 52	Quant. Anal. (Vol.) .....	4
Chem.171-172	Organic Chemistry .....	8
Chem.181-182	Biochemistry .....	8
Math. 11-12	Elem. Math. Analysis .....	10
Phys. 3-4	General Physics .....	8

Women students enrolled in the curriculum need not take P.E. 1, Healthful Living.

Candidates for the degree of B.S. (H.Ec.) are required to complete 60 credits in academic subjects.

JOURNALISM

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED			COURSE		
Course		Credits	Course		Credits
	Ability to use the typewriter		Journ.	185 History of Journalism	2
Bus.	175 Principles of Advertising	3	Journ.	186 Special Feature Articles	3
Journ.	81 Elements of Journalism	2	Journ.	183 Newspaper Promotion and Advertising	3
Journ.	82 Reporting	4	Journ.	197 Problems in Newspaper Publishing	3
Journ.	181 Advanced Reporting	4	Journ.	196 Pro-Seminar	1
Journ.	184 News Editing	3			

Twenty credits in related fields. Consult the chairman concerning special opportunities available to journalism majors who are trained in certain related fields.

LATIN

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED			COURSE		
Course		Credits	Course		Credits
Gk.	53-54 Scientific Terminology	4	Lat.	121-122 Directed Reading	4-6
Hist.	137-138 Classical Civilization	6	Lat.	124 Latin for Teachers	2
Lat.	13-14 Intermediate Latin	8	Choice of one:		
A reading knowledge of Greek or of a modern foreign language.			Lat.	125-126 Pro-Seminar	
Lat.	101-102 Advanced Latin	6	or		
Lat.	123 History of Latin Literature	2	Lat.	195-196 Thesis	4
Courses in English Literature					

Related fields: A total of 20 credits must be earned in related fields.

Recommended Preparation: Hum. 1-2 (Introduction to the Humanities) or Eng. 85-86 (Great Books) is recommended as a sophomore course; a second foreign language should, if possible, be begun in the same year.

LAW

(A combined six-year curriculum for the degrees of B.A. and LL.B. For the general requirements of the degree of Bachelor of Arts, see pages 67-68. For the first year of law see College of Law section, Part III.)

A student may secure the degrees of Bachelor of Arts and Bachelor of Laws in six years under the following regulations: Any candidate for the Bachelor of Arts degree, who at the end of the junior year has completed 100 semester hours and who has satisfied all other requirements of the College of Letters and Science for this degree, may in his senior year take the full first year of the law course, and upon completion of the same be entitled to receive the degree of Bachelor of Arts. Upon satisfactory completion thereafter of two years of advanced law study, the degree of Bachelor

of laws will be conferred. Students in this curriculum register in the College of Letters and Science for their first four years (supplying during the fourth year a duplicate study list to the College of Law) and in the College of Law for the last two years.

SENIOR YEAR

Course	Credits
Law (first year)	28

MATHEMATICS

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED		
Course		Credits
Math.	11-12 Elementary Math. Analysis	10
Math.	51-52 Calculus	8
Physics	3-4 General Physics	8
or		
Physics	51-52 Engineering Physics	10

Twenty credits in mathematics in courses numbered above 100, not including Math. 104. A maximum of six credits in analytical or technical mechanics courses numbered above 100 may be applied toward this requirement.

SUGGESTED ELECTIVES

Course	Credits
Phil. 103 Advanced Logic	3

Advanced work in Chemistry, Physics, Engineering, or Statistics where Mathematics may be applied. To be approved by the Head of the Department of Mathematics.

## APPLIED MATHEMATICS

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED		Credits
Course		
Math. 11-12	Elementary Math. Analysis	10
Math. 51-52	Calculus	8
Phys. 51-52	Engineering Physics	10
Math. 101-102	Advanced Eng. Math.	6
Math. 108	Numerical Analysis	3
Math. 131-132	Applied Math.	6

At least three courses chosen from Math. 115, Math. 105, Math. 121, Physics 121-122, Physics 131 or E.E. 149, but not both. Physics 132, Physics 133, and one of the following options:

OPTION A: At least four courses chosen from E.E. 22, E.E. 103, E.E. 169, E.E. 170, E.E. 134, E.E. 149 or Physics 131 but not both.

OPTION B: At least four courses chosen from E.S. 102, E.S. 120, Ch.E. 124, Ch.E. 131, Ch.E. 132. (Note that Chem. 1-2 is prerequisite for these courses.)

With the approval of the Mathematics Department and the appropriate division of the College of Engineering, a limited number of courses may be used to satisfy the requirements of the Options which are not listed above.

Electives: As many courses as can be scheduled conveniently from the list of supporting courses should be taken. It is strongly urged that all students complete German 1-2 and Russian 1-2 by the end of the Junior year. French 1-2 could be used as a substitute for one of these languages. Math. 113-114 should be taken by all students preparing for graduate work in Mathematics.

## MUSIC (B.A.)

(For the general requirements of the degree of Bachelor of Arts see page 67.)

PLAN I		Credits
Course		
Mus. 1-2	Theory of Music	7
Mus. 75-76	Theory of Music	8
Mus. 7	Introduction to Music Literature	2
Applied Music (Lower division)		16
Mus. 101-102	History and Literature of Music	6
Mus. 103	Musical Form	2
Mus. 104	Modern Music	2
Applied Music (Upper division)		14
Organized Music and/or Ensemble		4
Senior Recital		0
TOTAL		61

PLAN II		Credits
Course		
Mus. 1-2	Theory of Music	7
Mus. 75-76	Theory of Music	8
Mus. 7	Introduction to Music Literature	2
Applied Music (Lower division)		16
Mus. 101-102	History and Literature of Music	6
Mus. 103	Musical Form	2
Mus. 104	Modern Music	2
Applied Music (Upper division)		4
Organized Music and/or Ensemble		4
Courses in a related field, or Music electives		8
Mus. 150	Senior Seminar	2
TOTAL		61

Minimum piano requirements for all music majors: Ability to play a sonatina and a composition equal in difficulty to Schubert's Moment Musical in A flat, Op. 94, No. 6. Ability to read at sight a simple accompaniment.

NOTE: Course of study in freshman year under Plan I and Plan II are identical. Choice of Plan is made at end of freshman year with approval of head of music department.

## MUSIC (B.M.)

## FRESHMAN YEAR

Course	Credits	
	First Sem.	Sec. Sem.
Eng. 1-2	English Composition	3 3
Mus. 1-2	Theory of Music	3 4
Mus. 7	Introduction to Music Literature	2 2
Applied Music		6 6
P.E. (Women)		3 or 1 1 or 3
or		
Mil. and P.E. (Men)		2 2

## SOPHOMORE YEAR

Course	Credits	
	First Sem.	Sec. Sem.
French or German	4	4
Mus. 75-76	Theory of Music	4 4
Applied Music		6 6
P.E. (Women)		1 1
or		
Mil. and P.E. (Men)		2 2

JUNIOR AND SENIOR YEARS

REQUIRED		Course	Credits
Proficiency test for admission to junior courses in applied music.			
Course			Credits
Mus. 101-102	History and Literature of Music .....		6
Mus. 103	Musical Form .....		2
Mus. 104	Modern Music .....		2
Mus. 105-106	Counterpoint .....		4
Mus. 109-110	Elementary Composition .....		4
Electives in Music .....			6
Electives in liberal arts subjects .....			10
Senior recital .....			0
A. For those studying piano:			
Mus. 67-68	Ensemble (instrumental) ....		2
Mus. 121	Piano (applied music) .....		16
Mus. 108	Piano Class Techniques, or		
Mus. 114	Piano Literature .....		2
B. For those studying voice:			
Mus. 67-68	Ensemble (vocal) .....		2
Mus. 131	Voice (applied music) .....		16
Mus.	Organized Music (Choral) 4*		
C. For those studying other instruments:			
Mus. 67-68	Ensemble (instrumental) ....		2
Applied Music	(one instrument) .....		16
Mus. 25-26	Band .....		2
Mus. 45-46	Orchestra .....		2
D. Option—Composition and Arranging:			
An additional 12 credits in Counterpoint, Composition, Band Arranging and Orchestration, with approval of the head of the music department.			
Applied Music (upper division) .....			6
Minimum piano requirements for all music majors: Ability to play a sonatina and a composition equal in difficulty to Schubert's Moment Musical in A flat, Op. 94, No. 6. Ability to read at sight a simple accompaniment.			

NAVAL SCIENCE

The University of Idaho offers the degree of Bachelor of Naval Science with the following requirements:

- (a) Completion of a total of 128 credits.
- (b) Completion of Navy Requirements.
- (c) Normal progress toward another University degree as approved by the Dean of the division concerned.

A student in *Naval* ROTC who qualifies for both the Bachelor or Naval Science degree and another University degree in four years will be given but one degree, namely the regular University degree.

PHILOSOPHY

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED		Course	Credits
Phil. 61	Ethics .....		3
Phil. 71	Logic .....		3
Phil. 109	History of Ancient Philosophy		3
Phil. 110	History of Modern Philosophy		3
Phil. 191	Pro-Seminar .....		3
Twelve additional credits in Philosophy in courses numbered above 100.			
Twenty credits in Literature, Art, Social Sciences, and other related fields, selected with the approval of the head of the department.			

PHYSICS

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED		Course	Credits
Chem. 1-2	General Chemistry .....		8
Math. 11-12	Elementary Math. Analysis		10
Math. 51-52	Calculus .....		8
Phys. 3-4	General Physics .....		8
or			
Phys. 51-52	Engineering Physics .....		10
Course			
Phys. 121-122	Analytical Mechanics .....		6
Phys. 131-132	Electricity and Magnetism ..		6
Twelve additional credits in physics courses numbered above 100.			
The choice of electives must receive the approval of the head of the department.			

## POLITICAL SCIENCE

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED			
Course		Credits	
1. Six credits of lower division political science under either Plan A or Plan B		6	
<b>PLAN A</b>			
Pol.Sci. 1	American Government	3	
plus any one of the following three:			
Pol.Sci. 2	American Government	3	
Pol.Sci. 75	State Government	3	
Pol.Sci. 76	City and County Gov't.	3	
<b>PLAN B.</b>			
Pol.Sci.85-86	Comparative Government	6	

2. Six credits in introductory courses in other Social Sciences (Economics, History, Sociology, or Philosophy)	6
3. Six credits in Political Theory. Pol.Sci. 125-126 Political Theory	6
4. Fourteen additional credits in Political Science courses numbered above 100	14
5. Twenty credits in related fields	20
Total credits for major	52

The choice of specific courses in the above groups must receive the approval of the head of the department.

**PUBLIC ADMINISTRATION.**—Political Science majors wishing to prepare for a career in public administration should include the following recommended courses:

Course		Credits	Course		Credits
Bus. 31-32	Principles of Accounting	6	Pol. Sci. 85-86	Comparative Government	6
Bus. 83	Statistics	3	Pol.Sci. 132	Legislatures and Legislation	3
	or		Pol.Sci. 151	Public Administration	3
Psych. 117	Statistics for Psychol. & Ed.	3	Pol.Sci. 152	Administrative Law	3
Bus. 165-166	Business Law	6	Pol.Sci. 153	Public Personnel Administr.	3
Bus. 151	Personnel Management	3	Pol.Sci. 162	Government and Business	3
Econ. 51-52	Principles of Economics	4-6	Pol.Sci. 167	The American Constitution	3
or 56	Public Finance	3	Soc. 51	Introduction to Sociology	3
Econ. 109	Technical Writing	3	Soc. 157	Social Legislation and Public Welfare	3
Eng. 115	Urban Geography	3			
Geog. 170	American Government	6			
Pol.Sci. 1-2	State Government	3			
Pol.Sci. 75	City and County Gov't.	3			
Pol.Sci. 76					

## PRE-DENTAL STUDIES

Students who plan to enter a college of dentistry after completing a minimum of two years of college pre-dental training are required to complete the following:

Course		Credits	Course		Credits
Chem. 1-2	General Chemistry	8	P.E. (Women)		6
Chem. 71-72	Elementary Organic Chem.	6	Zool. 1-2	General Zoology	8
Eng. 1-2	English Composition	6	Elective		1-4
Foreign Language		8	Total		64
Math. 1	Fundamentals of Math.	4			
or Math. 11	Elementary Math. Analysis	5			
Phys. 3-4	General Physics	8			
Social Studies		6			
Mil. and P.E. (Men)		8			

Students who wish to receive the B.S. or B.A. degree in four years may do so by selecting a major in the junior year.



PRE-MEDICAL STUDIES

FRESHMAN YEAR

Course	Credits	
	First Sem.	Sec. Sem.
Chem. 1-2 General Chemistry ..	4	4
Eng. 1-2 English Composition	3	3
Zool. 1-2 General Zoology .....	4	4
Social Studies .....	3	3
Mil. and P.E. (Men) .....	2	2
or		
P.E. (Women) .....	1	1
Elective (Women) .....	1	1
	16	16

Women students enrolled in this curriculum need not take P.E. 1, Healthful Living.

SOPHOMORE YEAR

Course	Credits	
	First Sem.	Sec. Sem.
Chem. 51 Qualitative and Gravi- metric Analysis ....	4	
Chem. 52 Quantitative Analysis		4
Foreign Language .....	4	4
Math. 1 Fundament. of Math. 4 or Math. 11 Elementary Math. Analysis .....		5
Zool. 54 Compar. Anatomy ....		4
Mil. and P.E. (Men) .....	2	2
P.E. (Women) .....	1	1
Elective .....	1-3	2-3
	16	16

JUNIOR YEAR

Chem.171-172 Organic Chemistry ..	4	4
Phys. 3-4 General Physics .....	4	4
Zool. 113 Embryology .....	4	
Foreign Language .....	3-4	3-4
Elective .....	1-0	5-4
	16	16

SENIOR YEAR

*Option I.*—Completion of the first year of medical study at an approved college of medicine.

*Option II.*—Completion of 32 credits. Twenty-four of these credits must be in courses numbered above 100, and at least one-half (12) of the credits numbered above 100 must be in the humanities and social studies. All electives must have the approval of the director of pre-medical studies.

PRE-NURSING STUDIES

FRESHMAN YEAR

Course	Credits	
	First Sem.	Sec. Sem.
Chem. 1-2 General Chemistry ..	4	4
Eng. 1-2 English Composition	3	3
H.Ec. 6 Elementary Nutrition	2	
Zool. 1 General Zoology .....	4	4
Social Studies .....	3	3
P.E. (Elective) .....	1	1
Elective .....	3	1
	16	16

Women students enrolled in this curriculum need not take P.E. 1, Healthful Living.

SOPHOMORE YEAR

Course	Credits	
	First Sem.	Sec. Sem.
Bact. 51 General Bacteriology	4	
Psych. 1 General Psychology ..		3
P.E. (Elective) .....	1	1
Soc. 51 Introduction to Sociology .....		3
Zool. 2 General Zoology .....	4	4
Elective .....	4	12
	16	16

JUNIOR YEAR

Course	Credits	
	First Sem.	Sec. Sem.
Bact. 104 Pathogenic Bacteria ....		4
Soc. 121 The Family .....	3	
Soc. 159 Fields of Social Work	3	
Zool. 105 General Physiology ....	4	
*Elective .....	6	12
	16	16

SENIOR YEAR

To receive the degree of B.S. (Pre-Nurs.), the student may choose from the following options:

1. Graduation from an approved school of nursing.
2. Completion of a total of 128 credits, 36 of which must be in course numbered above 100.

\* These elective credits must be in courses numbered above 100.

## PRE-PHYSICAL THERAPY

(For the general requirements of the degree of Bachelor of Science see page 67.)

FRESHMAN YEAR				SOPHOMORE YEAR				
Course			Credits		Course		Credits	
			First Sem.	Sec. Sem.			First Sem.	Sec. Sem.
Chem.	1-2	Gen. Chem.	4	4	Psych.55-56	Human Growth and Development	3	3
Eng.	1-2	English Composition	3	3	P.E. 40 (men) or P.E. 55 (women)			1
Math.	1	Fundamentals of Mathematics		4	Zool. 6	Physiology	3	
Psych.	1	Gen. Psych.	3		Zool. 54	Comparative Anatomy		4
Zool.	1-2	Gen. Zool.	4	4	Mil. and P.E. (men)		2	2
Mil. and P. E.		(Men)	2	2	P.E. 5, 6, 7, or 8 (women)		1	1
P.E. 1, 5, 6, 7, or 8		(women)	1	3	Foreign Language		4	4
		TOTALS - (men)	16	17	Social Sciences		3	3
		- (women)	15	18			15	17
							14	16

JUNIOR YEAR				SENIOR YEAR				
Course			Credits		Course		Credits	
			First Sem.	Sec. Sem.			First Sem.	Sec. Sem.
Psych. 111		Ab. Psych.	3		Ed. 115	Prin. and Prac. in Guidance	3	
Physics 1		Elem. Physics	4		P.E. 119	Kinesiology	3	
Psych. 161		Psych. Pers.	3		P.E. 124	Theory of Ind.		2
Psych. 102		Ex. Individ.		3	Zool. 113	Embryology	4	
P.E. 52		P.E. Act. El. Sch.	2	2	Electives -	men	6	13
Zool.103-104		Human Anatomy	2	2		women	7	14
Electives			4	9		TOTALS - (men)	16	15
		TOTALS - (men)	16	16		- (women)	17	16
		- (women)	16	16				

## PSYCHOLOGY

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED			Course		Credits	
Course		Credits				
Psych.75-76	General Experiment Psych.	8	Psych. 141	Physiological Psychology	3	
Psych. 105	Comparative Psychology	3	Psych. 198	Systems of Psychology	3	
Psych. 117	Statistics for Psychology and Education	3				

At least eight additional credits in psychology courses numbered above 100.

Secondary area of specialization to be selected with the approval of the department staff. Recommended: Mathematics, Physical Sciences, Biological Sciences, Social Sciences.

Students expecting to apply for graduate or professional training should have strength in mathematics and science.

## RADIO-TV

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED			Course		Credits	
Course		Credits				
Rad. 91-92	Introduction to Radio-TV Broadcasting	4	Rad. 191	Announcing	2	
Rad. 93-94	Recording and Broadcasting Techniques	6	Rad. 192	Advanced TV Production	3	
Rad. 97	Station Writing	3	Rad. 193	Commercial Broadcasting	2	
Rad. 188	Advanced Station Writing	3	Rad. 194	Radio-TV News	2	
			Rad. 197	Program Planning	3	

Ability to use the typewriter.  
Twenty credits in related fields.

## SOCIOLOGY

(For the general requirements of the degree of Bachelor of Arts see page 67.)

Course	Credits
Soc. 51 Introduction to Sociology .....	3
Soc. 52 Social Problems .....	3
Soc. 72 Introduction to Anthropology	3
Soc. 181 History of Social Thought .....	3
or	
Soc. 191 Contemporary Sociology .....	3

Twenty credits in Sociology in courses numbered above 100.

Twenty credits in related fields.

The choice of specific courses in the above groups must receive the approval of the head of the department.

*Recommended Preparation:* Choice of at least 6 credits from introductory courses in any two of the following fields: History, Political Sciences, Philosophy, Economics.

**ANTHROPOLOGY.**—Sociology majors wishing to prepare for a career in Anthropology should include the following recommended courses:

Course	Credits
Biol. 1-2 General Biology .....	8
Geog. 3 Phys. Geography .....	4
Geog. 12 Economic Geography .....	3
Psych. 1 General Psychology .....	3
Psych. 117 Statistics for Psychology and Education .....	3

Course	Credits
Soc. 51 Introduction to Sociology .....	3
Soc. 72 Introduction to Anthropology	3
Soc. 117 Cultural Anthropology .....	3
Soc. 121 The Family .....	3
Soc. 123 Old World Archeology .....	3
Soc. 124 New World Archeology .....	3
Soc. 181 History of Social Thought .....	3

## SPANISH

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED		Credits
Course		
Spanish 13-14	Intermediate Spanish .....	8
A reading knowledge of another foreign language.		
Twenty additional credits in Spanish, chosen from among the following:		
Span. 101-102	Composition and Conversation	
Span. 121-122	Survey of Span. Literature	
Span. 135-136	The Nineteenth Century	
Span. 141-142	The Golden Age	

Span. 147-148	Contemporary Literature
Span. 161-162	Directed Reading
Span. 183-184	Commercial Spanish
Span. 191-192	Spanish for Teachers

Twenty credits in related fields, including History 173-174 or History 111-112, and at least 6 credits in upper-division courses in English.

The choice of specific courses in the above groups must receive the approval of the head of the department.

*Recommended Preparation:* Humanities 1-2 or English 85-86 is recommended as a sophomore course; a second foreign language should, if possible, be begun in the same year.

## SPEECH

(For the general requirements of the degree of Bachelor of Arts see page 67.)

REQUIRED		Credits
Course		
Sp. 51-52	Fundamentals of Speech .....	4
Choice of one:		
a. Sp. 9	Intercollegiate Debating or	1-2
b. Sp. 62	Parliamentary Law and Procedure	
Sp. 151-152	Advanced Speaking .....	4
Sp. 161	Discussion and Conference Methods .....	2

Course	Credits	
Sp. 162	Speech and Social Control ....	2
Sp. 185	Voice and Speech Improvement .....	2
Sp. 186	Speech Correction .....	2
Sp. 191	Propaganda and Public Opinion .....	2
Sp. 192	American Public Address .....	2

Twenty credits in related fields, including Drama 105-106, Advanced Interpretation, 4-8 credits.

## ZOOLOGY

(For the general requirements of the degree of Bachelor of Science see page 67.)

REQUIRED		Credits
Course		
Bot. 1 or 3	General Botany or Prin. of Botany .....	4
Chem. 1-2	General Chemistry .....	8
Chem. 71-72	Organic Chemistry .....	6
Zool. 54	Comparative Anatomy of Vertebrates .....	4
	or	
Zool. 153	Invertebrate Zoology .....	5
Zool. 58	Introduction to Genetics .....	4
	or	
Zool. 102	General Genetics .....	4
Zool. 105	General Physiology .....	4

## ELECTIVES

Of the electives, twenty hours are to be chosen from courses numbered 100 or above in Zoology and all electives must have the approval of the head of the department.

Entomology courses may count toward a Zoology major with the consent of the Head of the Department of Biological Sciences.

# The College of Agriculture

Agricultural Chemistry	Dairy Science
Agricultural Economics	Entomology
Agricultural Education	Horticulture
Agricultural Engineering	Plant Pathology
Agronomy	Poultry Husbandry
Animal Husbandry	Veterinary Science
Bacteriology	

JAMES E. KRAUS, Ph.D. .... *Dean of the College*

DON A MARSHALL, Ph.D. .... *Associate Dean*

**T**HE equipment of the College of Agriculture and Agricultural Experiment Station at Moscow consists of 990 acres of land. In addition, the University owns or leases for purposes of agricultural experiments, 1,700 acres located at other points in the state.

The equipment for agricultural instruction consists of the Agricultural Science Building, used as a central office, classroom, and laboratory building; Dairy Science Building; Agronomy Building; Laboratories in Science Hall, Kirtley Engineering Laboratory, Engineering Building, and Agricultural Engineering Laboratory Building; Veterinary Science Building and Disease Research Barn; greenhouses; Entomology Building; dairy cattle, sheep, swine, and beef cattle barns, judging pavilion; poultry brooder and laying houses. A number of head of poultry, dairy cattle, beef cattle, sheep and swine representing several breeds are maintained for instructional and research purposes. In addition, acreages of land are available and are used for instructional purposes in breeding, production, and applying scientific principles to all fields of agriculture.

## FACILITIES

**AGRICULTURAL CHEMISTRY.**—The laboratories are fully equipped with the necessary apparatus and facilities for instruction and research in biochemistry, nutrition, soil chemistry and plant biochemistry. Equipment and facilities are also available for research using radioisotopes. Pertinent reference books and technical journals are on file in the library.

**AGRICULTURAL ECONOMICS.**—Facilities for instruction and research are provided in the Agricultural Science Building. An office library is maintained which contains the chief sources of agricultural statistics, both historical and current, together with bulletins, textbooks, and periodicals. Electric calculating machines and other devices are at hand as an aid to research.

**AGRICULTURAL ENGINEERING.**—The Laboratories are equipped for instruction and research in the four major fields in agricultural engineering, including land and water reclamation and conservation, farm structures and equipment, field power and machinery, and rural electrification. The instructional and research equipment and apparatus include weirs, pumps, and tanks for water measurement, farm levels and field measuring equipment, farm water supply systems and household facilities, farm machinery, stationary and field power units, dynamometers, motors and generators, farm shop and farm machinery repair facilities, including gas and electric welding outfits. These laboratories are used for the farm shop and farm equipment repair work in the vocational agriculture teacher training program.

**AGRONOMY.**—The offices and laboratories of the department occupy the Agronomy Building. Three student laboratories, two for soils and one for crops work, are available. There is also a small soils research and a well equipped weed research laboratory. In addition, the building contains a work and a seed storage room. The soils laboratories are equipped for general soils and for special work in soil physics. The crops laboratory is arranged for crop and seed identification; in addition it contains a rather complete herbarium of weed plants and a collection of weed seeds.

The department, together with the Departments of Plant Pathology, Horticulture, and the College of Forestry, operates the 250-acre Plant Industry Farm. This farm is used for field plot research on crops, plant breeding, weed control, and soils projects. These field plots are used to supplement class instructional activities.

**ANIMAL HUSBANDRY.**—Courses in animal husbandry include instruction in judging, nutrition, feeding, breeding, meats, and livestock production, management and marketing. The University maintains for instructional purposes and for research studies 200 beef cattle representing the Aberdeen-Angus, Hereford and Shorthorn breeds; 580 sheep representing the Rambouillet, Hampshire, Suffolk, Panama and Targhee breeds; and 150 head of swine representing Duroc and Yorkshire breeds.

**BACTERIOLOGY.**—The Department of Bacteriology occupies the lower floor, west wing of Science Hall. The laboratories are well equipped for teaching and research work. The student laboratories are adjacent to research laboratories where studies are being made on human and animal diseases and also on agricultural and industrial problems, thus offering the student an excellent opportunity for observation in research methods. Leading national and foreign publications in bacteriology are on file in the library.

**DAIRY SCIENCE.**—The Department of Dairy Science occupies the Dairy Science Building which was erected in 1942. Facilities for instruction include the dairy products laboratory, provided with modern equipment usually found in commercial creameries and milk plants. In addition, there are well-equipped laboratories for research work. For practice in judging and for research work, the University maintains a herd of 120 head of dairy cattle, representing the Jersey and Holstein breeds. On these complete breeding and production records are kept.

**ENTOMOLOGY.**—The Department of Entomology occupies the entire Entomology Building. The laboratories are equipped with apparatus and materials necessary for undergraduate and graduate teaching and research in this field of science. Adequate greenhouse, field plot and library facilities are available. In addition, the department maintains an excellent insect collection for teaching and research purposes. The area in the vicinity of the University is ideally suited for the field study of insect biology, since it contains a varied insect fauna and exhibits marked differences in altitude, climate, flora and soil types.

**HORTICULTURE.**—Courses in Horticulture include instruction in three divisions, fruit growing, vegetable growing, and ornamental horticulture. Greenhouse space is available for research and instructional purposes. Test gardens of ornamental material including both woody plants and herbaceous plants are established either on or near the campus. In addition, a horticultural field station is located at Lewiston, Idaho, and its proximity to the University makes it possible for both graduate and undergraduate students to observe and participate in the horticultural research program at the station.

**PLANT PATHOLOGY.**—Facilities for instruction in plant pathology include offices, two well-equipped laboratories, a reading room containing suitable reference material, and a green house with modern equipment for both elementary and advanced study and research.

**POULTRY.**—Instruction in Poultry Husbandry is offered in the fields of breeding, nutrition, incubation, housing and management of poultry; also in quality, grades, processing and utilization of poultry products. Laboratories in the Agricultural Science Building and at the University poultry farm provide facilities for instruction and research in the above-mentioned fields of study. Approximately 2,500 laying hens of popular breeds are maintained in several types of modern buildings.

**VETERINARY SCIENCE.**—Facilities for instructing students of the animal sciences in the field of disease prevention include classrooms, laboratories and a research barn in which animal diseases can safely be studied. Well equipped research laboratories and facilities for veterinary service are maintained.

### ADMISSION

Admission requirements are presented in Part II of this catalog. Effective with the fall semester 1961, the admission requirements for all students who register in the College of Agriculture will be as follows: English 3 units; Social Science 2 units; Algebra 1 unit; Plane Geometry 1 unit; Natural Science (unspecified) 2 units; Academic units (unspecified) 2 units. Total Academic units 11; Elective units 4; Total units required 15.

## Curricula and Degrees

Four curricula of study are offered toward the degree Bachelor of Science in Agriculture. One hundred and thirty-six credits are required for graduation.

Requirements for the degrees Master of Science in Agriculture, Master of Agriculture and Doctor of Philosophy will be found in the section of this catalog devoted to the Graduate School.

Instruction is given in Agricultural Chemistry, Agricultural Economics, Agricultural Education, Agricultural Engineering, Animal Husbandry, Bacteriology, Dairy Science, Entomology, Field Crops, Food Technology, Horticulture, Plant Pathology, Poultry Husbandry, Soils, and Veterinary Science.

Before the end of the freshman year, a student should file a written statement in the dean's office indicating the curriculum under which he wishes to graduate, the department or subject matter area in which he wishes to major, and his major advisor.

### Agricultural Education

The teacher training curriculum in Agricultural Education is the course approved by the State Board of Vocational Education for the preparation of high school vocational agriculture teachers. Graduates who have completed at least twenty (20) credits in Agricultural Education, plus the state certification requirements which include one teaching minor of fifteen (15) semester hours, are eligible for an Idaho Standard Secondary Certificate valid for five years.

### Agricultural Engineering

The curriculum in Agricultural Engineering is offered jointly by the College of Agriculture and the College of Engineering and will be found outlined in the catalog devoted to the College of Engineering. For the degree B.S. (Ag. E.) see College of Engineering.

### Agricultural Science

Students who desire to prepare for a professional or academic career in agriculture may elect to enroll under the curriculum in Agricultural Science. Those who elect this curriculum may major in any one of the following subject

matter areas: Agricultural Chemistry, Animal Husbandry, Bacteriology, Dairy Science, Entomology, Field Crops, Food Technology, Horticulture, Plant Pathology, Poultry Husbandry, or Soils.

### **Agricultural Management**

Students who desire to prepare themselves for a career in commercial enterprises related to agriculture may elect to enroll under the curriculum in Agricultural Management. Those choosing this curriculum may elect to major in Agricultural Economics, Animal Husbandry, Poultry Husbandry, Dairy Science, Entomology, Field Crops, Food Technology, Horticulture, or Soils.

### **General Agriculture**

Students who desire a more general course in agriculture such as would be valuable for prospective county agents, other extension workers, agricultural field representatives, and farmers may select the curriculum in General Agriculture and may major in one or more of the following subject matter areas: Agricultural Economics, Animal Husbandry, Dairy Science, Entomology, Field Crops, Horticulture, Poultry Husbandry, or Soils.

### **Pre-Veterinary Science**

For those students who desire to enter the field of veterinary medicine, a two-year curriculum in Pre-Veterinary Science is offered.

## **REQUIREMENTS FOR GRADUATION**

### **One hundred and thirty-six credits are required for graduation**

The curricula outlines presented on the following pages have been prepared to guide the student in the preparation of his course of study. The credit hours listed in each of the subject matter areas are the minimum requirements which must be satisfied for graduation. The specific courses which may be taken to satisfy these requirements are the option of the student with the consent and approval of his major advisor. Certain subject matter areas and general requirements are defined below to avoid confusion.

### **Humanities and Social Sciences**

In addition to the general requirements listed in J-2 and subject to credit limitations imposed by J-5 of this catalog, a minimum of nineteen (19) credits are required in courses other than agriculture and its supporting courses. These courses are to be taken in Business, Humanities, Geography, Social Science, Art, Music, or Education. (In any curriculum where specific courses in these fields are required, these courses may be counted in the 19 total required.) Six (6) credits in advanced military may be counted toward the nineteen (19) credits. These requirements are the same as the requirements listed for Humanities or Social Sciences under the curricula outlined on the following pages.

### **Agricultural Courses**

Courses in the following subject matter departments may be taken to satisfy the requirements for agricultural courses as listed in the curricula outlines: Agricultural Chemistry, Agricultural Economics, Agricultural Education, Agricultural Engineering, Agronomy, Animal Husbandry, Bacteriology, Dairy Science, Entomology, Horticulture, Plant Pathology, Poultry Husbandry, and Veterinary Science. In the Agricultural Science curriculum, in the Agricultural Chemistry major, twenty (20) credits in physical and biological science courses may be substituted for the courses in agriculture without petition. In the Entomology major, nine (9) credits in courses in forestry may be substituted for the agricultural courses without petition. In the Bacteriology major, courses in Bacteriology may be counted as courses in agriculture or biological sciences, but the same course may not be used to meet both requirements.



**Biological and Physical Sciences**

Courses in the following departments may be taken to satisfy the requirements in Biological and Physical Sciences: Botany, Chemistry, Geology, Physics, and Zoology. Specific limitations on courses offered in these departments are noted on the curricula outlines.

A common course of study will be followed in the first year by all students in the College of Agriculture. This course of study is as follows:

**CURRICULUM IN AGRICULTURE**

**COMMON FRESHMAN YEAR**

FIRST SEMESTER				SECOND SEMESTER			
Course			Credits	Course			Credits
Ag.	1	Ag. Orientation .....	1	Eng.	2	Biological or Physic. Science	4
		Biological or Physic. Science	4			English Composition .....	3
Eng.	1	English Composition .....	3			*Mathematics .....	4
		*Mathematics .....	4			or	
		Electives .....	4	Mil.	2	Electives .....	5
Mil.	1	Freshman Military .....	1½	P.E.	31	Freshman Military .....	1½
P.E.	31	Freshman P.E. ....	½			Freshman P.E. ....	½
		Ag. Elective .....	3			Ag. Elective .....	3
		Total .....	17			Total .....	16-17

\* Math. 1 or 11 may be taken either the first or second semester.

**CURRICULUM IN AGRICULTURAL SCIENCE**

For the Degree of Bachelor of Science in Agriculture One hundred and thirty-six credits are required for graduation.

Students who choose to enroll under this curriculum may major in any one of the subject matter fields listed below and may choose an advisor from among the faculty of this major field.

Subject matter areas	Minimum Credit Requirements for Majors										
	Ag. Chem.	An. Hus.	Dairy Bact.	Field Sci.	Food Ent.†	Plant Crops	Poultry Tech.	Plant Hort.	Poultry Path.	Hus. Hus.	Soils
Ag. Major	26	20	24	23	20	20	20	20	20	20	20
Ag. Electives	12	23	12	14	12	12	12	12	12	24	12
Biological Sciences*	8	16	8	8	26	15	11	12	19	8	11
Electives	15	12	20	24	22	27	26	26	12	19	27
Humanities and Social Sciences	25	25	28	25	25	25	25	30	25	25	25
Mathematics	18	10	4	10	8	8	10	8	10	8	8
Physical Sciences**											
Chem.	16	14	24	16	11	17	16	16	22	16	17
Physics	8	8	8	8	4	4	8	4	8	8	8
Physical Education	8	8	8	8	8	8	8	8	8	8	8

\* Biology 1-2, 64 and 118 may not be taken to satisfy these requirements.

\*\*Chem. 56, 75, and Elementary Physics may not be taken to satisfy these requirements.

† All Entomology majors are required to submit prior to graduation a well prepared, properly classified insect collection. This collection shall consist of a minimum of 500 species classified to family and representing at least 20 orders. In addition, one selected group must be identified to species.

For those students wishing to receive training in the field of Forest Entomology, the following courses are required: For. 22, 124, 164, 174, and 175. In addition, For. S100 and S101 are highly recommended.

## CURRICULUM IN GENERAL AGRICULTURE

For the Degree of Bachelor of Science in Agriculture

One hundred and thirty-six credits are required for graduation.

Students who choose to enroll under this curriculum may major in any one of the subject matter fields listed below and may choose an advisor from among the faculty of this major field.

Subject matter areas	Minimum Credit Requirements for Majors							
	Ag. Econ.	An. Hus.	Dairy Sci.	Ent.*	Field Crops	Food Hort.	Poultry Hus.	Soils
Ag. Courses including major	50	50	50	50	50	50	50	50
Biological Sciences and Physical Sciences	16	16	16	16	16	16	16	16
Chem.	8	8	8	8	8	8	8	8
Electives	25	25	25	25	25	25	25	25
Humanities and Social Sciences	25	25	25	25	25	25	25	25
Mathematics	4	4	4	4	4	4	4	4
Military Science and Physical Education	8	8	8	8	8	8	8	8

\* All Entomology majors are required to submit prior to graduation as well prepared, properly classified insect collection. This collection shall consist of a minimum of 500 species classified to family and representing at least 20 orders. In addition, one selected group must be identified to species.

## CURRICULUM IN AGRICULTURAL MANAGEMENT

For the Degree of Bachelor of Science in Agriculture

One hundred and thirty-six credits are required for graduation.

Students who choose to enroll under this curriculum may major in any one of the subject matter fields listed below and may choose an advisor from among the faculty of this major field.

Subject matter areas	Minimum Credit Requirements for Majors								
	Ag. Econ.	An. Hus.	Dairy Sci.	Ent.*	Field Crops	Food Tech.	Hort.	Poultry Hus.	Soils
Ag. Econ.	18	12	12	9	12	12	12	12	12
Ag. Major		20	23	18	20	23	22	18	20
Ag. Electives	24	12	12	16	12	12	10	12	12
Business & Econ.	22	22	22	22	22	22	27	27	22
Electives	26	14	15	12	10	15	17	15	10
Humanities & Soc. Sci.	19	25	25	25	25	25	17	25	25
Mathematics	7	7	7	7	7	7	7	7	7
Physical Sciences and Biological Sciences	4	8	4	11	12	4	8	4	12
Chem.	8	8	8	8	8	8	8	8	8
Military Science and Physical Education	8	8	8	8	8	8	8	8	8

\* All Entomology majors are required to submit prior to graduation a well prepared, properly classified insect collection. This collection shall consist of a minimum of 500 species classified to family and representing at least 20 orders. In addition, one selected group must be identified to species.

## CURRICULUM IN AGRICULTURAL EDUCATION

For the Degree of Bachelor of Science in Agriculture

One hundred and thirty-six credits are required for graduation

Subject matter areas	Minimum Credit Requirements for Majors
Agriculture Courses (other than Ag.Ed.)	50
Agricultural Education	20
Electives	13
Humanities and Social Sciences	25
Physical and Biological Sciences	16
Military Science and Physical Education	8
Mathematics	4

## CURRICULUM IN PRE-VETERINARY SCIENCE

The aim of the Pre-veterinary Curriculum is to prepare students for admission to the veterinary institutions of the United States. It is not possible to obtain a veterinary degree at the University of Idaho.

Admission to a Veterinary College requires a minimum of two years of preprofessional study at the college level. At the present time the pre-veterinary course requirements differ at the various veterinary institutions and students are advised to plan, in consultation with their advisor, their course of study to fit the Veterinary College of their choice, including the first year courses in the Agricultural Curriculum and second year courses listed below.

Since all veterinary schools limit their enrollment, many applicants are rejected each year. Pre-veterinary students who are unable to gain admission to a Veterinary School are advised to elect a major from one of the curricula in the College of Agriculture to complete their college training. This, in most instances, will require an extra year for completion of basic courses. Courses offered by the Department of Veterinary Science are designed primarily for students in Animal and Poultry Husbandry and Dairy Science and are not acceptable as substitute courses in a veterinary institution.

SOPHOMORE YEAR					
FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bact. 51	General Bacteriology .....	4	A.H. 2	The Livestock Industry .....	3
Chem. 71	Elementary Organic Chem. ....	3	Chem. 72	Elementary Organic Chem. ....	3
Mil. 3	Sophomore Military .....	1½	Mil. 4	Sophomore Military .....	1½
P.E. 33	Sophomore P.E. ....	½	P.E. 33	Sophomore P.E. ....	½
	*Electives .....	9		*Electives .....	10
	Total .....	18		Total .....	18

## SUGGESTED ELECTIVES:

Ag. Econ. 55, Agricultural Economics, 3 credits; Art 41, Art Appreciation, 2 credits; Bot. 3, Principles of Botany, 4 credits; Bus. 31, Principles of Accounting, 3 credits; Chem. 180, Physiological Chemistry, 4 credits; Econ. 51, Principles of Economics, 3 credits; Eng. 65, Introduction to Literature, 3 credits; Geog. 12, Economic Geography, 3 credits; Hist. 3 & 4, History of Civilization, 3 or 6 credits; Hist. 9 & 10, History of the United States, 3 or 6 credits; Hum. 1 & 2, Introduction to the Humanities, 2 or 4 credits; Mus. 7, Introduction to Music Literature, 2 credits; Phil. 1, Introduction to Philosophy, 3 credits; Phil. 61, Ethics, 3 credits; Phys. 3 & 4, General Physics, 4 or 8 credits; Pol. Sci. 1 & 2, American Government, 3 or 6 credits; Pol. Sci. 75, State Government, 3 credits; Pol. Sci. 76, City and County Government, 3 credits; Soc. 51, Introduction to Sociology, 3 credits; Soc. 72, Introductory Anthropology, 3 credits; Sp. 51, Fundamentals of Speech, 2 credits; Zool. 1 & 2, General Zoology, 8 credits.

\* To be taken with the approval of the major professor. (Emphasis is placed upon Social Sciences and Humanities electives for the first two years.)

**GRADUATE PROGRAM**

Graduate studies leading to the Masters degree are offered in each of eleven departments in the College of Agriculture. Two degrees are offered—the Master of Science in Agriculture and the Master of Agriculture degree. The Master of Science in Agriculture degree is available to students who meet the requirements as outlined in the section of this catalog devoted to the Graduate School. A thesis is required. The Master of Agriculture degree is a terminal professional degree designed to give broader training than the Master of Science degree. A professional paper is required.

Graduate studies leading to the Doctor of Philosophy degree are offered in the Department of Agricultural Chemistry and Entomology.

**Graduate Fellowship**

A number of research fellowships are available to help qualified students in their graduate program. Normally two years are required to complete the degree requirements and usually a research project in the department in which the student is majoring serves to meet the requirements for the thesis.

**Graduate Work in the Departments**

The Department of Agricultural Economics offers graduate study leading to the Masters degree with specialization in production economics, marketing agricultural products, agricultural programs and policies, economics of resource development and use, agricultural statistics, and food processing plant efficiency and management.

The Department of Agricultural Chemistry offers graduate study leading to the Master of Science and Doctor of Philosophy degrees with specialization in animal biochemistry, plant biochemistry and soil and water chemistry.

The Department of Agricultural Education offers graduate study leading to the Master of Science degree with specialization in agricultural education.

The Agronomy Department offers graduate study leading to the Masters degree with specialization in soils, crops, weed control research, and plant breeding.

The Bacteriology Department offers graduate study leading to the Masters degree with specialization in bacterial physiology, serology, food microbiology, and soil microbiology.

The Department of Dairy Science offers graduate study leading to the Masters degree with specialization in dairy cattle nutrition, dairy cattle breeding and physiology, and dairy manufacturing.

The Entomology Department offers graduate study leading to the Master of Science degree and the Doctor of Philosophy degree with specialization in economic entomology, systematic entomology, forest entomology, insect ecology, and insect physiology.

The Horticulture Department offers graduate study leading to the Masters degree with specialization in pomology, olericulture, and ornamental horticulture.

The Plant Pathology Department offers graduate study leading to the Masters degree with specialization in virology, soil borne diseases, and foliar diseases of fruits, vegetables and agronomic crops.

The Poultry Husbandry Department offers graduate study leading to the Masters degree with specialization in poultry nutrition, poultry management, and poultry products.

The Animal Husbandry Department offers graduate study leading to the Masters degree with specialization in animal nutrition, animal breeding, and physiology of reproduction in beef cattle, sheep, or swine.

# The College of Engineering

Agricultural Engineering  
Chemical Engineering

Civil Engineering  
Electrical Engineering  
Mechanical Engineering

ALLEN S. JANSSEN, M.S., PE. .... *Dean of the College*

MARGARET STEWART ..... *Secretary of the College Faculty*

## PURPOSE

**T**HE purpose of the College of Engineering is to offer qualified students programs of training (1) in the practical and economic application of the sciences, (2) in the control and utilization of the forces, materials and energy of nature, and (3) in the organization and direction of human effort, all for the improvement of production, industry and commerce contributory to better living, social progress and national safety.

## THE ENGINEERING PROFESSION

Engineering is a profession concerned with and utilizing the training described above. Professional engineers use their technical training to plan and erect industrial plants, bridges, dams, buildings, and other large structures; to design and supervise the making of all kinds of industrial products; to plan and operate industrial processes and equipment; to sell technical products and recommend them for special uses; and to manage technical enterprises or industrial plants. An engineer usually specializes in a particular branch of the profession. Some of the important branches of engineering are:

**Agricultural Engineering** — the application of power and machinery to agriculture; rural electrification; soil and water conservation and irrigation methods; farm structures.

**Civil Engineering**—design, construction and operation of fixed works and structures; transportation; hydraulic and sanitary systems; surveying and mapping.

**Chemical Engineering**—design, construction and operation of industrial plants in which matter undergoes a change of state and composition.

**Electrical Engineering**—electric power generation, transmission and distribution; electronics; radio, radar, and telephony; illumination.

**Mechanical Engineering**—aeronautical, automotive, and other machine and engine design and production; heat and combustion; refrigeration; air conditioning; industrial production.

For those who want to specialize in such work as aeronautics, refrigeration, or air conditioning, basic training in mechanical engineering is recommended first to be followed by advanced training either in industry or in a recognized graduate school.

To qualify as an engineer one usually takes at least a four-year course in a recognized engineering college offering bachelors' (B.S.) degrees in the major branches of engineering. Following graduation, all states, including Idaho, require a period of practical experience and a qualifying examination before granting a license to do engineering work affecting public health and safety.

### ENGINEERING APTITUDES

Those likely to succeed in engineering are young men of serious purpose, willing to do consistently hard work, and with high school records that show marked ability in mathematics, physics, and chemistry. Equally important are: (1) ability to visualize in three dimensions the parts of a structure or the operation of a machine or electrical device, (2) facility in the use of written and spoken English, and (3) possession of those desirable personal attributes which enable one to inspire associates, assistants and other laborers to work together effectively. Without these qualifications, the chances for a successful professional career are poor. Aptitude for mathematics and science count most because an engineer's job is the practical application of science.

If the above qualifications and aptitudes are lacking, it is not advisable to undertake the study of engineering. A desire or ability to tinker with machines, to make things with one's hands, or to operate machinery is helpful but not enough. Students with these aptitudes only should consider the desirability of vocational or technical institute training in preference to professional engineering.

### PREPARATION AND ADMISSION

To enter a regular college course in engineering the student should have completed in four years of high school: 3 units of English, 3 units of mathematics, 2 units of natural science including 1 unit of physics, and 2 units of social science. A student may be admitted with less than the above, but the deficiency must be made up before he can progress very far in his college engineering course. There is no foreign language requirement. A statement of admission requirements is included in Part II of this catalog.

Students who contemplate entering the College of Engineering with advanced standing from junior colleges or other institutions should include as many freshman and sophomore requirements listed in the curricula as possible. Freshman mathematics should include college algebra, trigonometry, and analytic geometry. Calculus and physics are prerequisites to many advanced courses and their omission will delay graduation.

A junior engineering student must have at least a 2.00 grade average before being permitted to register in upper division courses offered by the College of Engineering.

### COURSES AND FACILITIES

The College of Engineering offers standard four-year courses in Civil Engineering, Electrical Engineering, Mechanical Engineering (with an aeronautical option), Chemical Engineering, and (in cooperation with the College of Agriculture) Agricultural Engineering.

The work for the first year in engineering is basic and the same for all curricula given in the College of Engineering. Consequently, if a student is undecided as to which branch of engineering to follow, the decision can be postponed until the beginning of the second year.

In addition to the normal drafting rooms and science laboratories for basic work in the freshman and sophomore years, there are specialized laboratories for junior and senior work in engineering. Of particular note are: a remodeled agricultural engineering laboratory building with excellent facilities for farm shop, farm building and rural electrification instruction; a new and complete chemical engineering laboratory; a new hydraulic and irrigation laboratory; a new mechanical engineering laboratory with typical, full-size engines, machine tools, and steam, gas, and aeronautical apparatus for student use; a new electrical engineering laboratory equipped for work in power, electronics, and radio; and a structural and materials testing laboratory used not only by the students but also by the Idaho Department

of Highways and by engineers, architects, and construction agencies throughout the state and region.

### STANDING AND ADVANTAGES

The University of Idaho, supported by both state and federal funds to serve primarily the interests of Idaho students, is a nationally recognized training center for engineers. Among the 180 or more engineering colleges in the country, the College of Engineering ranks as medium size—neither so large that the individual student is lost in the crowd, nor so small that facilities are inadequate for complete training. One often hears about the advantages of the larger schools, but when one considers that the College of Engineering is inspected periodically by the same agency that inspects and accredits all other engineering colleges, that the same textbooks are used, that the same amount and standard of student work is required, and that instructors come from various other institutions, it is reasonable to conclude that the training is on a par with that obtainable at other places. Other schools, mainly the larger ones, often merit their reputation primarily for their graduate facilities—not their undergraduate work.

The outstanding accomplishments of College of Engineering graduates in competition with engineers from all other engineering colleges and in all branches of engineering provide the real proof of the value of the training they received. Large industries on the Pacific Coast, in the Midwest and in the East regularly interview and recruit College of Engineering graduates because they know what other graduates have done. In normal times many students from other states come to Idaho to study engineering despite the fact that they have to pay out-of-state tuition—an extra cost not charged Idaho students.

If the engineering profession is to be practiced in this state or region, there are special advantages in studying here because the student will learn the background and potentialities of the region and make acquaintances with other students who in later life will be his professional contemporaries.

### DEGREES

Curricula are offered in the College of Engineering leading to the degrees of Bachelor of Science in Civil Engineering, B.S.(C.E.); Bachelor of Science in Electrical Engineering, B.S.(E.E.); Bachelor of Science in Mechanical Engineering, B.S.(M.E.); Bachelor of Science in Chemical Engineering, B.S.(Ch.E.); Bachelor of Science in Agricultural Engineering, (B.S. Ag.E.).

For the requirements of the advanced degrees of Master of Science in the respective branches of engineering, M.S.(C.E.), etc., and the professional engineering degrees, see the description of the Graduate School.

The degree, Bachelor of Science in Agricultural Engineering, B.S.(Ag.E.), may be granted to students who have completed a four-year course in civil, mechanical, or electrical engineering followed by one year of prescribed work approved by the faculties concerned. The degree B.S.(C.E.) may be awarded to students who have satisfactorily completed the agricultural engineering curriculum followed by one year of work approved by the faculty.

The degree B.S.(E.E.) may be granted to students who have completed the respective courses in mechanical engineering followed by one year of prescribed work approved by the faculty. Likewise the degree B.S.(M.E.) may be awarded to students who have satisfactorily completed the electrical engineering curriculum followed by one year of work approved by the faculty. Students planning on securing a second degree should make such decision before the beginning of the junior year to arrange for the necessary sequence of courses.

The courses in the four-year engineering curricula listed below may be distributed advantageously over five undergraduate years. This may be

especially desirable for students entering with deficiencies in mathematics and natural science. A five-year program also permits more time for the choice of electives from other departments and for participation in worthwhile student activities, especially in student chapters of the various national engineering societies. Electives should be broadly chosen and the student should give careful attention to their sequence and coherence.

### REQUIREMENTS FOR GRADUATION

Students of all four-year curricula in the College of Engineering take the same work in the freshman year, as follows:

#### COMMON FRESHMAN YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
Chem.	1	Gen. Chemistry .....	4	Chem.	2	Gen. Chemistry .....	4
Engr.	1	Engr. Graphics .....	3	Engr.	2	Engr. Graphics .....	3
Engr.	5	Engr. Lectures .....	1	Engr.	10	Engr. Problems .....	1
Engr.	1	English Composition .....	3	Engr.	2	English Composition .....	3
Math.	11	Elementary Math. Anal. ....	5	Math.	12	Elementary Math. Anal. ....	5
		Military Science .....	1½			Military Science .....	1½
P.E.		Freshman Physical Ed. ....	½	P.E.		Freshman Physical Ed. ....	½
		<b>Total .....</b>	<b>18</b>			<b>Total .....</b>	<b>18</b>

To obtain the recommendation of the faculty for the degree of Bachelor of Science in Agricultural, Chemical, Civil, Electrical, or Mechanical Engineering, the candidate must have completed, in addition to the common freshman year above, the curriculum corresponding to the degree as outlined below. Elective courses must be approved by the Dean of the College of Engineering and will be selected in consultation with the student's advisor. Primary consideration will be given to humanistic-social courses and related work in other fields.

### CURRICULUM IN AGRICULTURAL ENGINEERING

Administered jointly by the Colleges of Engineering and Agriculture

#### SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
Ag.E.	51	Introduction to Ag. E. ....	1	Ag.E.	52	Introduction to Ag.E. ....	1
Agron.	51	General Soils .....	4	C.E.	54	Advanced Surveying .....	4
C.E.	53	Elementary Surveying .....	3	E.S.	66	Mechanics (Statics) .....	2
Math.	51	Calculus .....	4	Math.	52	Calculus .....	4
Phys.	51	Engr. Physics .....	5	Phys.	52	Engr. Physics .....	5
		Military Science .....	1½			Military Science .....	1½
P.E.		Sophomore Physical Ed. ....	½	P.E.		Sophomore Physical Ed. ....	½
		<b>Total .....</b>	<b>19</b>			<b>Total .....</b>	<b>18</b>

#### JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
E.S.	103	Mech. of Materials .....	4	Ag.E.	123	Agr. Mach. Design .....	3
E.E.	101	Elect. Machinery I .....	3	C.E.	140	Hydrology .....	2
E.E.	137	Elect. Engr. Lab. I .....	1	E.E.	102	Elect. Mach. II .....	3
Eng.	111	Engineering Reports .....	3	E.E.	138	Elect. Engr. Lab. ....	1
E.S.	101	Mechanics (Dynamics) .....	2	E.S.	120	Thermo. and Heat Trans. ....	3
E.S.	102	Fluid Mechanics .....	2	Elective			6
Elective			3				
		<b>Total .....</b>	<b>18</b>			<b>Total .....</b>	<b>18</b>



## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Ag.E. 140	Rural Electrification	2	Ag.E. 116	Farm Struct. Design	3
Ag.E. 157	Field Trips	0	Ag.E. 124	Agr. Tractor Power	3
Ag.E. 165	Conservation Engr.	2	Ag.E. 152	Agr. Engr. Appns.	2
Ag.E. 166	Irrigation Engineering	3	Ag.E. 158	Field Trips	1
C.E. 129	Elems. Struct. Design	4	C.E. 154	Contracts and Specifications	2
Econ. 56	Basic Economics	3	Elective		7
Elective		4			
	Total	18		Total	18

Total credits required, 145

## CURRICULUM IN CHEMICAL ENGINEERING

## SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Chem. 51	Qualitative Analysis	3	Chem. 52	Quantitative Analysis	3
Ch.E. 21	Introduction to Ch. E.	1	Ch.E. 22	Props. Engr. Materials	2
Econ. 56	Basic Economics	3	Math. 52	Calculus	4
Math. 51	Calculus	4	E.S. 66	Mechanics (Statics)	2
Phys. 51	Engr. Physics	5	Phys. 52	Engr. Physics	5
	Military Science	1½		Military Science	1½
P.E.	Sophomore Physical Ed.	½	P.E.	Sophomore Physical Ed.	½
	Total	18		Total	18

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Chem. 171	Organic Chemistry	4	Chem. 172	Organic Chemistry	3
Ch.E. 109	Chem. Engr. Lab. I	1	Ch.E. 130	Unit Operations	3
E.E. 131	D. C. Machinery	2	Ch.E. 124	Chem. Process Principles	3
E.S. 102	Fluid Mechanics	2	E.E. 132	A. C. Machinery	3
E.S. 120	Thermo and Heat Transfer	3	Eng. 111	Engineering Reports	3
Met. 103	Principles of Metallurgy	3	*Elective		3
*Elective		3			
	Total	18		Total	18

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Chem. 105	Physical Chemistry	4	Chem. 106	Physical Chemistry	4
Ch.E. 131	Mass Transfer I (Equil.)	2	Ch.E. 110	Pro Seminar	1
Ch.E. 134	Chem. Proc. Ind.	3	Ch.E. 132	Mass Transfer II (Rate)	2
Ch.E. 137	Field Trips	0	Ch.E. 136	Chemical Plant Design	4
Ch.E. 141	Chem. Engr. Lab. II	2	Ch.E. 138	Field Trips	1
E.S. 103	Mechanics of Materials	4	Ch.E. 142	Chem. Engr. Lab. III	2
*Elective		3	Ch.E. 144	Automatic Proc. Control	2
	Total	18	*Elective		3
				Total	19

\* A minimum of six elective credits are required in the humanistic-social field; the remaining six elective credits may be taken in technical fields, as additional work in the humanistic-social fields, or in other areas.

Total credits required, 145

## CURRICULUM IN CIVIL ENGINEERING

## SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
C.E.	53	Elementary Surveying .....	3	C.E.	54	Advanced Surveying .....	4
Geol.	11	Physical Geology .....	4	E.S.	66	Mechanics (Statics) .....	2
Math.	51	Calculus .....	4	Math.	52	Calculus .....	4
Phys.	51	Engr. Physics .....	5	Phys.	52	Engr. Physics .....	5
		Military Science .....	1½	Elective		.....	2
P.E.		Sophomore Physical Ed. ....	½			Military Science .....	1½
				P.E.		Sophomore Physical Ed. ....	½
		Total .....	18			Total .....	19

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
E.S.	103	Mech. of Materials .....	4	C.E.	110	Soil Mechanics .....	3
Econ.	56	Basic Economics .....	3	C.E.	122	Hydrology .....	2
E.E.	131	D. C. Machinery .....	2	C.E.	120	Theory of Structures .....	5
Eng.	111	Engr. Reports .....	3	E.E.	132	A. C. Mach. and Lab. ....	3
E.S.	101	Mechanics (Dynamics) .....	2	*Elective		.....	4
E.S.	102	Fluid Mechanics .....	2			Total .....	17
*Elective		.....	3				
		Total .....	19				

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
C.E.	108	Materials of Construct. ....	2	C.E.	111	Tranportation Engr. ....	3
C.E.	121	Struct. Des.-Rein. Conc. ....	4	C.E.	122	Struct. Des.-Stl. and Tbr. ....	4
C.E.	131	Sanitary and Municipal Engineering .....	3	C.E.	132	Sanitary and Municipal Engineering .....	2
C.E.	152	Pro Seminar .....	1	C.E.	141	Hydraulic Engr. ....	3
C.E.	153	Engr. Economy .....	2	C.E.	154	Contracts and Specifications	2
C.E.	157	Field Trips .....	0	C.E.	158	Field Trips .....	1
E.S.	120	Thermo. and Heat Transfer	3	*Elective		.....	3
*Elective		.....	3			Total .....	18
		Total .....	18				

\* No less than 5 credits to be selected in humanities, history, economics, government, literature or art. No less than 6 credits to be selected from approved list of technical electives.

Total credits required, 145

## CURRICULUM IN ELECTRICAL ENGINEERING

## SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
Econ.	56	Basic Economics .....	3	C.E.	51	Engr. Measrmts. (Surv.) ....	2
E.E.	22	Elect. and Mag. Circuits ....	3	E.E.	32	D. C. Machinery .....	3
Math.	51	Calculus .....	4	Math.	52	Calculus .....	4
M.E.	53	Machine Tool Lab. I .....	1	E.S.	66	Mechanics (Statics) .....	2
Phys.	51	Engr. Physics .....	5	Phys.	52	Engr. Physics .....	5
		Military Science .....	1½			Military Science .....	1½
P.E.		Sophomore Physical Ed. ....	½	P.E.		Sophomore Physical Ed. ....	½
		Total .....	18			Total .....	18

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
E.E. 122	Electronics .....	3	E.E. 106	Electrical Transients .....	3
E.E. 134	A.C. Circuits .....	3	E.E. 140	Elect. Instrument .....	3
E.E. 135	E.E. Laboratory .....	2	Eng. 111	Engr. Reports .....	3
Math. 101	Engr. Math. ....	3	E.S. 103	Mech. of Materials .....	4
E.S. 101	Mechanics (Dynamics) .....	2	E.S. 120	Thermo. and Heat Transfer .....	3
E.S. 102	Fluid Mechanics .....	2	*Elective	.....	3
*Elective	.....	3			
	Total .....	18		Total .....	19

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
E.E. 141	A.C. Machinery I .....	3	C.E. 154	Contracts and Specifications .....	2
E.E. 145	Pro Seminar .....	1	E.E. 142	A.C. Machinery II .....	2
E.E. 149	Elect. and Mag. Fields .....	3	E.E. 143	E.E. Laboratory .....	2
E.E. 163	Field Trips .....	0	E.E. 146	Pro-Seminar .....	1
E.E. 165	Radio Engineering .....	3	E.E. 148	Electrical Design, or	
E.E. 167	Radio Laboratory .....	2	E.E. 158	Transmission Lines .....	3
E.E. 169	Auto. Cont. Theory I .....	2	E.E. 164	Field Trips .....	1
M.E. 135	M.E. Laboratory .....	2	E.E. 170	Auto. Cont. Theory II .....	3
*Elective	.....	3	*Elective	.....	3
	Total .....	19		Total .....	17

\* It is recommended that 6 credits of electives be taken in history, economics, government, literature, or fine arts.

Total credits required, 145

## CURRICULUM IN MECHANICAL ENGINEERING

## SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Econ. 56	Basic Economics .....	3	Math. 52	Calculus .....	4
Math. 51	Calculus .....	4	M.E. 63	Kinematics .....	3
M.E. 53	Machine Tool Lab. I .....	1	E.S. 66	Mechanics (Statics) .....	2
M.E. 61	Materials and Processes .....	3	M.E. 54	Machine Tool Lab. II .....	2
Phys. 51	Engr. Physics .....	5	Phys. 52	Engr. Physics .....	5
	Military Science .....	1½		Military Science .....	1½
P.E.	Sophomore Physical Ed. ....	½	P.E.	Sophomore Physical Ed. ....	½
	Total .....	18		Total .....	18

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
E.E. 101	Elect. Machinery I .....	3	E.E. 102	Elect. Machinery II .....	3
E.E. 137	E.E. Laboratory .....	1	E.E. 138	E.E. Laboratory .....	1
Math. 101	Engr. Math. ....	3	Eng. 111	Engineering Reports or	
E.S. 101	Mechanics (Dynamics) .....	2	†Math. 102	Engr. Math. ....	3
E.S. 102	Fluid Mechanics .....	2	E.S. 103	Mech. of Materials .....	4
M.E. 121	Thermodynamics I .....	3	M.E. 122	Thermodynamics II .....	3
*Elective	.....	5	M.E. 136	M.E. Laboratory I .....	1
	Total .....	19	*Elective	.....	3
				Total .....	18

SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
M.E. 123	Comp. Fluid Mech. ....	3	M.E. 125	Machine Design II .....	4
M.E. 124	Machine Design I .....	3	M.E. 138	M.E. Laboratory III or .....	4
M.E. 131	Engine Analysis or .....		†M.E. 172	Mech. Vibrations .....	2
†Phys. 171	Intro. Atom. & Mol Phys. ....	3	M.E. 140	Pro-Seminar .....	1
M.E. 137	M.E. Laboratory II .....	2	M.E. 141	Power Plant Engr. or .....	
M.E. 145	Heat Tranfer .....	3	†Phys. 172	Intro. Atom. & Mol. Phys. ..	3
M.E. 163	Field Trips .....	0	M.E. 164	Field Trips .....	1
*Elective	.....	4	Bus. 134	Indust. Management or .....	
			†Phys. 154	Solid State Physics .....	3
			*Elective	.....	4
	<b>Total</b> .....	<b>18</b>		<b>Total</b> .....	<b>18</b>

\* A minimum of nine elective credits are required in the humanistic-social field.  
 † Alternative courses are primarily for those students expecting to study for advanced degrees.

Total credits required, 145

*Aeronautical Option*

For students primarily interested in the aeronautical phase of Mechanical Engineering, the following elective subjects may prove helpful to those seeking employment in the aircraft industry. These courses are in addition to M.E. 123, Comp. Fluid Mechanics, required in the Mechanical Engineering curriculum. Usually additional time is required to complete the entire option.

Course		Credits
C.E. 105	Advanced Mechanics of Materials .....	2
C.E. 120	Theory of Structures .....	5
C.E. 122	Structural Design .....	4
E.E. 122	Electronics .....	3
E.E. 165	Radio Engineering .....	3
E.E. 166	Radio Engineering .....	2
E.E. 167	Radio Engineering Lab. ....	2
E.E. 168	Radio Engineering Lab. ....	1

# The College of Law

EDWARD S. STIMSON, A.B., B.S., A.M., J.D., S.J.D. .... Dean of the College

WILLIAM J. BROCKELBANK, A.B., LL.B., LL.M., *Docteur en Droit* ..... Secretary

*The College of Law provisions in this bulletin are not to be regarded as an irrevocable contract between the students and the College of Law. With appropriate approval of the general faculty or the Academic Council, the College of Law reserves the right to change any provision or requirements at any time within the student's term of residence.*

## HISTORY AND PURPOSE

**T**HE COLLEGE of Law was established in 1909. Its primary purpose is to afford a thorough and scientific legal education for students who are fitted by intellectual maturity and previous academic training to pursue professional study under university methods of instruction.

The curriculum covers a minimum period of three academic years and is designed to prepare students for the general practice of law in any American state except Louisiana. Special attention is paid, however, to problems of local law in the western states, to irrigation and mining law, to Idaho pleading and practice, and to the Idaho law of community property.

The College of Law is conducted upon the theory that the teaching of law is a task requiring all the working time of well-trained legal scholars who have made special preparation for teaching. The members of the teaching staff do not practice law but give their entire time to instruction and research. Their practice of the law, which gives them an appreciation of the law in operation, has preceded their teaching.

The case system of instruction is used, supplemented by collateral reading, the examination of statutes and other source materials, the solution of problems, and the rendition of reports upon legal questions. The mere accumulation of information is subordinated to the more important ends of developing the facilities of the student and of training him in scientific habits of thought, at the same time imparting a thorough knowledge of the law as it actually functions.

## STANDING

The University of Idaho College of Law is the only law school in Idaho. It is a member of the Association of American Law Schools, the highest accrediting agency in the United States for law schools. It is also approved by the American Bar Association.

## ADMISSION TO THE BAR

Graduates of the University of Idaho College of Law have the legal education required to qualify them to take the bar examinations in any state in the United States, except possibly Louisiana. Pre-legal requirements vary somewhat in the several states. Graduates are admitted to take the bar examinations in Idaho.

## SCHOLARSHIPS AND AWARDS

**TITLE INSURANCE COMPANY SCHOLARSHIPS.**—The Title Insurance Company of Boise, Idaho, provides three scholarships each of the value of \$350 which are awarded annually on the basis of ability or scholarship, character and need. One of these scholarships is awarded in each of the three Law School classes. The holder of the scholarship in the first-year class will retain the scholarship in the second year, if his need continues and if he was in the upper half of his class during the first year. The holder of the scholarship in the

second year will retain the scholarship in the third year, provided his need continues and he was in the upper half of his class during the second year. Otherwise the scholarships are re-awarded in the second and third year.

**MACLANE SCHOLARSHIPS.**—John F. MacLane, the first Dean of the University of Idaho's College of Law, provided the University with a fund, the income from which is used to finance annual scholarships for students in the College of Law. It is planned that three MacLane Scholarships will be awarded each year. Applications for these scholarships will be judged on the basis of ability, scholarship and need. The specific amount of each award will be based on need.

**ROCKY MOUNTAIN MINERAL LAW FOUNDATION SCHOLARSHIP.**—Each year a \$350 scholarship is awarded by this foundation to a student in the College of Law who (a) has maintained above-average grades in all of his courses; (b) obtained a high grade in Irrigation and Mining Law; (c) has demonstrated a superior ability to think independently, constructively and analytically in his general law school work and in the field of mineral law in particular; (d) has written as a condition to the receipt of the scholarship, a case note or brief article upon some phase of mineral law.

**WILLIAM E. BORAH MEMORIAL PLAQUE.**—Phi Alpha Delta, national professional legal fraternity, engraves each year on the William E. Borah Memorial Plaque, donated to the College of Law by the fraternity, the name of the member of the graduating class who has made the highest scholastic average during the first five semesters of the law course.

**THE NATHAN BURKAN MEMORIAL COMPETITION.**—The American Society of Composers, Authors and Publishers awards each year a first prize of \$150 and a second prize of \$50 for the best and next best paper by senior students in the College of Law on some phase of Copyright Law.

**LAWYERS' TITLE AWARD.**—The Lawyers' Title Insurance Corporation offers an annual prize of \$100 to the graduating senior who is most proficient in Real Property Law.

**ROCKY MOUNTAIN MINERAL LAW FOUNDATION ESSAY CONTEST.**—The foundation offers three prizes each year: first prize, \$400; second prize, \$200; third prize, \$100, for essays on mineral law. The contest is open to students in law schools like the University of Idaho College of Law which are members of the foundation.

**THE LAWYERS COOPERATIVE PUBLISHING COMPANY AWARDS.**—This company awards a book on each subject to the student receiving the highest grades in the class on that subject.

Some scholarships and awards available generally to students in the University are available to law students. See pages 23 to 41 for a list of these.

### SUGGESTIONS FOR PRE-LEGAL WORK

The subject matter of pre-legal education is in general less important than the quality of the work done and the caliber of the professors under whom the work is taken. The student preparing to enter law school should avoid easy courses and take those which will develop his thinking powers. Intensive work will enable him to acquire the intellectual discipline and experience necessary for success in law school. Generally, the students who succeed best in law school are those who have done distinguished work in high school and college.

In regard to the subject matter itself, the pre-legal educational plan should be of a course which will provide a broad outline with enough concentration in a single field to secure a sense of mastery of the subject. A lawyer must have above average skill in written and oral expression. The

acquisition of these skills requires more than a course in English composition. It requires practice in writing and speaking obtained from courses requiring such practice. It is generally considered that courses in the social sciences (economics, political science, history, philosophy, psychology and sociology) afford a desirable background, especially economics and political science because an understanding of the economic and political organization of society and of business practice is necessary in understanding the legal problems connected therewith. A year's work in elementary accounting is almost essential background to an understanding of the law of income taxation and business organization.

### REQUIREMENTS FOR ADMISSION

Admission to the College of Law will be granted to those who have completed 96 semester credits or more of *acceptable college work in residence* at an *accredited* college or university with at least a "C" average on all work attempted (except "D" and "F" work which has been once repeated to raise the grades). These credits should include six semester credits of English Composition or their equivalent. However, in the discretion of the Dean of the College of Law, students may be admitted with less than 96 semester credits but with 90 or more semester credits whose total credits are equal to three-fourths of the credits acceptable for a bachelor's degree granted on the basis of four years of work at the university or college where the work was taken or the state university in the state where the work was taken, whichever is higher, (principal college or university where no state university). In the event an applicant is admitted with 90 or more semester credits but less than 96, the deficiency must be made up before an LL.B. degree will be awarded.

#### *Definition of Italicized Words*

"*Acceptable college work*" does not include credits in hygiene, domestic arts, physical education, vocal or instrumental music, typing, shorthand, practice teaching, teaching methods and techniques, non-theory courses in military science and similar courses *except that* required courses in such work are acceptable up to 10 per cent of the total credits offered for admission. The grade average requirement must be obtained on credits other than those offered in these subjects.

"*In residence*" means that the student must be in personal contact with the instructor. It does not include correspondence work. It does include work done off the campus in regular class sessions conducted by and under the personal supervision of members of the instructional staff.

"*Accredited college or university.*" The most satisfactory way for a prospective student to ascertain whether or not a college or university is accredited is to write the Registrar of the University of Idaho, giving the name of the institution whose standing is in question.

### PROCEDURE FOR ADMISSION

*Applicants who have taken their pre-legal work at the University of Idaho* should fill out and file with the Dean of the College of Law a Personnel Blank. Students in the combined curricula should file such Personnel Blank prior to taking any law course. Personnel Blanks should be filed at least a month before the beginning of the semester in which the applicants plan to take law work. Blanks may be obtained from the Dean of the College of Law.

*All other applicants should* (1) fill out and file with the Registrar of the University of Idaho an application blank for admission to the University of Idaho, (2) have the principal of the high school from which they

graduated send their high school transcript direct to the Registrar of the University of Idaho, (3) have each university or college attended send a transcript direct to the Registrar of the University of Idaho, and (4) fill out and file with the Dean of the College of Law a Personnel Blank.

If the applicant is accepted, he will receive a permit to register from the Registrar. Applicants will be saved much inconvenience if all their credentials are received in sufficient time for the settlement of any question through correspondence.

### **ADMISSION TO ADVANCED STANDING**

Students who have satisfactorily completed work in a law school which is a member of the Association of American Law Schools may be admitted to advanced standing. (See Requirements for Graduation as to requirements for students so admitted.)

### **SPECIAL STUDENTS**

In rare instances persons who cannot qualify as candidates for the degree of Bachelor of Laws may be admitted as special students on petition to the Committee on Admissions approved by the faculty of the College of Law.

The applicant must show that he is unable to pursue such studies as will qualify him for admission as a regular student, and that he possesses such educational training and practical experience as will enable him to pursue the study of law satisfactorily. Application for permission to enter as a special student should be made in advance of the regular registration period. It must be distinctly understood that such special students are not candidates for a degree in Law.

### **COMBINED ARTS AND LAW COURSE**

A student may secure the degree of Bachelor of Arts and Bachelor of Laws in six years under the following regulation: Any candidate for the Bachelor of Arts degree, who at the end of the junior year has completed 100 semester credits and who has satisfied all other general requirements of the College of Letters and Science for this degree as specified on page 67, may in his senior year take the full first year of the law course, and upon completion of the same be entitled to receive the degree of Bachelor of Arts. Upon satisfactory completion thereafter of two years of advanced law study, the degree of Bachelor of Laws will be conferred. When the 100 semester credits of Letters and Science work are completed, the student must be qualified for admission to the College of Law before taking any law courses. The requirements for admission are the same as for applicants who are not on the combined curriculum. No work included in the above 100 credits and counted toward the Bachelor of Arts degree may be counted again toward the LL.B. degree.

The College of Law has similar combined curricula arrangements with Idaho State College, Ricks College, College of Idaho and Northwest Nazarene College.

### **COMBINED BUSINESS AND LAW COURSE**

The College of Law and the College of Business Administration offer a combined six-year curriculum leading to the degree of Bachelor of Science in Business at the end of four years and to the degree of Bachelor of Laws at the end of six years. Details with respect to this combination curriculum may be found on page 132. The student must be qualified for admission to the College of Law before taking any law courses. The requirements for admission are the same as for applicants who are not on the combined curriculum.



**FEES AND EXPENSES**

There is no special tuition fee in the College of Law. General expenses are outlined in Part I.

**REQUIREMENTS FOR GRADUATION**

The degree of Bachelor of Laws (LL.B.) will be awarded to students who have obtained 82 semester credits offered by the College of Law with an average grade of 2.00 (C) upon all law work taken except that which the student has retaken. A student may once be permitted to retake any course in which a grade below (C) was received, provided such a course is being offered. When a course is retaken, only the semester credits and grade points of the second taking shall be considered in determining the student's grade point average required for graduation. The last 26 semester credits of law must be completed in residence. Students admitted to the College of Law with advanced standing must maintain the same average on all law work taken here as that required for graduation. The courses of the first year and Conflict of Laws I, Conflict of Laws II, Legal Profession I, Legal Profession II, Practice Court I and Practice Court II are required for graduation.

**OTHER REQUIREMENTS**

Students in the College of Law must have the following cumulative grade point averages in law courses in order to be eligible to register at the beginning of any fall semester.

<b>Semester Credits Taken</b>	<b>Grade Point Average</b>
12 to 23 inclusive	1.5
24 to 35 "	1.7
36 to 82 "	1.8

A student ineligible to reregister may petition the faculty of the College of Law for reinstatement and if the petition is granted, he may then reregister. Appeal from a decision denying reinstatement may be made to the Academic Council.

Any student registering for a third or fourth semester of law, who has less than a (C) average, must repeat first-year courses offered that semester in which he has grades of (D) or (F).

First-year law courses are not open to third-year law students except in unusual circumstances and by special permission of the Dean. This rule applies to the class of 1955 and succeeding classes.

**ENGLISH**

Skill of a professional standard in the use of English in legal drafting and argumentation, oral and written, shall be a prerequisite to graduation or to continued study in the College of Law. The faculty may prescribe such remedial or other studies as may be deemed advisable in particular cases, and for such purposes may restrict the number or character of law courses to be taken by such students.

**PRACTICE COURT**

As an essential part of the work in procedure, the College of Law maintains a Practice Court as a supplement to classroom courses in pleading and evidence. The purpose of this course is to give the students an opportunity to coordinate their knowledge of procedure with their knowledge of substantive law in the conduct of actual cases.

The first semester of this course is devoted to a study of trial tactics. In the course of the semester, student teams interview a client, conduct deposition proceedings, participate in pre-trial and summary judgment hearings, subject witnesses to examination and cross-examination, and finally, present final argument to a jury composed of their classmates. Each class is two hours in length. The first hour is devoted to the class assignment and the second hour to criticism by students and the faculty member conducting the course. In the second semester, narrative factual statements are prepared and submitted to students from the undergraduate colleges in the University who then act out the roles assigned to them in the course of actual litigation. Class members acting in teams of two carry a trial from its beginning stages through presentation to a jury to post-trial practice. The juries are normally composed of volunteers from various community organizations or high school groups. A faculty member officiates as judge and class members function as officers of the court in various capacities. Following each trial the conduct and tactics of counsel are subjected to criticism by the class. Concurrently with the trial in the second semester, a series of lectures on trial and appellate practice is delivered by the faculty member assigned to the course.

Cases are constructed in such a fashion to approximate as closely as possible the usual types of cases encountered in trial practice. The cooperation of local lawyers and judges is utilized as frequently as possible.

#### **BENCH AND BAR**

The student organization of the College of Law, known as the *Bench and Bar*, holds regular meetings, when it is addressed by outstanding lawyers and other professional men.

#### **SPECIAL LECTURES**

It is the policy of the College of Law to bring to the school each year expert practicing lawyers and jurists of the state for a series of lectures in specialized subjects. Special lectures are given on workmen's compensation legislation, on corporation finance and the regulation of securities issues, on special phases of Idaho practice, and on office practice.

#### **EQUIPMENT**

The College of Law is housed in new and attractive quarters consisting of courtroom, classrooms, offices, library with stack and shelf space for 40,000 volumes, typing rooms, discussion and seminar rooms.

#### **LIBRARY**

The law library consists of 23,600 accessioned volumes, constantly being added to by gift and purchase. Included are an unusually complete collection of treatises and periodicals, as well as all standard digests and encyclopedias; the statutes of the United States and of the American states; the National Reporter System and reports of virtually all of the states prior thereto; the reports of the Supreme Court of the United States; English reports from the earliest date; and all the various annotated case series. Included also are works on the general nature and history of law, legal philosophy, public international law, and on closely related fields of political science and business practice.

The law library is supplemented by the very excellent collections in the main University library, which as a depository library contains practically all publications issued by the United States government.

#### **CURRICULUM**

The course of study covers three academic years. The prescribed first-year work is required of all students. Students in the second and third

years normally take 14 semester credits each semester and may not, during any semester, receive credit for more than 15 semester credits.

Students may register for three semester credits of advanced R.O.T.C. work in any semester and such students may register for a total of 17 semester credits, but the R.O.T.C. credits do not count toward the LL.B. degree.

### Curriculum in Law

#### FIRST YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Law 101	Contract I .....	3	Law 102	Contracts II .....	3
Law 103	Legal Writing I .....	1	Law 104	Legal Writing II .....	1
Law 109	Judicial Remedies .....	4	Law 106	Agency .....	2
Law 112	Real Property .....	3	Law 114	Constitutional Law .....	3
Law 115	Torts I .....	3	Law 116	Torts II .....	2
		<u>14</u>	Law 122	Trusts .....	3
					<u>14</u>

#### SECOND YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Law 207	Evidence .....	4	Law 213	Administration of Decedents' Estates .....	1
Law 212	Wills .....	2	Law 231	Code Pleading .....	3
Law 216	Titles .....	3	Law 248	Irrigation and Mining Law .....	3
Law 227	Legal Profession I .....	1	Law 268	Business Associations .....	3
Law 228	Legal Profession II .....	1	Law 274	Taxation .....	3
Law 241	Bills and Notes .....	3			<u>13</u>
		<u>14</u>			

#### THIRD YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Law 205	Community Property .....	2	Law 224	Administrative Law .....	3
Law 236	Creditors' Rights .....	3	Law 229	Estate Planning .....	3
Law 239	Contracts III .....	3	Law 233	Criminal Law and Its Administration .....	3
Law 255	Conflict of Laws I .....	2	Law 256	Conflict of Laws II .....	2
Law 279	Practice Court I .....	1	Law 280	Practice Court II .....	1
		<u>11</u>			<u>12</u>

#### SECOND OR THIRD YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Law 203	Persons .....	2	Law 226	Municipal Corporations .....	2
Law 242	Suretyship .....	2	Law 277	Labor Law .....	2

# The College of Mines

Mining Engineering  
Metallurgical Engineering

Geological Engineering  
Geology

Geography

E. F. COOK, B.S., M.S., Ph.D. .... *Dean*

W. W. STALEY, B.S., M.S., E.M. .... *Secretary*

**T**HE UNIVERSITY OF IDAHO, situated in one of the foremost mining regions of the world, appropriately maintains courses in mineral industries technology and in the earth sciences. To enable this work to be carried on effectively, a College of Mines was created August, 1917, as an administrative unit of the University, and its scope was indicated in the following language:

Within this college will be included the work in mining proper, in metallurgy, and in geology; and it shall include the exploitation of the nonmetalliferous minerals (except road-making materials) as well as that of the precious and useful metals.

In accordance with these instructions, the College of Mines offers curricula leading to the degrees of Bachelor of Science in Mining Engineering, Metallurgical Engineering, Geological Engineering, Geology, and Geography. For requirements for the degrees of Master of Science in these branches and the professional degrees, E.M., Met.E., and Geol.E., see the description of the Graduate School.

## ADVANTAGES OF LOCATION

The campus of the University of Idaho at Moscow is ideally located in relation to the mineral industry of the Northwest. Large commercial deposits of many metallic and non-metallic minerals are found in nearby areas which serve as "laboratories" for our students.

**GEOLOGY.**—Idaho cannot be surpassed as a field for general geologic investigations. Portions of four physiographic provinces, with their particular structural features, are included within the State. The sedimentary rock section ranges from Algonkian to Pleistocene. The crystalline rocks are unusually varied and include Precambrian intrusives; the great Idaho batholith; middle Tertiary and more recent lava flows that cover thousands of square miles; and recently active volcanic craters. There are few areas in the world where the relationships of ore deposition to structure and igneous activity can be studied to better advantage.

The College of Mines Summer Camp at Mackay is especially well located for geological study. It permits ready access to numerous geological structures, highly fossiliferous sedimentary rocks, extrusive and intrusive igneous rocks, deposits of numerous ore minerals, and rocks in different stages of metamorphism.

Idaho and the surrounding area contain many outstanding economic mineral deposits, both metallic and non-metallic. The great lead-zinc-silver deposits of Coeur d'Alene are within a few hours drive of the campus. The Coeur d'Alene district is one of the seven or eight "billion-dollar" districts in the world—districts which have produced metal valued in excess of one billion dollars. Two others of these billion-dollar giants—Butte, Montana, and Bingham, Utah—are within 500 miles of the Idaho campus.

The famous Sullivan lead-zinc deposit in British Columbia is just north of the Idaho boundary, and there are important uranium deposits in north-

eastern Washington. East-central Idaho has the largest deposit of cobalt in the United States. Columbium, tantalum, and uranium are being produced from placer sands in Valley County. In recent years Idaho has been a large producer of antimony and tungsten. Some Idaho placers contain important amounts of monazite.

Two non-metallic "ores" in Idaho warrant special mention. The great phosphate deposits of southern Idaho are the largest in the world, and they are being exploited on a large scale. In Latah County, within about 15 miles of Moscow, there are extensive clay beds, which are now being developed for mining; not only will these clays be produced for their "conventional" uses—paper filler and coating, filters, and ceramics, but they are being intensively tested as a source of high-grade alumina for the production of metallic aluminum.

In addition to Idaho's phosphate and clays, there are many other important non-metallic deposits in Idaho and its neighboring states and provinces—magnesite in northeastern Washington; coal in Montana, Utah, and Wyoming; and petroleum in Alberta, Montana, and Wyoming.

**GEOGRAPHY.**—The impact of economic mineral deposits and their attendant industrial activities has an important effect on differential land use patterns as studied in our courses in Geography; land uses for forestry, agriculture, recreation, and other purposes are interrelated with the needs of the mineral industry.

**MINING.**—Students have opportunities to observe all types of mining operations and see the machinery and equipment employed in the mining industry—in some of the smaller mines, as well as in the large mines of the Coeur d'Alene and Butte districts. Not only are these visited on field trips, but many students find summer employment in the mines.

**METALLURGY.**—There are many large metallurgical plants within relatively short distances of Moscow—concentrating mills, lead smelter, and zinc plant at Kellogg, Idaho; copper smelter and zinc plant at Anaconda, Montana; lead smelter and zinc plant at Trail, B. C.; and an aluminum smelter and rolling mill in Spokane, Washington. These, too, often provide students with opportunities for summer work.

**OTHER ORGANIZATIONS.**—The Idaho Bureau of Mines and Geology has its headquarters and research facilities on the University of Idaho campus, and works in close conjunction with the College of Mines. There are field and research branches of both the U. S. Geological Survey and the U. S. Bureau of Mines in nearby Spokane. There are chapters of A.I.M.E. and A.S.M. in Spokane, and students in the College of Mines are encouraged to become student members of these societies.

## EQUIPMENT AND FACILITIES

The College of Mines equipment is conveniently described under the four heads of geology, mining, metallurgy, and geography. In addition to the facilities here mentioned, the student has the use of the well-equipped laboratories of the departments of mechanical, electrical, and civil engineering, and of chemistry and physics, and enjoy many cultural benefits not obtainable in isolated mining schools that are not connected with universities.

**MINING ENGINEERING.**—Facilities and equipment include models of mine workings, mine timbering and mine equipment, rock drilling machines, mine surveying instruments, calculating machines, drafting equipment, a mine fan and apparatus for making ventilation surveys, and a Geiger counter. Illustrative material includes, maps, drawings, films, and slide collections illustrating mining methods and practices.

The Idaho College of Mines has a unique art collection—the Peschel collection, which was given on a permanent loan basis to the College by the heirs of William M. Peschel who lived for many years at Lewiston, Idaho. This contains a number of prints and water colors illustrating the parade uniforms worn by mining officials and workers in Germany about the seventeenth century. In addition to the illustrations, the collection contains a number of the ceremonial axes and canes which were carried by these officials.

**METALLURGICAL ENGINEERING.**—The metallurgy laboratories are equipped for class instruction and research in ore dressing and process metallurgy. Equipment includes crushers, ball mills, pulverizers, screens and screen shakers, flotation machines, leaching equipment, and various other concentrating machines including a Carpcio induced-roll magnetic separator and a Carpcio high-intensity electric separator.

Physical metallurgy is centered in two laboratories. The metallography laboratory has facilities for polishing and etching metals, alloys, minerals, and ceramic materials for macroscopic and microscopic examination; metallographic microscopes for visual examination of specimens; and a metallograph, cameras, and darkroom for photographic work. The X-ray diffraction laboratory is equipped to handle a large variety of problems in metallurgy, ceramics, and mineralogy such as identification of alloy phases and minerals, texture studies, and phase diagram determinations. Other equipment includes pyrometers, calorimeter, hardness tester, and several electric furnaces for melting, thermal analysis, and heat treatment.

**GEOLOGICAL ENGINEERING AND GEOLOGY.**—Laboratories are maintained for work in introductory geology, mineralogy, paleontology, optical mineralogy, and petrology.

Working materials include crystal models; representative specimens of minerals, rocks, and fossils; thin sections and polished sections of minerals and rocks; and topographic and geologic maps. Reference materials include large collections of minerals, of rocks, and of specimens illustrating ore deposits. Equipment includes binocular, reflecting, and petrographic microscopes. Research facilities include a universal stage, photomicrograph equipment, and apparatus for preparing thin sections and polished sections.

**GEOGRAPHY.**—The equipment available for work in geography includes an assembly of specialized cartographic equipment and more than a thousand maps and air photos for interpretive studies. In addition, there are available over 60,000 specialized maps in the University Library. Also of significance to the geography student are the numerous complementary course offerings in the several divisions of the University.

**FIELD TRIPS.**—Appropriate field trips are arranged and conducted under close instructional supervision. The availability of areas of unusual geologic structure and of mining and metallurgical plants provides convenient opportunity for studies in the field to supplement class and laboratory work.

**IDAHO BUREAU OF MINES AND GEOLOGY LIBRARY.**—Mr. Joseph J. Taylor of Montpelier, one of the pioneer mining engineers of the West, gave the Idaho Bureau of Mines and Geology a number of years ago a small but select library of technical books and reports of great value, and upon this nucleus, through gifts and loans from other friends and members of the faculty, and exchange of the Idaho Bureau of Mines and Geology, an excellent reference and research library has been built up to supplement the University Library for purposes of instruction and research.

### GENERAL INFORMATION

**FEES AND EXPENSES.**—For a statement of fees and expenses, see Part I.

**SUMMER EMPLOYMENT.**—The dean and faculty of the College aid students in securing employment in the mineral industries and in geological field work during summer vacations. Employment is sometimes available during Christmas and spring vacations.

**GRADUATE ASSISTANTSHIPS AND RESEARCH FELLOWSHIPS.**—Several graduate teaching assistantships in geology, mining, and metallurgy are offered, each providing an income of \$1500 for 10 months, plus exemption from tuition. The Idaho Bureau of Mines and Geology supports, as funds permit, graduate research in geology, mining, and metallurgy according to the needs of the State. From time to time a graduate research fellowship is made available under a cooperative agreement with the U. S. Bureau of Mines.

**SCHOLARSHIPS, GRANTS-IN-AID, AND LOAN FUNDS.**—Students having a high academic standing at either high school or college level should refer to "Scholarship" in Part I of this catalog. The American Smelting and Refining Company, Hecla-Bunker Hill, and A. E. Larson scholarships are made available only to students in the College of Mines. The College of Mines administers the J. R. Simplot Grant-in-Aid program to needy and deserving students. Two loan funds, the Laney fund and the J. J. Day fund, are restricted to College of Mines students.

**GEOLOGY-MINING FIELD CAMP.**—The College of Mines Field camp at Mackay, Idaho, is offered during the summer and is required of students in the Mining Engineering, Geological Engineering, and Geology curricula. The camp program, scheduled for the summer between the junior and senior years, consists of geological field practice, mine surveying, and mapping. The specific requirements for each curriculum are given in the respective descriptions. The purpose of the field camp is to give the student the opportunity to apply what he has learned in the classroom and laboratory to actual field problems. The camp provides work situations approximating the conditions comparable to those met by the professional geologist.

## Curricula

With the exception of the Geography curriculum, students of all four-year curricula in the College of Mines take the same work in the freshman year.

A list of acceptable electives may be consulted in the office of the heads of departments concerned or in the office of the major professor or advisor. Electives must be approved by the head of the department or by the major professor involved.

### COMMON FRESHMAN YEAR IN ALL OPTIONS EXCEPT GEOGRAPHY

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
Chem.	1	General Chemistry .....	4	Chem.	2	General Chemistry .....	4
Eng.	1	English Composition .....	3	Engr.	2	English Composition .....	3
Geol.	11	Physical Geology .....	4	Geol.	14	Mineralogy .....	4
Math.	11	Elementary Math. Analysis ..	5	Math.	12	Elementary Math. Analysis	5
Min.	1	Mineral Industry Lectures ..	1	Mil.		Military Science .....	1½
Mil.		Military Science .....	1½	P.E.	31	Freshman Physical Ed. ....	½
P.E.	31	Freshman Physical Ed. ....	½				
		Total .....	19			Total .....	18

## CURRICULUM IN GEOLOGICAL ENGINEERING

## SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Engr.	1	Engineering Graphics .....	Engr.	2	Engineering Graphics .....
Geol.	51	Rock Study .....	Geol.	52	Historical Geology .....
Math.	51	Calculus .....	Math.	52	Calculus .....
Phys.	51	Engineering Physics .....	Phys.	52	Engineering Physics .....
Pol.Sci.	1	American Government .....	Mil.		Military Science .....
		or	P.E.	33	Sophomore Physical Ed. ....
Psych.	1	General Psychology .....			<u>1½</u>
Mil.		Military Science .....			<u>18</u>
P.E.	33	Sophomore Physical Ed. ....			Total .....
		<u>1½</u>			18
		Total .....			
		19			

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
C.E.	53	Elementary Surveying .....	Econ.	52	Principles of Economics ....
Econ.	51	Principles of Economics ....	E.S.	103	Mechanics of Materials .....
E.S.	66	Mechanics (Statics) .....	Geol.	130	Geol. Field Methods .....
Geol.	121	Structural Geology .....	Geol.	150	Economic Mineral Deposits ..
Min.	101	Elements of Mining .....	Geog.	12	Economic Geography .....
Elective		.....			or
		3	Hist.	4	History of Civilization .....
		Total .....	Elective		.....
		17			3
					Total .....
					17

SUMMER: Geol. 131 - Field Geology, 3-4 credits

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
E.S.	102	Fluid Mechanics .....	E.S.	120	Thermodynamics and
Geol.	101	Geomorphology .....			Heat Transfer .....
Geol.	133	Geologic Reports .....	Geol.	104	Sedimentation .....
Geol.	163	Optical Mineralogy .....	Geol.	141	Engineering Geology .....
Geol.	197	Pro-Seminar .....			or
Elective		.....	Geol.	160	Exploration Geology .....
		3-4	Geol.	164	Petrography and Petrology ..
		Total .....	Elective		.....
		15-16			5
					Total .....
					17

Total credits required, 144

## CURRICULUM IN GEOLOGY

## SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Chem.	51	Qualitative and	Chem.	52	Quantitative Analysis .....
		Gravimetric Analysis .....			or
		.....	Eng.	2	Foreign Language .....
		4	Eng.	2	Engineering Graphics .....
		or	Geol.	52	Historical Geology .....
Engr.	1	Engineering Graphics .....	Phys.	4	General Physics .....
Geol.	51	Rock Study .....	Mil.		Military Science .....
Phys.	3	General Physics .....	P.E.	33	Sophomore Physical Ed. ....
Mil.		Military Science .....			<u>1½</u>
P.E.	33	Sophomore Physical Ed. ....			<u>18</u>
Elective		.....			Total .....
		8			17
		Total .....			
		18			



JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
C.E. 53	Elementary Surveying .....	3	Geol. 104	Sedimentation .....	2
Econ. 51	Principles of Economics .....	3	Geol. 112	Invertebrate Paleontology ....	3
Geol. 103	Stratigraphy .....	2	Geol. 130	Geological Field Methods ....	1
Geol. 121	Structural Geology .....	3	Geol. 150	Economic Mineral Deposits ..	3
Elective .....		4	Elective .....		5-6
Total .....		15	Total .....		14-15

SUMMER: Geol. 131 - Field Geology, 3-4 credits

SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Geol. 101	Geomorphology .....	3	Geog. 110	Cartography .....	4
Geol. 133	Geological Reports .....	2	Geol. 102	Map Interpretation .....	2
Geol. 151	Origin of Mineral Deposits ..	3	Geol. 164	Petrography and Petrology ..	4
Geol. 163	Optical Mineralogy .....	4	Geol. 198	Pro-Seminar .....	1
Geol. 197	Pro-Seminar .....	1	Elective .....		3
Elective .....		3	Total .....		14
Total .....		16	Total .....		14

Total credits required, 135

CURRICULUM IN GEOGRAPHY

FRESHMAN YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Eng. 1	English Composition .....	3	Eng. 2	English Composition .....	3
Geog. 3	Physical Geography .....	4	Geog. 12	Economic Geography .....	3
Hist. 3	Western Civilization .....	3	Geog. 54	World Regional Geography ..	2
Math. 1	Fundamentals of Math. ....	4	Geol. 4	Fundamentals of Geology .....	4
Min. 1	Mineral Industry Lectures ..	1	Math. 2	Fundamentals of Math. ....	4
Mil.	Military Science .....	1½	Mil.	Military Science .....	1½
P.E. 31	Freshman Physical Ed. ....	½	P.E. 31	Freshman Physical Ed. ....	½
Total .....		17	Total .....		18

SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Biology, Botany, Chemistry, Zoology .....		4	Biology, Botany, Chemistry, Zoology .....		4
Engr. 1	Engineering Graphics .....	3	Agron. 51	Soils .....	3
	or			Foreign Language .....	4
	Architecture 13-14 .....	2	Mil.	Military Science .....	1½
	Foreign Language .....	4	P.E. 33	Sophomore Physical Ed. ....	½
Soc. 72	Introduct. to Anthropology ..	3	Elective .....		3
Mil.	Military Science .....	1½	Total .....		16
P.E. 33	Sophomore Physical Ed. ....	½	Total .....		16
Total .....		15-16	Total .....		16

JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Agron. 111	Crop Ecology .....	3	Econ. 52	Principles of Economics ....	3
Econ. 51	Principles of Economics ....	3	Eng. 115	Technical Writing .....	3
Geog. 180	Political Geography .....	3	Geog. 101	Weather and Climate .....	3
Geol. 101	Geomorphology .....	3	Geog. 140	Geography of North America ..	3
Phys. 1 or 3	(Elementary Physics) .....	4	Elective .....		3-4
Elective .....		3	Total .....		15-16
Total .....		19	Total .....		15-16

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Geog. 137	Conservation of Natural Resources	3	Geog. 110	Cartography	4
Geog. 155	Geography of Asia	3	Geog. 170	Urban Geography	3
Pol.Sci. 137	International Relations	3	Soc. 118	Peoples of the World	3
Elective		8	Elective		6
	Total	17		Total	16

Total credits required, 135

## CURRICULUM IN METALLURGICAL ENGINEERING

## SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Chem. 51	Qualitative and Gravimetric Analysis	3	Chem. 52	Quantitative Analysis	3
Engr. 1	Engineering Graphics	3	Engr. 2	Engineering Graphics	3
Math. 51	Calculus	4	Math. 52	Calculus	4
Phys. 51	Engineering Physics	5	Phys. 52	Engineering Physics	5
Mil.	Military Science	1½	Mil.	Military Science	1½
P.E. 33	Sophomore Physical Ed.	½	P.E. 33	Sophomore Physical Ed.	½
	Total	17		Total	17

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Chem. 105	Physical Chemistry	3	Chem. 106	Physical Chemistry	3
E.S. 66	Mechanics (Statics)	2	E.S. 103	Mechanics of Materials	4
E.S. 102	Fluid Mechanics	2	Met. 104	Physical Metallurgy	3
Met. 103	Principles of Metallurgy	3	Met. 106	Experimental Physical Metallurgy	2
Min. 101	Elements of Mining	3	Met. 110	Ore Dressing	3
Elective*		5	Elective*		3
	Total	18		Total	18

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
E.E. 131	D. C. Machinery	2	C.E. 51	Engineering Measurements (Surveying)	2
Eng. 111	Engineering Reports	3	Ch.E. 124	Chemical Process Principles	3
E.S. 120	Thermodynamics and Heat Transfer	3	E.E. 132	A. C. Machinery	3
Met. 112	Metallurgical Lab	3	E.S. 101	Mechanics (Dynamics)	2
Met. 127	Production Metallurgy	3	Met. 128	Production Metallurgy	3
Met. 131	Metallurgical Calculations	1	Met. 132	Metallurgical Calculations	1
Elective*		3	Elective*		5
	Total	18		Total	19

Total credits required, 144

\* 12 elective credits must be earned in courses given in Social Sciences, Humanities, and Psychology.

## CURRICULUM IN MINING ENGINEERING

## SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
Engr.	1	Engineering Graphics .....	3	Engr.	2	Engineering Graphics .....	3
Geol.	51	Rock Study .....	2	E.S.	66	Mechanics (Statics) .....	2
Math.	51	Calculus .....	4	Math.	52	Calculus .....	4
Phys.	51	Engineering Physics .....	5	Phys.	52	Engineering Physics .....	5
Mil.		Military Science .....	1½	Mil.		Military Science .....	1½
P.E.	33	Sophomore Physical Ed. ....	½	P.E.	33	Sophomore Physical Ed. ....	½
Elective*		.....	1-2			.....	
Total .....		17-18	Total .....		16		

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
C.E.	53	Elementary Surveying .....	3	Geol.	130	Geological Field Methods ....	1
E.S.	103	Mechanics of Materials .....	4	Geol.	150	Economic Mineral Deposits	3
Geol.	121	Structural Geology .....	3	Met.	110	Ore Dressing .....	3
Met.	103	Principles of Metallurgy ....	3	Min.	108	Mine Surveying .....	2
Min.	101	Elements of Mining .....	3	Min.	122	Mining Methods .....	2
Elective*		.....	3	Min.	128	Rock Mechanics .....	2
Total .....		19	Total .....		16		

## SUMMER

Min. 118 — Mine Surveying and Mapping, 2 credits  
 Geol. 131 — Field Geology, 1-2 credits

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
E.E.	131	D. C. Machinery .....	2	E.E.	132	A. C. Machinery .....	2
Eng.	111	Engineering Reports .....	3	E.S.	102	Fluid Mechanics .....	2
E.S.	101	Mechanics (Dynamics) .....	2	Min.	106	Mine Plant Design .....	2
Met.	112	Metallurgical Lab .....	3	Min.	124	Mining Economics .....	2
Min.	105	Mine Plant Design .....	2	Min.	130	Surface Mining .....	2
Min.	113	Mine Ventilation .....	2	Min.	140	Mining Lab .....	1
Min.	131	Support of Ground .....	2	Min.	161	Geophysical Prospecting ....	2
Elective*		.....	3	Elective*		.....	3
Total .....		19	Total .....		16		

Total credits required, 144

\* 10 elective credits must be chosen from Social Sciences, Humanities, Psychology, or Industrial Relations courses.

# The College of Forestry

Forest Management	Range Management
Wildlife Management	Fishery Management
Wood Utilization Technology	

ERNEST WOHLLETZ, M.S. .... *Dean of College*  
CRAIG MACPHEE, Ph.D. .... *Secretary of College Faculty*

## HISTORY AND PURPOSE

**T**HE COLLEGE of Forestry at the University of Idaho was established in 1909 and was administered as a department until 1917. At that time the status was changed to a School of Forestry. The name was changed to College of Forestry in 1953.

The purpose of the College of Forestry is to train students as competent individuals and professionals. The goal is to offer an educational program which will give the student a well rounded college education, both scientific and cultural. These studies will prepare the individual for his responsibility in society and give him the educational background for a happier, more abundant, and productive life. The specific objective, however, is to superimpose on this general background a course of study of a professional nature. The training obtained qualifies the student for the technical, administrative, and research requirements necessary for the management and use of the resources of forest and range lands.

## ADVANTAGES OF LOCATION

The University of Idaho is ideally located for the training of students in forestry and the allied professional fields, described below. The State of Idaho is comprised largely of forest and range lands with a variety of vegetational types, close at hand for student study. The virgin and cut-over forested areas range from the ponderosa pine type in southern Idaho to the mixed coniferous and famous white pine types in northern Idaho. Range lands used by domestic livestock and big game cover extensive areas within the State. These grazing lands vary from spring-fall and winter ranges in the sagebrush-grass and bunchgrass to summer ranges in several of the forested zones. Also within the boundaries of the forest and range lands are found hundreds of lakes and streams and extensive wilderness areas, all of which provide recreational opportunities and habitat for game birds, fish and furbearers.

The commercial resources and benefits that flow from these lands and waters include wood products of all types, cattle and sheep in great numbers, abundant wildlife of many species, game fishes of world renown, and water for domestic use, power and irrigation. All these natural study areas and resources are available for directed effort of the student in preparing himself for his chosen profession.

In addition, the commercial preparation of the timber for final use constitutes the second most important industry in Idaho. These include some of the largest sawmills, other woodworking plants and logging camps found in the United States. These operations provide study facilities in nearly every phase of the wood products industries. Several firms are located only a few miles from the campus. Likewise, the production of range livestock creates a business enterprise of major importance in the State. Students have an opportunity to study this business on near-by ranches.

## FACILITIES

Facilities available for the training of professional men include the natural laboratories described above and the campus at the University of

Idaho. The Forestry Building, a four-story brick structure, houses the College of Forestry on the campus. Within this building are brought together the teachers, the classrooms, laboratories, technical equipment, and plant and animal collections necessary for the highest quality instruction. Supporting courses for forestry students are offered in modern, well-equipped classrooms and laboratories of seven other colleges of the University.

A 20-acre forest nursery is managed by the College for the production of planting stock, which is sold to the people of the State for erosion control, wildlife food and cover, windbreaks, farm woodlots and to timber landowners. The nursery is also used for student training purposes. A tract of over 7,000 acres of forest land located 25 miles from the campus is used as an experimental and demonstration forest. A large arboretum, comprising more than 100 species of trees, is maintained on the University campus for studies in dendrology and silviculture. Under lease from the State Land Board, a permanent Summer Camp site is maintained by the College on the shores of Payette Lake. These facilities not only provide the best for instructional purposes but also provide for work opportunities whereby experience can be gained and money earned while going to school.

### STANDING OF THE COLLEGE OF FORESTRY

The Society of American Foresters, founded in 1900, is the professional organization of foresters in the United States. To promote high professional standards in the training of foresters, the Society has rated the schools and colleges of forestry in this country. They have been grouped into three categories upon the basis of provision for instruction, personnel, financial support, equipment, field instruction and success of alumni. The College of Forestry at the University of Idaho is placed in the "approved", or highest, category. In October, 1954, the Society of American Foresters was represented on the accreditation committee of the Northwest Association of Secondary and Higher Schools that evaluated the University as a whole. Unrestricted accreditation by the Association was granted the University for a period of ten years following the evaluation, and the College of Forestry was again given full accreditation. This indicates not only the high quality of undergraduate training but also assures all graduates the opportunity for post-graduate study at other approved Colleges.

### FEES AND EXPENSES

For a statement of fees and expenses, see Part I, pages 19 to 22 of the University of Idaho catalog.

### ADMISSION REQUIREMENTS

For a statement of admission requirements, see Part II, page 47 of the University of Idaho catalog.

### Transfer Students

Junior College and other transfer students planning to complete their undergraduate studies in the College of Forestry should follow closely the stated curriculum for the freshman and sophomore years of the College of Forestry, set forth in the catalog of the University of Idaho. If this schedule of courses cannot be followed, then it is possible that more than two years and Summer Camp may be required for graduation. Each transfer student's schedule, however, is studied and arranged to meet requirements in the shortest time at the University of Idaho. Special attention should be given to differences, if any, in the subject matter content of comparable courses, and particularly to botany, chemistry, mathematics, and physics when they vary in semester credits. Mathematics, for example, should include college algebra, trigonometry, and analytic geometry.

Transfer students who have essentially completed the required work of the freshman and sophomore years should attend Summer Camp before registration for the junior year. They should file an application with the Registrar not later than April 1 of the year in which they wish to register.

### GENERAL REQUIREMENTS

All courses listed in the option outlines must be completed for graduation. It is intended that these courses be taken in sequence as listed. Choice of electives must meet the approval of the Dean and the major professor in each case. The number of elective credits listed in any semester is the minimum number required; additional credits may be elected by students who have attained high standards of scholarship. Except by special permission, no student may enroll in one semester for more than 20 credits.

Upon approval by the Dean in advance of registration, credits obtained in non-resident courses may be substituted for credits in required or elective courses needed to complete any option in the College of Forestry.

Enrollment in Summer Camp may be limited to the capacity of the camp facilities and equipment available. The University may exercise its prerogative to refuse surplus applications.

## Undergraduate Program

The undergraduate courses of study in each of the options listed are arranged to assure a fundamental and professional education in four years. All students take a common arrangement of courses during the freshman and sophomore years and at Summer Camp. Emphasis in these years is placed on subjects which will give the student a good foundation in the biological, physical and social sciences; in speaking and writing skills; in the techniques of elementary engineering; and in field practice at Summer Camp.

Beginning in the junior year students will choose one of five optional offerings depending upon interest. The options are: Forest Management, Range Management, Wildlife Management, Fishery Management, and Wood Utilization Technology.

The course of study in each of the options is so arranged as to provide for: commonness among options in certain subject matter fields; a degree of concentration in each option in subject matter peculiar to the professional requirements; several electives in each option. Through judicious choice of these electives the student can obtain training in some of the requirements in one or more additional options, or take courses in other colleges which may be of particular interest. For example, a student with a special interest in forest insect work may partially fulfill his degree requirements with courses in entomology.

All options require a minimum of twelve credits (except in some cases when advanced military is taken) in the social sciences or humanities. Opportunity for advanced military training and a commission in the army, air force or navy is assured if desired.

The knowledge required to manage and utilize effectively forest, range, wildlife, and fish resources is very extensive. No one individual can attain such in four years. It is thus essential to specialize to a certain degree which explains the breakdown into options. Each of these areas of study has attained professional status. The profession of forestry is the oldest

and most mature of the group. Others, like wildlife and fisheries, though young, are growing rapidly and are attracting considerable attention.

No matter which option is chosen, upon graduation the student becomes a professional man. The forester is primarily concerned with the growing of trees for conversion to wood products, the range manager deals with forage production for domestic livestock on forested and nonforested ranges, the wildlife manager and the fisheries biologist, respectively, treat game and fish as crops. All of these men deal with various phases of land management. A wood utilization technologist, however, deals with harvesting, manufacture, distribution and correct use of wood products. Since this field requires specialists of various types this option permits concentration either in business, engineering, chemistry, or chemical engineering.

In practice, men from several professional groups often work as teams in assuring maximum and continuous production of all the crops or benefits which flow from forest and range land areas.

Job opportunities following training in these educational programs vary depending upon the option or field of concentration. A complete discussion of employment possibilities is contained in a publication, "Forestry, Your Career in the Outdoors." It can be obtained by writing to the Dean of the College of Forestry or the Registrar's office.

### REQUIREMENTS FOR GRADUATION

Completion of the course work as described in the following pages, in each option, leads to the degree of Bachelor of Science in Forestry. A total of 151 credits is required to obtain the degree.

#### FRESHMAN YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
Bot.	3	Principles of Botany .....	4	Bot.	53	Systematic Botany .....	4
Engr.	1	Engr. Graphics .....	3	Chem.	1	General Chemistry .....	4
Eng.	1	English Composition .....	3	Eng.	2	English Composition .....	3
For.	1	Forestry Lectures .....	1	For.	2	Forestry Lectures .....	1
Math.	1	Fundamentals of Math. ....	4	Math.	2	Fundamentals of Math. ....	4
		Military Science .....	1½			Military Science .....	1½
P.E.		Freshman Physical Ed. ....	½	P.E.		Freshman Physical Ed. ....	½
		Total .....	17			Total .....	18

#### SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER				
Course		Credits	Course		Credits		
Chem.	2	General Chemistry .....	4	C.E.	53	Elementary Surveying .....	3
Econ.	51	Principles of Economics ....	3	Econ.	52	Principles of Economics ....	3
<sup>1</sup> Geol.	11	Physical Geology .....	4	For.	22	Silvics .....	2
Speech	51	Fundamentals of Speech ....	2	<sup>4</sup> Phys.	3	General Physics .....	4
		Military Science .....	1½	<sup>2</sup> Zool.	1	General Zoology .....	4
P.E.		Sophomore Physical Ed. ....	½	P.E.		Military Science .....	1½
<sup>3</sup> Elective		.....	3			Sophomore Physical Ed. ....	½
		Total .....	18			Total .....	18

<sup>1</sup> Geol. 3 or Geol. 4 may be substituted for Geol. 11.

<sup>2</sup> Math. 51 and/or 52 may be substituted for Geol. 11 and/or Zool. 1.

<sup>3</sup> Elective must be chosen from the social sciences or humanities.

<sup>4</sup> Physics 51 may be substituted for Physics 3.

#### SUMMER CAMP

C.E.	S 55	Field Practice in Surveying	2
For.	S100	Field Measurements and Mapping .....	4
For.	S101	Field Ecology .....	4
		Total .....	10

## FOREST MANAGEMENT OPTION

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Agron. 51	General Soils .....	3	For. 120	Dendrology .....	3
C.E. 118	Elem. Photogrammetry .....	2	For. 124	Silviculture .....	3
For. 107	Elem. of For. Biometry .....	3	For. 174	Mensuration .....	3
For. 151	Elem. of Range Mgt. ....	3	For. 182	Econ. of For. Enterprise .....	2
†Elective	.....	7	†Elective	.....	7
	Total .....	18		Total .....	18

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Eng. 115	Technical Writing .....	3	For. 134	Logging and Milling .....	3
For. 131	Wood Technology .....	3	For. 164	Forest Pathology .....	3
For. 175	Forest Management .....	3	For. 176	Forest Finance .....	3
For. 183	Econ. of Conservation .....	2	For. 184	For. Policy and Admin. ....	3
†Elective	.....	6	†Elective	.....	5
	Total .....	17		Total .....	17

† The following course selections must be made: (a) at least 13 credits are required from the list of Restricted Electives below; (b) an additional 3 credits in the social sciences or humanities are required except for those presenting 12 credits in advanced military. All of these selections must be made with the approval of the faculty advisor and deviations may be made with his consent.

## RESTRICTED ELECTIVES

Course		Credits	Course		Credits
Agron. 101	Genetics .....	3	For. 122	Forest Planting .....	2
Eng. 101	Plant Physiology .....	3	For. 125	Regional Silviculture .....	2
Bot. 105	Plant Ecology .....	3	For. 142	Principles of Wildlife Mgt. ...	3
Chem. 75	Carbon Compounds .....	3	For. 162	Watershed Management .....	3
†Ent. 101	General Entomology .....	4	For. 167	Fire Prevention and Control ..	2
†Ent. 120	Insect Identification .....	3	†For. 169	Forest Entomology .....	3
For. 117	Elem. of Fishery Mgt. ....	2	For. 197	Land Mgt. Seminar .....	1
			For. 198	Land Mgt. Seminar .....	1

† Not more than 6 credits of these courses may be counted in satisfaction of the minimum 13 credits of restricted electives.

## RANGE MANAGEMENT OPTION

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Agron. 51	General Soils .....	3	A.H. 2	Livestock Industry .....	3
Bot. 107	Agrostology .....	3	A.H. 106	Livestock Feeding .....	3
Chem. 75	Carbon Compounds .....	3	Eng. 115	Technical Writing .....	3
For. 107	Elem. of For. Biometry .....	3	For. 142	Principles of Wildlife Mgt. ...	3
For. 151	Elem. of Range Mgt. ....	3	For. 152	Range Plants .....	3
*Elective	.....	3	*Elective	.....	3
	Total .....	18		Total .....	18

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
**A.H. 114	Beef Cattle Production .....	3	**Agro. 108	Forage Crops .....	3
Bot. 105	Plant Ecology .....	3	**For. 124	Silviculture .....	3
For. 153	Range Methods & Tech. ....	3	For. 154	Range Mgt. Planning .....	3
For. 183	Econ. of Conservation .....	2	For. 162	Watershed Mgt. .....	3
For. 197	Land Mgt. Seminar .....	1	*Elective	.....	5
*Elective	.....	5		Total .....	17
	Total .....	17			

\* At least three of the elective credits must be taken in the social sciences or humanities.

\*\*With permission of the faculty advisor, courses in the same subject matter field may be substituted for the courses listed.



RECOMMENDED ELECTIVES

Course	Credits	Course	Credits
Ag.Ec. 108	Farm Management ..... 3	C.E. 118	Elem. Photogrammetry ..... 2
Ag.Ec. 150	Land Economics ..... 3	Ent. 101	General Entomology ..... 4
Ag.Ed. 150	Extension Methods ..... 2	For. 175	Forest Management ..... 3
Agron. 101	Genetics ..... 3	For. 176	Forest Finance ..... 3
Agron. 111	Crop Ecology ..... 3	For. 182	Econ. of For. Enterprise ..... 2
Agron. 154	Origin and Class. of Soils .. 3	For. 184	For. Policy and Admin. .... 3
Agron. 157	Soil Physics ..... 3	Geog. 101	Weather and Climate ..... 3
A.H. 105	Principles of Nutrition ..... 3	V.S. 171	Comp. Anat. and Physiol. . 4
A.H. 115	Sheep Production ..... 2	V.S. 176	Non-Infec. Animal Diseases 2
Bot. 101	Plant Physiology ..... 3		
	or		
Bot. 102	Plant Physiology ..... 4		

WILDLIFE MANAGEMENT OPTION

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
C.E. 118	Elem. Photogrammetry ..... 2	Agron. 51	General Soils ..... 3
For. 107	Elem. of Forest Biometry ... 3	Chem. 75	Carbon Compounds ..... 3
For. 117	Elem. of Fishery Mgt. .... 2	**For. 124	Silviculture ..... 3
For. 151	Elem. of Range Mgt. .... 3	For. 142	Principles of Wildlife Mgt. 3
**V.S. 171	Comp. Anat. and Phys. .... 4	*Elective	..... 6
*Elective	..... 4		
	Total .....18		Total .....18

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
**A.H. 105	Principles of Nutrition ..... 3	Eng. 115	Technical Writing ..... 3
For. 143	Wildlife Mgt. Techniques ... 3	For. 144	Big Game Mgt. .... 3
For. 183	Econ. of Conservation ..... 2	Zool. 130	Ornithology ..... 3
Zool. 131	Mammalogy ..... 3	*Elective	..... 8
*Elective	..... 6		
	Total .....17		Total .....17

\* The following course selections must be made: (a) at least 12 credits are required from the list of Restricted Electives below; (b) an additional 3 credits in the social sciences or humanities are required except for those presenting 12 credits in advanced military. All of these selections must be made with the approval of the faculty advisor and deviations may be made with his consent.

\*\*With permission of the faculty advisor, courses in the same subject matter field may be substituted for the courses listed.

RESTRICTED ELECTIVES

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Agron. 101	Genetics ..... 3	Agron. 154	Origin and Class. of Soils ... 3
Agron. 111	Crop Ecology ..... 3	Bact. 51	Gen. Bacteriology ..... 4
Ag.E. 161	Irrig. and Drainage Practice 3	For. 118	Fishery Mgt. Technique ... 3
Bact. 51	Gen. Bacteriology ..... 4	For. 162	Watershed Management ... 3
Bot. 105	Plant Ecology ..... 3	For. 176	Forest Finance ..... 3
For. 169	Forest Entomology ..... 3	For. 184	Forest Policy ..... 3
For. 175	Forest Management ..... 3	Jour. 162	Mag. Article Writing ..... 2
For.197-198	Land Management Seminar 1	V.S. 174	Animal Diseases ..... 3
Zool. 153	Invertebrate Zool. .... 4	Zool. 118	Parasitology ..... 3
		Zool. 132	Animal Ecology ..... 3

FISHERY MANAGEMENT OPTION

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Ent. 101	Gen. Entomology ..... 4	Bact. 51	General Bacteriology ..... 4
For. 107	Elem. of Forest Biometry ... 3	Chem. 75	Carbon Compounds ..... 3
For. 117	Elem. of Fishery Mgt. .... 2	Eng. 115	Tech. Writing ..... 3
Zool. 153	Invertebrate Zoology ..... 5	For. 116	Limnology ..... 3
*Elective	..... 4	For. 142	Principles of Wildlife Mgt. 3
	Total .....18	*Elective	..... 2
			Total .....18

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Ent. 120	Insect Identification .....	3	For. 118	Fishery Mgt. Techniques ....	3
For. 111	Ichthyology .....	3	For. 162	Watershed Management ....	3
For. 183	Economics of Conservation ..	2	Zool. 118	Parasitology .....	3
**Zool. 54	Comp. Anat. of Vertebrates ..	4	*Elective	.....	8
*Elective	.....	5			
	Total .....	17		Total .....	17

\* At least 3 of the elective credits must be taken in the social sciences or humanities.

\*\*Zool. 118 Comp. Vert. Embryo., or V.S. 171 Comp. Anat. and Physiology may be substituted for Zool. 54 with the consent of the faculty advisor.

## RECOMMENDED ELECTIVES

Course		Credits	Course		Credits
Agron. 51	General Soils .....	3	For. 143	Wildlife Mgt. Techniques ..	3
Agron. 101	Genetics .....	3	For. 182	Econ. of For. Enterprise ....	2
	or		For. 184	Forest Policy and Admin. ....	3
Zool. 58	Introduction to Genetics ....	2	For.197-198	Land Mgt. Seminar .....	1
A.H. 105	Principles of Nutrition .....	3	Pol.Sci. 151	Introduction to Publ. Admin. ..	3
C.E. 118	Elem. Photogrammetry .....	2	Zool. 2	General Zoology .....	4
For. 124	Silviculture .....	3	Zool. 130	Ornithology .....	3
			Zool. 131	Mammalogy .....	3

## WOOD UTILIZATION TECHNOLOGY OPTION\*\*

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
For. 107	Elem. of For. Biometry .....	3	Chem. 75	Carbon Compounds .....	3
For. 131	Wood Technology .....	3	For. 166	Wood Products Path. ....	3
**Math. 51	Calculus .....	4	For. 174	Mensuration .....	3
*Elective	.....	8	For. 182	Econ. of For. Enterprise ....	2
	Total .....	18	*Elective	.....	7
				Total .....	18

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Eng. 111	Engineering Reports .....	3	For. 184	Logging and Milling .....	3
For. 137	Util. Techn. I .....	3	For. 188	Util. Techn. II .....	3
*Elective	.....	11	For. 184	For. Policy and Admin. ....	3
	Total .....	17	*Elective	.....	8
				Total .....	17

\* The following course selections must be made: (a) at least 26 credits required from one of the lists of Restricted Electives below; (b) an additional 3 credits in the social sciences or humanities are required except for those presenting 12 credits in advanced military. All of these selections must be made with the approval of the faculty advisor and deviations may be made with his consent.

\*\*Students electing this option are advised to take Math. 51-52, Calculus, in the sophomore year.

## RESTRICTED ELECTIVES

## BUSINESS

Course		Credits	Course		Credits
Bus. 31	Principles of Acct. ....	3	Bus. 151	Pers. Management .....	3
Bus. 32	Principles of Acct. ....	3		or	
Bus. 91	Inter. Acct. ....	3	Bus. 152	Industrial Relations .....	3
	or		Bus. 165	Business Law .....	3
Bus. 185	Managerial Cost Analysis ..	3	Econ. 152	Inter. Econ. Theory .....	3
Bus. 107	Transportation .....	3		or	
	or		Econ. 153	Income and Empl. ....	3
Bus. 169	Marketing .....	3	For. 124	Silviculture .....	3
Bus. 134	Industrial Management .....	3	For. 175	Forest Management .....	3
			For. 176	Forest Finance .....	3

## CIVIL ENGINEERING\*

Course	Credits	Course	Credits
C.E. 54 Adv. Surveying .....	4	For. 167 Fire Prevention & Control ..	2
C.E. 113 Field Engineering .....	2	or	
C.E. 118 Elem. Photogrammetry .....	2	For. 169 Forest Entomology .....	3
C.E. 154 Cont. and Spec. ....	2	For. 176 Forest Finance .....	3
For. 124 Silviculture .....	3	E.S. 66 Mech. (Statics) .....	2
For. 175 Forest Management .....	3	E.S. 101 Mech. (Dynamics) .....	2
		E.S. 103 Mech. of Materials .....	4
		Phys. 52 Engr. Phys. ....	5

\* Students electing credits in this group should take Physics 51 in sophomore year in place of Physics 3.

## CHEMISTRY OR CHEM. ENGINEERING\*\*

Course	Credits	Course	Credits
Chem.E. 21 Introd. to Chem. Engr. ....	2	Chem. 106 Physical Chem. ....	4
Chem.E. 22 Introd. to Chem. Engr. ....	2	Chem. 154 Instr. Analysis .....	3
Chem.E.123 Chem. Proc. Principles .....	3	Chem. 171 Organic Chemistry .....	4
Chem.E.171 Proc. Engr. ....	3	Chem. 172 Organic Chemistry .....	4
Chem. 51 Qual. and Grav. Anal. ....	4	For. 124 Silviculture .....	3
Chem. 52 Quant. Analysis .....	4	For. 175 Forest Management .....	3
Chem. 105 Physical Chem. ....	4		

\*\*Choice of courses dependent upon emphasis desired — chemistry or chemical engineering, and subject to approval of faculty advisor.

## GRADUATE PROGRAM

Programs of study leading to advanced degrees are offered in each of the five fields covered by the undergraduate options. The graduate degrees offered are: Master of Science in Forestry, M.S.(For.); Master of Science, M.S.; Master of Forestry, M.F.; and Doctor of Philosophy, Ph.D.

*Masters' Degrees*

The M.S.(For.) and M.S. degrees require research and the submission of a thesis. The choice between these degrees is made on the basis of the student's undergraduate training and the area in which he plans to take his graduate training.

The M.S. degree is ordinarily earned by a student whose undergraduate major is in one of the scientific disciplines basic to land management and/or whose program of advanced study and thesis research constitutes further specialization in such a field.

The M.S.(For.) degree is available to a student whose undergraduate training has been essentially equivalent to that in one of the College of Forestry undergraduate options and whose program of advanced study and thesis research is primarily concerned with the application of scientific principles to management problems.

The M.F., a professional degree, is limited ordinarily to students whose undergraduate training has been in forest management; its purpose is primarily to increase the student's professional qualifications rather than to provide the more intensive and specialized training and research experience required for the preceding two degrees. Usually it is desirable that work for this degree be preceded by a period of professional employment.

*Doctor of Philosophy*

Programs of study in Forestry Sciences leading to the Ph.D. degree are also offered. These are at present available in the areas of Forest, Range, Wildlife and Fisheries Management. As in the case of the Masters' degrees,

the student's prior training may be either in one of the above fields or in one of the biological, physical or social sciences basic thereto.

#### *Admission and Degree Requirements*

The typical student taking his graduate work in the College of Forestry will have completed course work essentially equivalent to that required for a Bachelor's degree in one of the forestry options. However, a student with a distinctly different undergraduate training, may also be admitted. The design of graduate study plans for these two classes of students will be such as to allow for the differences in preparation and, in large measure, to provide them with comparable backgrounds by the time the program is completed.

The foregoing may be illustrated by the hypothetical cases of two students, both interested in being trained in Forest Pathology, one with a Bachelor's degree in Forestry, the other in Botany. The program of the former will necessarily include a number of advanced undergraduate courses in Botany presumably already completed by the latter. The latter would be expected to complete the minimum essentials of forestry training previously acquired by the former.

Other than the foregoing compensating feature, the programs of all graduate students will contain the following general elements: formal course work concentrated in the sciences, e. g., botany, zoology, economics, underlying the field of specialization; formal course work in the technical aspects of the special field, e. g., forest entomology, forest genetics; directed study, research and preparation of a thesis (except M.F. degree); and, for doctoral students, an important feature will be the attainment of an understanding of the principles of resource management in the areas other than that which the student chooses for specialization.

The only specific requirements peculiar to the Ph.D. in Forestry Sciences are: one of the languages must be German or Russian and the student must demonstrate competence in elements of calculus and in biometrics.

General University requirements set a minimum of one year's resident study, beyond the Bachelor's degree, for the Master's degree, and three years for the Doctor's; these include minimum residence at the University of Idaho of one and two years, respectively. However, time normally taken to complete all requirements will exceed these minima according to (a) deficiencies in preparation, (b) nature of field research usually involved in forestry problems, and (c) course load—specifically, holders of assistantships or fellowships which require them to render part time service will take more time to earn the degree than a student carrying a full course load each term.

See the Graduate School section of the catalog for procedural details as to admission, requirements for the Masters' degrees, and procedures and requirements for the Ph.D. common to all departments.

#### *Facilities for Graduate Study*

Excellent opportunities for study and research are available in all subject matter fields in which the College proposes to offer graduate work. With approximately 90 percent of its area in forest and range land, together with a wealth of water resources, much of it close at hand, the State of Idaho offers unlimited possibilities for training and research in the areas of knowledge for which the College of Forestry is responsible.

The College has its own research organization, the Forest, Wildlife and Range Experiment Station. All faculty members of the College are also on the Experiment Station staff and are engaged in research as well as teaching. At the present time, there are 32 research projects under way in all areas of

responsibility. A major advantage accruing from this research agency is the opportunity to divide current research projects into facets any one of which might constitute a suitable thesis project. In this way, the student will be able to do independent research within the outlines of a more comprehensive project, with the resulting advantage of having much necessary supporting information already available. An organization of this type affords an ideal teaching and research environment.

Facilities available include well equipped laboratories on the campus. Separate laboratories in wood utilization, pathology, entomology, range management, wildlife management and fisheries management are available. Special herbaria or specimen collections in dendrology, wood technology, pathology, range plants, wildlife and fisheries are maintained.

The University has a 3-acre Arboretum, two 20-acre forest tree nurseries, a 58-acre summer camp location and a 7000-acre experimental forest which includes a 700-acre deer enclosure. Cooperative arrangements with public and private agencies make available, either on or near the campus, several other excellent facilities. These include a fully equipped Forest Genetics Center with a 40-acre seed orchard, two experimental forest areas established and operated by the U. S. Forest Service, the Idaho Cooperative Wildlife Research Unit, excellent range research areas and facilities, and many wood products processing plants.

Thesis research problems conducted outside the direct supervision of the College, in connection with a student's work for another organization, can also be accepted. In such cases, the work must meet the usual standards and the major advisor must have an opportunity to advise in the planning of the research.

#### *Graduate Fellowships*

A number of research fellowships are granted to assist highly qualified students in their graduate programs. The thesis research of such fellows normally will fall within the scope of station projects. Two to four years are required to complete the degree requirements during which time the student works on his project full time during the summer season, and part time during the academic year. The research fellowships available in the College of Forestry include two or more in the Experiment Station proper, the Potlatch fellowship for studies in wood utilization, fellowships in wildlife and fishery management founded by the Wildlife Research Unit, and a number made available through the Special Research program of the University. A list of fellowships available for any particular year and details of the stipends and other privileges offered, are contained in the annual fellowship announcements of the University, or may be obtained by writing to the Dean of the College of Forestry.

# The College of Education

Business Education	Industrial Arts Education
School Administration	Library Science
Secondary Education	Music Education
Elementary Education	Physical Education
Special Education Services	Psychology
Guidance and Counseling	

JOACHIM FREDERICK WELTZIN, Ph.D. .... *Dean of College*

MARGARET WALKER ..... *Administrative Assistant*

**T**HE College of Education, organized as an independent unit of the University by the Board of Regents in June, 1920, is a professional college whose aim is to prepare qualified men and women for careers as teachers, supervisors, educational administrators, psychologists and personnel officers. As the list of fields of educational service mentioned hereafter indicates, the College of Education offers training in all the major areas of professional education as it exists today. The College of Education is fully accredited by the National Council for Accreditation of Teacher Education.

The various programs of study are planned to meet certification requirements of the State of Idaho, those of most other states, and in addition, the requirements of the various accrediting agencies such as the Northwest Association of Secondary and Higher Schools.

**ADMISSION.**—For a statement of admission requirements, see Part II. Students presenting advanced credits from another institution at the time of their matriculation in the College of Education are required to present a scholastic average of 2.00 (“C”) or better.

## DEGREES

**BACHELOR’S DEGREES.**—Upon successful completion of appropriate programs of studies the following bachelor’s degrees are awarded:

- Bachelor of Science in Education
- Bachelor of Science in Music Education
- Bachelor of Science in Business Education

**MASTER’S DEGREES.**—Upon successful completion of appropriate graduate programs of studies the following master’s degrees are awarded:

- Master of Science in Education
- Master of Education
- Master of Science in Music Education
- Master of Music Education
- Master of Science in Business Education
- Master of Business Education

**DOCTOR’S DEGREES.**—Upon successful completion of appropriate advanced graduate programs the following doctor’s degrees are awarded:

- Doctor of Education
- Doctor of Philosophy

**GRADUATE STUDIES AND DEGREES.**—The graduate program in Education is under the direction of the Graduate School. See the Graduate School section of this catalog. Students interested in graduate work toward a master's degree should obtain from the dean of the College of Education a bulletin entitled *Programs for Master's Degrees in Education*. Offerings at the doctoral level are limited at this time to Educational Administration and Guidance and Counseling. Students interested in the possibility of carrying advanced graduate work should get in touch with the dean of Graduate School or the dean of the College of Education for current information.

**FIELDS OF EDUCATION SERVICE.**—The following are the types of educational positions for which the College of Education, with the cooperation of other divisions of the University, offers training:

- |                                  |                                     |
|----------------------------------|-------------------------------------|
| 1. Primary School Teacher        | 9. Superintendent of Schools        |
| 2. Elementary School Teacher     | 10. Educational Guidance Officer    |
| 3. Junior High School Teacher    | 11. Teacher of Exceptional Children |
| 4. Senior High School Teacher    | 12. School Librarian                |
| 5. College or University Teacher | 13. Educational Researcher          |
| 6. Elementary School Principal   | 14. School Psychologist             |
| 7. Elementary School Supervisor  | 15. Director of Recreation          |
| 8. High School Principal         |                                     |

**ADVISEMENT OF STUDENTS.**—Each student in the College of Education is assigned an advisor and with the aid of this advisor prepares a program of studies. By means of this system each student is able to organize the work to meet one's own individual needs and be informed at all times as to the status and progress in his college career. The student's program should be developed during the freshman year or as early as possible in the sophomore year.

**CERTIFICATES.**—Students who complete a four-year teacher training program are eligible to receive the Standard Elementary School Certificate or the Standard Secondary School Certificate issued by the State of Idaho. Students who complete appropriate programs for master's degrees in Education are eligible to receive the Advanced Elementary School Certificate or the Advanced Secondary School Certificate and, upon meeting experience requirements, an Administrator's Certificate.

The recommended programs of training and the degree requirements in the College of Education are so planned as to meet certification requirements in most other states with the exception of such courses as are required by the laws of other states to be studied in their own institutions. The teacher education programs are also designed to meet the requirements of the various accrediting associations and the employment requirements of the best school systems in the country.

An Idaho Provisional Teacher's Certificate is also available at the end of two or three years of training, depending upon whether elementary or high school teaching is intended. Detailed information on the Provisional Certificates may be obtained from the office of the Dean of the College of Education.

**STUDENT TEACHING.**—Student teaching is done in regular public schools so that students may obtain their practice work under typical school conditions. A number of public schools in Idaho cooperate in this activity including the Moscow schools. Normally student teaching is scheduled for nine weeks of fulltime teaching in a public school system outside of Moscow. Students should pre-plan their schedules for their senior year so as to facilitate this

schedule. During the semester preceding the one in which the student teaching is to be done, students should confer with the Director of Student Teaching and submit an application on a form provided for that purpose.

**EXTENSION AND CORRESPONDENCE COURSES.**—Many education courses are conducted each year at extension centers in various parts of the state. These courses are offered in accordance with interest and need. A considerable number of undergraduate teacher-training courses are also available through correspondence study. Extension and correspondence study is administered by the office of Educational Field Service to which inquiries should be addressed.

**PLACEMENT.**—The University maintains a placement bureau to assist in securing positions for educational workers. The first thought is for the home state, but many calls come for other states, and when students wish to go elsewhere assistance is cheerfully given to them. Graduates are urged to keep in touch with the College in order to be in line for deserved promotions.

### DEGREE REQUIREMENTS

#### Requirements for the Degree of Bachelor of Science in Education

- a. *Total Credits.* Satisfactory completion of 128 semester credits, of which 36 semester credits must be in courses numbered 100 or above.
- b. *General Requirements.* Satisfactory completion of the following courses:

Course	Credits	Course	Credits
Ed. 1 Education Lectures .....	1	Psych. 1 General Psychology .....	3
Eng. 1-2 English Composition .....	6	Psych. 55 Human Growth and Development .....	3
General Education — Each candidate for the degree must include in his program of studies at least 42 semester credits in general education. Each of the following areas must be represented as indicated:		or	
Natural Science and/or Mathematics ..	12	Psych. 56 Human Growth and Development .....	3
Social Science, including American History and/or American Government ..	9	or	
Humanities (in addition to Eng. 1 and 2) .....	8	Psych. 151 Educational Psychology ....	3
Speech 51 Fundamentals of Speech ....	2	Ed. 85-86 Foundations of Education ..	6
Military Science (Men) .....	6	Ed. 168 The Teacher and Educational Administration .....	3
Physical Education		Students majoring in Physical Education may meet this requirement by substituting P.E. 196, Organization and Administration, 3 credits.	
For Men — Four semesters of activity courses, to be taken during freshman and sophomore years .....	2	Students majoring in Music Education may meet this requirement by substituting Mus. 196, School Music Administration, 2 credits.	
For Women — Two credits in Healthful Living, to be taken during freshman year; and four credits in activity courses to be taken during freshman and sophomore year .....	6		

#### c. Additional Requirements for Secondary School Teachers

Ed. 114 High School Methods ....2 or 4 Four credits of secondary school methods are required in the secondary education curriculum. Two of these must be earned in Ed. 114, but the remainder may be earned in special methods courses such as those in Mu-	sic Education, Business Education, or Physical Education. Ed. 131 Student Teaching in Secondary Schools (Subject to variation in accordance with state certification requirements) .....	6
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d. *Additional Requirements for Elementary School Teachers*

English, in addition to Eng. 1 and 2 .....	6	Ed.	121	Methods and Materials in Science and Social Studies	3
Social Studies, including both American History and Government .....	12	Ed.	126	Methods and Materials in Mathematics .....	3
Methods and Materials in Music and Art	6	Ed.	130	Student Teaching in Elementary Schools (Subject to variation in accordance with state certification requirements) .....	6
Health and Physical Education—Ed. 123, Methods and Materials in Health Education, or P.E. 52, Physical Education Activities for Elementary Schools .....	3				
Ed. 120 Primary Language Arts Methods, or Ed. 122, Intermediate Language Arts Methods .....	3				

e. *Majors and Minors.* Candidates for the degree of Bachelor of Science in Education must complete *two* approved teaching majors of 30 semester credits each,

or

One approved teaching major of 40 semester credits accompanied by an approved teaching minor of at least 20 semester credits

or

One approved teaching major of 30 semester credits accompanied by one approved teaching minor of 20 semester credits and a second approved teaching minor of 15 semester credits.

*Note:* Elementary Education candidates may offer Elementary Education as a major.

**Requirements for the Degree Bachelor of Science in Business Education**

- a. Satisfaction of the requirements under "a" in the requirements for the B.S.(Ed.) degree above.
- b. Satisfactory completion of the courses and other requirements under "b" and "c" in the requirements for the B.S.(Ed.) degree above.
- c. Satisfactory completion of the following listed courses, plus the satisfactory completion of an approved selection of 15 credits in a secretarial, a general business, or a distributive education option.

Bus. 31-32 Principles of Accounting ....	6	Eng.	113	Business Writing .....	3
Bus.165-166 Business Law .....	6	Geog.	12	Economic Geography .....	3
Bus.Ed. 191 Methods in Bus. Education	3	S.S.	3	Typewriting Problems .....	2*
Bus.Ed. 192 Methods in Bus. Education	3	S.S.	16	Shorthand Dictation .....	4*
Econ. 51-52 Principles of Economics .....	6	S.S.	85	Office Machines .....	2

\* May be waived by examination.

- d. Satisfactory completion of one teaching minor of at least 20 semester credits in a high school teaching field.

**Requirements for the Degree of Bachelor of Science in Music Education**

- a. Satisfaction of the requirements under "a" in the requirements for the B.S.(Ed.) degree above.
- b. Satisfactory completion of the courses and other requirements under "b" and "c" in the requirements for the B.S.(Ed.) degree above, with the exception of the following deletion: Speech 51, 2 credits.
- c. Satisfactory completion of 49 credits in music courses uniformly required, plus 12-21 credits in specific courses required under the several options, as noted below. Students will choose from the following options: (1) wind instrument, (2) string instrument, (3) piano-instrumental, (4) choral, (5) piano-choral. Courses included under these options must be approved by the head of the Department of Music. See Music—Part V for course description.

Uniform Requirements:

Mus.	Applied Music (major instrument or voice) .....	16	Mus.101-102	History and Lit. of Music ..	6
Mus.	1-2 Theory of Music .....	7	Mus.	171 Elementary School Music .....	3
Mus.	7 Introduction to Music Lit. ..	2	Mus.	178 Jr. and Sr. High School Mus.	3
Mus.	75-76 Theory of Music .....	8	Mus.	179 Conducting .....	2
			Mus.	196 School Music Administration	2

Additional requirements for the instrumental options: Mus. 17, 27, 43-44, 63-64, 5 credits in vocal training and ensemble. Wind instrument students will omit 1 credit of either 17 or 27. String instrument students will omit either 43-44 or 63-64. Piano-instrumental students will substitute Mus. 108 for 2 credits of vocal training.

Additional requirements for the choral option: 4 credits from 17 and 27; 43-44 or 63-64; 59-60.

Additional requirements for the piano-choral option: 4 credits from 17; 43-44 or 63-64; 6 credits in vocal training.

Regular participation in organized music (band, orchestra, or choral groups) is required.

Minimum requirements in piano for all music majors, to be met by end of sophomore year: (1) ability to play a sonatina and a composition equal in difficulty to Schubert's Moment Musical in A flat, Op. 95, No. 6; (2) ability to read at sight a simple accompaniment.

- d. Satisfactory completion of one teaching minor of at least 20 semester credits in a high school teaching field.

### TEACHING MAJORS AND MINORS

Students are permitted a good deal of latitude in choosing their teaching fields. In making these choices, however, students should seek the counsel of their advisors who are in a position to suggest combinations of subjects for majors and minors which are advantageous for later employment. Similarly, students have considerable freedom in selecting studies to include within the majors and minors and as to this also the aid of the advisors should be sought. Majors should be chosen, at least tentatively, at the time of beginning the freshman year and minors should be designated at least during the sophomore year.

*Suggested Majors for the Bachelor of Science in Education Degree.*—Students should choose as majors, subjects commonly taught in the elementary and secondary schools, if it is the intention to teach at these levels. It is suggested that majors be chosen from among the following subjects or fields: Art, Botany, Biological Science, Chemistry, Elementary Education, English, French, Geography and Geology, German, Guidance, History, Industrial Arts, Latin, Mathematics, Natural Science, Physical Education, Physics, Political Science, Social Science, Spanish, Speech and Dramatics, Zoology. Students who plan later to prepare for a professional career in Psychology may select a major in Psychology.

*Minors.*—Teaching minors may be developed in most of the above subject fields.

*Content of Majors and Minors and Approval of Proposed Programs.*—In order to provide desirable flexibility, few courses are listed as requirements within the majors and minors in programs for the B.S.(Ed.) degree. However, it should be noted that the demands of adequate preparation and the system of course prerequisites result in some virtual requirements in the content of majors and minors. Also, the College of Education faculty reserves the right to judge the total adequacy of any proposed major and minor.

*Majors and Minors in English.*—All English majors and minors (except in programs of candidates for the B.S.(Bus.Ed.) degree) must include English 141, Modern English Language, 3 credits.

*Majors in Business Education and Music Education.*—The content of these majors in the programs for the special degrees of B.S.(Bus.Ed.) and B.S.(Mus.Ed.) are extensively prescribed. Consult the list of requirements for these degrees in an earlier part of this section.

# The College of Business Administration

Accounting	Finance
Business and Law	Foreign Trade
Economics	General Business
Business and Applied Science	Marketing
Office Administration	

DAVID D. KENDRICK, B.S. (Bus.), M.A., Ph.D. .... *Dean of the College*

GERALDINE MEINERS, B.A., M.S. in Ed. .... *Secretary*

## PURPOSE OF THE COLLEGE

**T**HE College of Business Administration was established as a separate professional college of the University in 1925. It provides professional training for young men and women who plan to make business their career. The breadth and complexity of present day economic life make it increasingly difficult to gain a proper understanding of the basic principles of modern business by starting as a junior employee of a business firm and learning on the job. The College instructs its students in these fundamentals before they commence their business careers. Actual experience then enriches and makes more complete their understanding of these principles. As a part of a state-supported university, founded to train better citizens, the College also aims to give its students an appreciation of the social importance and responsibilities of business men.

In addition to instruction in the fundamental principles of business, the College of Business Administration also offers specific training in the techniques of business where this is feasible; as, for example, in accounting, accounting research techniques, and secretarial practice. In common with other university schools of business, however, the College avoids extremely specialized instruction in business practices. Since such practices vary greatly among business firms and change rapidly, they can in most cases be best learned on the job.

## FEES AND EXPENSES

For a statement of fees and expenses, see Part I.

## ADMISSION REQUIREMENTS

For a statement of admission requirements, see Part II.

## MAJOR FIELDS OF STUDY

Instruction in the College of Business Administration is divided into nine principal divisions: the eight majors listed below, and the combined curriculum in business and law. When he enters the College each student may select one of these specialized curricula. In general, shifts to other fields are possible during the first two years.

**ACCOUNTING.**—This field, in common with many others requiring specialized training, offers many opportunities for the college man and woman. The four-year course emphasizes cost accounting, corporation accounting, auditing, public accounting, and taxation.

**ECONOMICS.**—This major prepares students for professional careers as economists or statisticians in private business or government service.

**BUSINESS AND APPLIED SCIENCE.**—Because the University affords strong technical training in Agriculture, Engineering, Forestry, and Mining, the College of Business Administration is able to offer instruction in combination with them. Most students interested in one of the above fields find it most advantageous to take an intensive and complete technical course in the respective college offering such work. On the other hand, there are some students who plan to enter a field of business where complete technical training is not essential, but where some technical knowledge is highly desirable. The Business and Applied Science Major offers an opportunity to combine a major in Business Administration with a minor in one of the technical fields.

**FINANCE.**—Training in this curriculum provides excellent background for the fields of banking, investments, insurance, and real estate. The student may elect to place emphasis upon one of these areas of finance.

**FOREIGN TRADE.**—A four-year curriculum preparing students for positions in the importing and exporting business or in the foreign departments of American firms.

**GENERAL BUSINESS.**—This major is intended for those students who prefer all-around training in business management to specialization in one field.

**MARKETING.**—This major is intended for those students contemplating a career in retail or wholesale merchandising or in advertising.

Certain modifications of this major will be arranged for those wishing to prepare for advertising.

**OFFICE ADMINISTRATION.**—This program is designed to equip students to enter the field of business through secretarial work. In addition to a background of business experience the student receives technical secretarial training leading to specialized skills in a field of the student's choice through course work and on-the-job experience.

### **COMBINATION CURRICULUM IN BUSINESS AND LAW**

For students who want training in both business and law, a combination curriculum is available. Students in this curriculum register in the College of Business Administration for their first four years, and in the College of Law for the last two. The degree of Bachelor of Science in Business is conferred upon the completion of the required courses of the first four years, and the degree of Bachelor of Law at the end of the full six years. The requirements of the first four years are outlined below. The fifth and sixth years, which are the same as the second and third years of the College of Law curriculum, may be found on page 105.

### **STANDING**

Fully accredited by the Northwest Association of Secondary and Higher Schools, the College of Business Administration keeps abreast of developments in business training through various organizations and by constant consultation with Idaho businessmen. The quality of the program is attested to by the outstanding achievements of Idaho graduates in all fields of business throughout the nation.

### **DEGREE**

The degree, Bachelor of Science in Business, B.S.(Bus.), is conferred on all students satisfactorily completing any one of the eight majors in the College of Business Administration or the first four years of the combined Business and Law Curriculum.

### **DIVISIONAL REQUIREMENTS**

In addition to the general university requirements for degrees (p. 58) and the specific courses indicated in the curricula below, all candidates for

the B.S. (Bus.) degree *must successfully complete a minimum of eight credits in one foreign language.*\* Students normally will register for foreign language at a point in the pertinent curriculum where sufficient "free electives" are designated to permit satisfactory scheduling.

It is strongly recommended that students familiarize themselves with the operation of the typewriter and other commonly used business machines.

Students registered in the College of Business Administration will be required to achieve a minimum overall average of 1.85 grade points for the first two academic years before being permitted fully to pursue upper division work. Specifically, this means that a student earning an overall average of less than 1.85 grade points for a minimum of 58 credits may not register for more than one course numbered above 100 in any one semester until his cumulative grade point average is raised to this minimum level.

## Curricula\*\*

Below are stated the requirements in each of the major fields of study and in the combined business and law curriculum.

**One hundred twenty-eight credits are required for graduation.**

### COMMON FIRST TWO YEARS

(For majors in Accounting, Business & Law, Economics, Extractive Industries, Finance, General Business, Marketing.)

#### FRESHMAN YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 1	Business Lectures .....	1	Bus. 32	Principles of Accounting ....	3
Bus. 31	Principles of Accounting ....	3	Eng. 2	English Composition .....	3
Eng. 1	English Composition .....	3	Math. 1 or 11	Freshman Math. ....	4-5
Soc.Sci., Psych., or Econ.Geog.	.....	3-4	Soc.Sci., Psych., or Econ.Geog.	.....	3-4
Free Electives	.....	3-4	Free Electives	.....	0-2
P.E. and Military (Men)	.....	2	P.E. and Military (Men)	.....	2
P.E. (Women)	.....	3	P.E. (Women)	.....	1
Total .....		16-17	Total .....		16-17

#### SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Econ. 51	Principles of Economics .....	3	Econ. 52	Principles of Economics .....	3
English Literature	.....	2-3	English Literature	.....	2-3
††Major Electives	.....	2-4	†Math. or Nat. Sci.	.....	3-4
‡Natural Science	.....	4	††Major Electives	.....	5-6
Speech	.....	2	P.E. and Military (Men)	.....	2
P.E. and Military (Men)	.....	2	P.E. (Women)	.....	1
P.E. (Women)	.....	1	Total .....		16-18
Total .....		16-18	Total .....		16-18

\* Two units of a single foreign language at the high school level may be substituted for one year of university-level courses. For students in any of the Advanced R.O.T.C. programs, this requirement can be waived only on petition and with the approval of the Faculty of the College of Business Administration.

\*\*Advanced R.O.T.C.—Students accepted for advanced R.O.T.C. are assured opportunity for an adjustment of their program to permit scheduling the 12 credits in military science required in the Junior and Senior years.

† In the Accounting and Finance majors, Math 1 or 11 and Math 14 required. In the Economics major, Math. 1-2 (or Math. 11-12) and Math. 14 or 51 required. In the Extractive Industries major (engineering option) Math. 11-12 required.

††Bus. 83 (Statistics), required second semester of sophomore year of those majoring in Accounting, Economics, Finance, Marketing or Business and Law. Accounting, Business-Law and Finance majors take Bus. 91-92 in sophomore year.

‡ Physical or biological laboratory science (not Psychology).

## ACCOUNTING

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 165	Business Law .....	3	Bus. 166	Business Law .....	3
Bus. 185	Managerial Cost Analysis ..	3	Bus. 186	Cost Accounting .....	3
Bus. 187	Advanced Accounting .....	3	Bus. 188	Advanced Accounting .....	2
Econ. 103	Money and Banking .....	3	†Bus. or Econ. Electives .....		4
†Free Electives	.....	4	Free Electives	.....	4
Total .....		16	Total .....		16

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 169	Marketing .....	3	Bus. 134, 151, or 152 .....		3
Bus. 183	Federal Tax Accounting ....	3	Econ. 152	Intermediate Econ. Theory	3
Bus. 191	Auditing .....	3	or		
†Bus. or Econ. Electives .....		3	Econ. 153	Income and Employment ...	3
Free Electives	.....	4	Eng. 113	Business Writing .....	3
Total .....		16	†Bus. or Econ. Electives .....		3
			Free Electives	.....	4
			Total .....		16

† To be chosen from courses numbered above 100 with the approval of the advisor.

‡ Additional Speech recommended.

## BUSINESS AND LAW COMBINED CURRICULUM

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Econ. 103	Money and Banking .....	3	Bus 134, 151, or 152 .....		3
Bus. 169	Marketing .....	3	Econ. 153	Income and Employment ...	3
Econ. 152	Intermediate Econ. Theory	3	Eng. 113	Business Writing .....	3
†Bus. or Econ. Electives .....		6	†Bus. or Econ. Electives .....		6
Free Electives	.....	3	Free Electives	.....	3
Total .....		18	Total .....		18

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Law 101	Contracts .....	3	Law 102	Contracts .....	3
Law 103	Legal Writing I .....	1	Law 104	Legal Writing II .....	1
Law 109	Judicial Remedies .....	4	Law 106	Agency .....	2
Law 112	Real Property .....	3	Law 114	Constitutional Law .....	3
Law 115	Torts I .....	3	Law 116	Torts II .....	2
Total .....		14‡	Law 122	Trust .....	3
			Total .....		14‡

† To be chosen from courses numbered above 100 with the approval of the advisor.

‡ If student registers for advanced ROTC, the total credits carried each semester of the senior year will be 17.

## ECONOMICS

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Econ. 103	Money and Banking .....	3	Bus. 169	Marketing .....	3
Econ. 152	Intermediate Econ. Theory	3	‡German or French .....		4
†German or French .....		4	Social Science (100's course) .....		3
Social Science (100's course) .....		3	Free Elective	.....	6
Free Elective	.....	3	Total .....		16
Total .....		16			

‡ One language must be completed through the intermediate course.

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 193	Business Conditions	3	Bus. 168	Gov't. Regulation of Bus.	3
Bus. 165	Business Law	3	Bus. 166	Business Law	3
Econ. 109	Public Finance	3	Econ. 153	Income and Employment	3
Econ. 141	Labor Economics	3	§Bus. or Econ. Electives		6
Econ. 174	International Econ. Policies	3	Free Electives		1-3
Free Electives		1-3			
Total		16-18	Total		16-18

§ To be chosen from courses numbered above 100 with the approval of the advisor.

## BUSINESS AND APPLIED SCIENCE

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 83	Statistics	3	Bus. 124	Business Finance	3
Bus. 169	Marketing	3	Econ. 152	Intermediate Econ. Theory	3
Econ. 103	Money and Banking	3	or		
†Technical Electives		5	Econ. 153	Income and Employment	3
Free Electives		2-3	†Technical Electives		5
Total		16-17	†Bus. or Econ. Electives		3
			Free Electives		2-3
			Total		16-17

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 165	Business Law	3	Bus. 134, 151, or 152		3
Eng. 113	Business Writing	3	Bus. 166	Business Law	3
†Technical Electives		5	Bus. 168	Gov't. Regulation of Bus.	3
†Bus. or Econ. Electives		3	†Technical Electives		2-3
Free Electives		2-3	†Bus. or Econ. Electives		3
Total		16-17	Free Electives		3-4
			Total		16-18

† Technical electives are to be taken in one of the following fields: Agr., Engr., For., or Mining. A list of the courses required in the various fields may be obtained from the Dean of the College of Business Administration.

‡ To be chosen from courses numbered above 100 with the approval of the advisor.

## FINANCE

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 124	Business Finance	3	Bus. 134, 151, or 152		3
Bus. 177	Insurance	3	Bus. 169	Marketing	3
Econ. 109	Public Finance	3	Econ. 103	Money and Banking	3
†Bus. or Econ. Electives		3	†Bus. or Econ. Electives		3
Free Electives		4	Free Electives		4
Total		16	Total		16

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 165	Business Law	3	Bus. 136	Investments	3
Bus. 193	Business Conditions	3	Bus. 166	Business Law	3
Eng. 113	Business Writing	3	†Bus. or Econ. Electives		3
†Bus. or Econ. Electives		3	Econ. 152	Intermediate Econ. Theory	3
Free Electives		4	or		
Total		16	Econ. 153	Income and Employment	3
			Free Electives		4
			Total		16

† To be chosen from courses numbered above 100 with approval of advisor except:

- Students who choose the Real Estate option must take Bus. 119 and Ag.Econ. 150. H.Ec. 82 must be taken in place of Bus. or Econ. Electives.
- All other students must take Econ. 104 as a Business or Economics Elective.

## GENERAL BUSINESS

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 83	Statistics .....	3	Bus. 92	Intermediate Accounting ....	
Bus. 91	Intermediate Accounting ....			or	
			Bus. 186	Cost Accounting .....	3
Bus. 185	Managerial Cost Analysis ..	3	Bus. 124	Business Finance .....	3
Econ. 141	Labor Economics .....	3	Econ. 103	Money and Banking .....	3
†Bus. or Econ.	Electives .....	4	†Bus. or Econ.	Electives .....	4
Free Electives	.....	3	Free Electives	.....	3
	Total .....	16		Total .....	16

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 134, 151, or 152	.....	3	Bus. 166	Business Law .....	3
Bus. 165	Business Law .....	3	Econ. 152	Intermediate Econ. Theory ..	
Bus. 169	Marketing .....	3		or	
Bus. 193	Business Conditions .....	3	Econ. 153	Income and Employment ....	3
Free Electives	.....	4	Eng. 113	Business Writing .....	3
			†Bus. or Econ.	Electives .....	4
			Free Electives	.....	3
	Total .....	16		Total .....	16

† To be chosen from courses numbered above 100 with approval of the advisor.

## MARKETING

## JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 151	Personnel Management .....	3	Bus. 124	Business Finance .....	3
Bus. 169	Marketing .....	3	Econ. 152	Intermediate Econ. Theory ..	
Bus. 175	Principles of Advertising ....	3		or	
Econ. 103	Money and Banking .....	3	Econ. 153	Income and Employment ....	3
Free Electives	.....	4	Eng. 113	Business Writing .....	3
			†Bus. or Econ.	Electives .....	4
			Free Electives	.....	3
	Total .....	16		Total .....	16

## SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 129	Retail Merchandising .....	3	Bus. 130	Retail Merchandising .....	3
Bus. 165	Business Law .....	3	Bus. 166	Business Law .....	3
Bus. 193	Business Conditions .....	3	Bus. 170	Marketing Problems .....	3
†Bus. or Econ.	Electives .....	4	†Bus. or Econ.	Electives .....	3
Free Electives	.....	3	Free Electives	.....	3
	Total .....	16		Total .....	16

† To be chosen from courses numbered above 100 with approval of the advisor. Art 121-122, Journ. 188, Radio-TV 193, Psych. 161 may be substituted for Bus. or Econ. Electives.

## OFFICE ADMINISTRATION

## FRESHMAN YEAR

FIRST SEMESTER			SECOND SEMESTER		
Course		Credits	Course		Credits
Bus. 1	Business Lectures .....	1	Eng. 2	Eng. Composition .....	3
Eng. 1	Eng. Composition .....	3	O.A. 16	Shorthand Dictation .....	4
O.A. 3	Typewriting Problems .....	2	O.A. 85	Office Machines .....	2
O.A. 15n	Shorthand Theory .....	4	Soc. Sci. or Econ.	Geography .....	3
Soc. Sci. or Psychology	.....	3	Free Electives	.....	3
P.E. and Military (Men)	.....	2	P.E. and Military (Men)	.....	2
P.E. (Women)	.....	3	P.E. (Women)	.....	1
	Total .....	15-17		Total .....	16



SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Bus. 31 Principles of Accounting	3	Bus. 32 Principles of Accounting	3
Econ. 51 Principles of Economics	3	Econ. 52 Principles of Economics	3
English Literature	2-3	English Literature	2-3
O.A. 71 Shorthand Speed Devel.	2-3	O.A. 72 Shorthand Transcription	3
Speech 51	2	Free Electives	3-4
Free Electives	1-2	P.E. and Military (Men)	2
P.E. and Military (Men)	2	P.E. (Women)	1
P.E. (Women)	1		
<b>Total</b>	<b>16-17</b>	<b>Total</b>	<b>16-18</b>

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Bus. 124 Business Finance or		Eng. 113 Business Writing	3
Bus. 151 Personnel Management or		*Foreign Language	4
Bus. 162 Office Management	2-3	†Natural Sci. or Math.	4-5
Econ. 103 Money and Banking	3	Soc. Sci. or Econ. Geography	3
*Foreign Language	4	Free Electives	2
†Natural Sci. or Math.	4-5		
Free Electives	2	<b>Total</b>	<b>16-17</b>
<b>Total</b>	<b>16</b>		

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Bus. 83 Statistics	3	Bus. 166 Business Law	3
Bus. 165 Business Law	3	Bus. 169 Marketing	3
O.A. 195 Sec. Office Procedures	3	O.A. 197 Applied Sec. Procedures	3
O.A. 196 Applied Sec. Procedures	3	Free Electives	7
Business or Economic Electives	3		
Free Electives	2	<b>Total</b>	<b>16</b>
<b>Total</b>	<b>17</b>		

\* Two years of one foreign language in high school will satisfy this requirement.

† Physical or biological laboratory science (not Psych.).

FOREIGN TRADE

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Bus. 1 Business Lectures	1	Bus. 32 Principles of Accounting	3
Bus. 31 Principles of Accounting	3	Eng. 2 English Composition	3
Eng. 1 English Composition	3	Geog. 12 Economic Geography	3
Foreign Language	4	Foreign Language	4
Math. I or II Freshman Math.	4-5	P.E. and Military (Men)	2
P.E. and Military (Men)	2	P.E. (Women)	3
P.E. (Women)	1		
<b>Total</b>	<b>16-18</b>	<b>Total</b>	<b>15-16</b>

SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Course	Credits	Course	Credits
Econ. 51 Principles of Economics	3	Econ. 52 Principles of Economics	3
English Literature	2-3	English Literature	2-3
†Foreign Language	4	†Foreign Language	4
†Electives, Related Fields	6	†Electives, Related Fields	3
P.E. and Military (Men)	2	Free Electives	2-3
P.E. (Women)	1	P.E. and Military (Men)	2
		P.E. (Women)	1
<b>Total</b>	<b>17-18</b>	<b>Total</b>	<b>15-18</b>

## JUNIOR YEAR

FIRST SEMESTER		Credits	SECOND SEMESTER		Credits
Course			Course		
Bus. 83	Statistics .....	3	Bus. 124	Business Finance .....	3
Bus. 169	Marketing .....	3	Eng. 113	Business Writing .....	3
Econ. 103	Money and Banking .....	3	Econ. 152	Intermediate Econ. Theory	
†Elective, Related Fields	.....	3		or	
Free Electives	.....	4	Econ. 153	Income and Employment ...	3
		—	†Electives, Related Fields	.....	3
	Total .....	16	Free Electives	.....	4
					—
			Total .....		16

## SENIOR YEAR

FIRST SEMESTER		Credits	SECOND SEMESTER		Credits
Course			Course		
Bus. 165	Business Law .....	3	Bus. 134, 151, or 152	.....	3
Econ. 174	International Economics ...	3	Bus. 166	Business Law .....	3
Electives, Related Fields	.....	6	Bus. 172	International Com. Policy	3
Free Electives	.....	4	Bus. or Econ. Electives	.....	3
		—	Free Electives	.....	3-4
	Total .....	16			—
			Total .....		15-16

† Electives, Related Fields, may be chosen from Psychology, Social Science, Geography or Mathematics (Mathematics courses must be numbered above 100 in order to qualify). At least nine units of electives must be numbered over 100.

‡ One language must be completed through the intermediate course.

# The Graduate School

## GRADUATE COUNCIL

L. C. CADY, Ph.D. (Chairman)	.....	Dean
D. D. DUSAULT, M.S. (Secretary)	.....	Registrar
W. H. BAKER, Ph.D.	.....	Head, Department of Biological Sciences
W. F. BARR, Ph.D.	.....	Professor of Entomology
R. M. BERRY, Ed.D.	.....	Head, Department of Education
C. N. COE, Ph.D.	.....	Head, Department of Humanities
A. M. FINLEY, Ph.D.	.....	Head, Department of Plant Pathology
R. L. GILBERTSON, Ph.D.	.....	Assistant Professor of Forestry
ERWIN GRAUE, Ph.D.	.....	Professor of Economics
R. E. HOSACK, Ph.D.	.....	Head, Department of Social Sciences
M. L. JACKSON, Ph.D.	.....	Head, Department of Chemical Engineering
W. D. MILLER, M.S.	.....	Resident Director of the NRTS Program
JOSEPH NEWTON, M.S. (Met.E.)	..	Head, Department of Mining and Metallurgy
E. S. SCHWARTZ, M.S. (Mus.Ed.)	.....	Associate Professor of Music
L. F. ZIMMERMAN, M.A. (L.S.)	.....	Librarian

## GENERAL INFORMATION

**T**HE INSTRUCTION and training of graduate students have been functions of the University of Idaho for sixty years, the first master's degree having been awarded in 1897. The Graduate School was formally organized on its present basis in 1925. Graduate study presents an opportunity for advanced students to become closely associated with mature scholars and to develop a maturity of thought and attitude which enhances both their professional and cultural life.

The Graduate School serves four groups: students working for advanced degrees, those who wish certain courses for personal reasons or who are working for certification as a teacher, persons who are working for an advanced degree at another institution and have made arrangements to do part of the work at the University of Idaho, and alumni fulfilling the requirements for professional engineering degrees.

The Graduate Council, consisting of a number of faculty members representative of the areas covered by graduate instruction, and with the dean of the Graduate School as chairman coordinates and promotes graduate instruction, establishes policy and makes long-range plans for the graduate program. The scope of the Graduate School covers graduate study throughout the University with more than fifty departments offering considerably more than that many majors. Thus the opportunities for specialization are extensive.

## GRADUATE FELLOWSHIPS AND ASSISTANTSHIPS

To aid graduate students and promote graduate study and research the University of Idaho awards each year a number of teaching assistantships, research fellowships, and service assistantships. The holders of these assistantships and fellowships pay only a very nominal fee and are required to give a limited amount of assistance in the department of their principal study. Holders of assistantships and fellowships will not, under normal circumstances, find it possible to complete the requirements for a master's degree in less than two years or of a doctor's degree in less than four years.

Fellowships and assistantships are open to the graduates of any university or college of recognized standing. Application for one of these positions should be made directly to the subject matter department in which the applicant plans to carry on his graduate work.

**ADVANCED DEGREES OFFERED**

For a list of the advanced degrees offered see page 53.

**PROFESSIONAL DEGREES IN ENGINEERING AND MINING**

As a form of recognition for its own graduates, the University of Idaho offers professional degrees in several fields. The degrees may be granted to graduates of the College of Engineering or the College of Mines who have had five years of appropriate professional experience, one year in responsible charge of work, and who submit an acceptable thesis. Preliminary inquiry should be directed to the Graduate School giving (1) a detailed list of professional activities since graduation with references, and (2) the proposed thesis subject. This material will be referred to the College of Engineering or the College of Mines as the case may be for review and recommendation. When approved, Application for a Professional Degree forms will be furnished the student. These carry the same diploma and thesis binding fees and have the same deadline (March 1) as applications for master's degrees. As degrees are awarded only in June of each year applications should be submitted in the summer or early fall to afford ample time for the preparation and review of the required thesis. For a list of the professional degrees offered see page 53.

**GRADUATE SCHOOL PROCEDURE**

**ADMINISTRATION.**—The chairman and secretary of the Graduate Council administer the routine problems of all graduate students whose cases come under the accepted regulations. Exceptional cases or those from which an appeal is taken are referred to the Graduate Council for action.

**ADMISSION.**—A graduate, with an acceptable scholastic record, of the University of Idaho or of another accredited institution which has equivalent requirements for the first degree may be admitted to the Graduate School. The University Registrar serves as secretary of the Graduate Council and Admissions Officer for the Graduate School, and handles the admission of graduate students subject to final approval by the dean of the Graduate School. The applications for admission of foreign students, applicants with mediocre scholastic averages, and any irregular cases are also reviewed by the division in which the student wishes to major.

Students seeking admission to the University of Idaho for the first time should have transcripts of all college work they have taken sent directly from the institutions in which it was taken to the Registrar, University of Idaho, and request from him appropriate admission forms. These must be submitted by out-of-state students by August 15, and by Idaho residents by September 7 for first semester registration. The deadline for receipt of transcripts and admission forms for second semester registration is January 15 for all students.

Applicants planning to start a doctoral program should note also the sections on Admission and Specific Requirements under Doctor's Degrees, pages 142-145.

The admission categories for graduate students are as follows:

**FULL ENROLLMENT.**—Eligible to start working for a master's degree (any decision regarding a doctoral program is made at a later date).

**UNCLASSIFIED STUDENT.**—Not working for a degree, but eligible to change to Full Enrollment if the student later decides to work for an advanced degree. Only those courses which fit into the student's master's degree program may be counted toward the degree. An unclassified student ordinarily is not eligible to receive VA benefits. (In special cases benefits may be obtained by developing a program which receives VA approval.) A student in this category may not register for Research and Thesis courses.

**PROVISIONAL ADMISSION.**—In exceptional cases a graduate of a non-accredited institution, a student with a number of undergraduate deficiencies, an applicant with a grade point average below the requirement for full graduate standing, and transient students, may be admitted to the Graduate School on a Provisional Non-Degree status. Students in this category are not working for advanced degrees and hence may not enroll for Research and Thesis courses, nor be admitted to Candidacy for a degree. A student who has earned 15 credits with an average of "B" or better may petition the Graduate Council for advancement to full graduate standing and permission to use credits completed acceptably toward an advanced degree. Students in this category are expected to meet all graduate-school regulations which are appropriate to their status including the 2.4 grade requirement.

## THE MASTER'S DEGREES

### General Degree Requirements

It is felt at the University of Idaho that grades and credits in graduate work do not carry their usual undergraduate implication. More proper criteria are the intellectual advancement of the graduate student, and the development of his initiative, research technique, scientific enthusiasm and mature attitude. However, because accurate measures of these values are lacking, the credit and grade requirements used are:

A minimum of thirty credits is required for all master's degrees.

At least two-thirds of the required semester hours must be completed in residence at the University of Idaho, except that graduates of the University of Idaho may with the prior approval of their major professor and the dean of the Graduate School present one-half the required semester hours from another approved graduate school.

The concentration of the graduate program is in the major subject which comprises not less than twelve course credits on the graduate level (courses numbered 200). Other credits which shall be in cognate or supporting courses must be approved by the major professor. A candidate for an advanced degree may select his major only from those subjects which are allowed as majors for the corresponding bachelor's degree. He must present preparation equivalent both in the major field and in the general requirements to that required for the first degree. When applying this criterion for adequate preparation to an M.S. with a major in a certain field; a foreign language will be required if it is required for the undergraduate major, but if not required for the undergraduate major it will not be required for the graduate major in the same field. Any change of major must be approved by the major professors concerned and the dean of the Graduate School. Notice of this approval must be filed in the Registrar's office.

At least two-thirds of the minimum number of credits required for all master's degrees shall be graduate in character (courses numbered 200), and not more than one-third may be in courses classified as advanced undergraduate (numbered 100). Courses numbered below 100 may not be applied to fulfill the requirements for a master's degree. Not more than ten research and thesis credits may be applied toward a master's degree.

Candidates for the degree of Master of Arts, Master of Music, and the Master of Science degrees in all fields shall complete an acceptable thesis. An original composition in music may be presented in lieu of a thesis.

Candidates for the degree of Master of Agriculture, Master of Forestry, and Master of Natural Sciences must pass a comprehensive examination which may be written or oral or a combination of the two. A maximum of six credits in approved 100's courses, basic to the professional field, may be substituted for six credits of 200's courses. Other special requirements for these degrees may be obtained from the Graduate School.

Candidates for the degree of Master of Education, Master of Music Education, and Master of Business Education must pass a written comprehensive examination.

### **Outline of Procedures for Master's Degrees**

**APPROVAL OF MASTER'S DEGREE PROGRAM.**—At the beginning of his first semester or summer session each student prepares, in conference with his major professor, a master's degree program outlining all of the work which he plans to complete and present to fulfill the requirements for the degree. This is an individual program of study for each student and is designed to meet the particular needs and objectives of the student. This program is submitted for approval to the dean of the Graduate School within six weeks after the student's first registration. A student who fails to submit a program or whose program is not approved is not eligible to become a candidate for an advanced degree.

**STUDENT'S COMMITTEE.**—Each student's committee is recommended by the student's major professor and approved by the dean of the Graduate School. Normally the committee will consist of the major professor as chairman, a second member from the major field, a professor representing the cognate or supporting field(s), and one or more members from outside the major department. The recommendation of a majority of his committee is necessary before a student may receive his master's degree.

**CANDIDACY FOR A DEGREE.**—This is the important point at which students are selected as qualified to work toward an advanced degree. A student is eligible to be recommended for candidacy after the tenth week of his first semester or after the end of his first summer session (grades are available at these times). The recommendation to candidacy is made by the student's major professor and must be approved by the dean of the Graduate School. It is the policy to recommend to candidacy only those students whose grade averages meet the grade requirement for a master's degree (see **Grades and Grading System** page 141.) A student who has not been admitted to candidacy is not eligible to file an application for a master's degree.

**EXAMINATIONS.**—An oral or written examination is required of each candidate who is presenting a thesis or musical composition as a part of the requirements for his degree, except candidates for the degree of Master of Music may give a public recital in lieu of an oral examination.

Students fulfilling the requirements of those degrees which require a comprehensive examination may secure the details regarding this examination from the College in which the examination is given.

Passing the oral or comprehensive examination is one of the requirements for the master's degree. Students are not eligible to take these examinations until they are in the process of completing the final requirements for their degrees.

**THESIS**—The student should choose, in conference with his major professor, his thesis subject as early as possible after his first registration in the Graduate School. Failure to start work on the thesis promptly may lead to a postponement of the date the degree can be awarded. Each thesis is carefully reviewed by the Graduate Council and requires the approval of that body before the degree can be granted. The original and first copy of the thesis must be deposited in the Graduate School office before May 15 for submission to the Graduate Council.

**APPLICATION FOR A MASTER'S DEGREE**—Formal application for a master's degree is filed at the beginning of the last semester or summer session in which the student is in residence. The final date for filing an application for a degree is March 1 of the year in which the degree is to be awarded. The diploma and thesis binding fees are paid when the application is filed.

**COMMENCEMENT.**—The candidate is expected to attend commencement unless permission to be absent has been recommended by the dean of the Graduate School and granted by the president of the University.

### General Regulations for Master's Degrees

**DEFICIENCIES.**—Students who enter the Graduate School with deficiencies may, with the approval of the dean, make up such deficiencies by non-resident study, provided: the student's total scholastic load is not increased beyond the acceptable limit, and the course cannot be taken in residence.

**PARTIAL ENROLLMENT.**—A senior in his last semester at the University of Idaho who has satisfied the undergraduate residence requirement and who needs not more than six credits to complete the requirements for his baccalaureate degree, with the consent of the dean of the Graduate School, may register in partial enrollment in the Graduate School. Application must be made to the dean of the Graduate School in advance of enrollment in order that graduate credits may be awarded for the appropriate courses. To enroll in partial enrollment a senior must have a sufficiently high undergraduate average to meet the regular Graduate School admission requirements.

### RESIDENCE REQUIREMENTS

(1) All students, except graduates of the University of Idaho, will be required to attend a minimum of 24 weeks in residence on the campus.

(2) Graduates of the University of Idaho may be permitted in special cases to fulfill the residence requirement with one semester at the University of Idaho and complete the remainder of the required work at some other approved institution. Such a request requires the recommendation of the major professor and the approval of the dean of the Graduate School before the work is taken.

(3) No full-time employee, either of the University of Idaho, or of another employer, shall be granted a master's degree for less than two years of graduate work, unless such employee shall have been given a leave from his regular employment and enrolls as a full-time graduate student.

**NON-RESIDENT CREDITS NOT ACCEPTED.**—Credits from non-residence (correspondence) courses are not accepted to fulfill any of the requirements of a master's degree (except to remove deficiencies), nor do they reduce the residence requirement.

**EXTENSION AND TRANSFER CREDIT.**—A maximum of nine credits of extension work, *offered by the University of Idaho*, may be accepted toward a master's degree. Up to one-third of the credit requirement may be transferred from another approved graduate school, provided: these credits were earned while the student was enrolled in the graduate school of that institution, the courses fit into his specific program, and the courses have not been used to fulfill the requirements for another degree. However, it should be noted (see **General Degree Requirements** page 139) that the combined number of credits accepted toward degree requirements by extension, transfer and In Absentia courses cannot be greater than one-third of the total credit requirement.

**FEES.**—Full-time graduate students pay the same fees as undergraduate students except that non-resident tuition is not charged to graduate students from outside the State of Idaho. Graduate students on Regents appointment do not pay registration fees. All students registering in the Graduate School who fail to complete registration within one day after the final undergraduate registration date in any semester are required to pay the same late registration fee charged undergraduates who register late. (See page 21.)

**GRADES AND GRADING SYSTEM.**—A graduate student, to meet the degree requirements, must attain the grade of A or B in not less than two-thirds of the courses required for his graduate degree and not less than a C in the remaining one-third. The grade of P (Passed) may be used for 200's courses in place of A. or B. (See Section E, page 56.)

In addition to the requirements for graduation, a student in order to be eligible to reregister in the Graduate School the following semester or summer session, must have attained a grade-point average of at least 2.4 for his most recent semester or summer session; except that a student registered for only one course may be permitted to reregister if he has earned a grade of C in that course. For purposes of computing grade-point averages a grade of P shall be considered equivalent to a B.

**GRADUATE AND UNDERGRADUATE COURSES CONDUCTED SEPARATELY**—Graduate and undergraduate courses must be conducted separately; it is not permissible to combine an undergraduate and a graduate course and conduct them as a single class.

**TIME LIMIT ON CREDITS**—A candidate for the master's degree must complete all requirements for the degree within eight consecutive years after being admitted to the Graduate School. All extension credits and those transferred from other institutions must have been earned within this period in order to apply toward the degree.

### **MASTER'S PROGRAMS AT ATOMIC ENERGY COMMISSION INSTALLATIONS**

The Regents of the University of Idaho have authorized two graduate programs at Atomic Energy Commission installations. These programs are offered in cooperation with the Phillips Petroleum Company's Educational Program at the National Reactor Testing Station, Idaho Falls, Idaho and the Hanford Graduate Center at Richland, Washington. Students enrolled in either of these programs may be admitted to the University of Idaho Graduate School and receive credit for approved courses given by qualified staff members of the cooperating organizations.

### **THE DOCTOR'S DEGREES**

The doctor's degree is traditionally the highest certificate of academic accomplishment. The doctorate is conferred on evidence of superior qualities of mind and intellectual interests of high attainment in the chosen field. All requirements and regulations are merely devices that are designed to permit the candidate to demonstrate his present capabilities and future promise for scholarly work. Requirements of time and credit are secondary. No candidate will be recommended for a degree until he has satisfied the general and specific requirements.

#### **General Degree Requirements**

These include:

- The completion of an approved program of formal course work.
- The demonstration of facility with foreign languages for the Ph.D. or professional experience for the Ed.D.
- Passing various examinations including the qualifying, preliminary and final examinations.
- Carrying out a research program and offering an acceptable dissertation.

#### **Outline of Procedures for the Ph.D. and Ed.D. Degrees**

##### *1. Admission*

See the section on Admission to the Graduate School, page 138. An applicant who has a master's degree or who plans to start working for a doctor's degree following the student's first enrollment in the Graduate School, should communicate with the division in which the applicant wishes to major well in advance of the submission of the application for admission, and before coming to the campus. The major department will wish to study the credentials of all applicants and secure references and other information before it will be willing to sponsor their admission.



## 2. *Notice of Intention*

Upon receiving a master's degree from the University of Idaho or entering the University of Idaho with a master's degree, or completing two semesters of full-time graduate study or its equivalent beyond a bachelor's degree, the student files with the Graduate School a Notice of Intention to work for a Ph.D. or Ed.D. This must be done at least four semesters before the student expects to receive the degree. In order to start a doctoral program, a student must have the approval of the major department (or of a departmental committee composed of the senior members of the department).

## 3. *Major Professor and Advisory Committee*

The student selects a major professor from among the faculty approved and available to serve in this capacity. The advisory committee normally will consist of the major professor as chairman, a second member from the major field, two members from supporting areas, and a representative of the Graduate Council. The committee is appointed by the dean of the Graduate School in consultation with the student's major professor, the head of the department and the dean of the College concerned.

## 4. *Qualifying Examinations*

As soon as the student is notified of the appointment of his advisory committee he holds a conference with its members and stands ready to take his qualifying examinations. These examinations are given by his advisory committee which determines the type of examination suitable to judge the capabilities of the individual student.

The purpose of the qualifying examinations, which cover both the major and supporting fields, is to determine the areas in which the student may be weak, and to furnish a basis for the formulation of his doctoral program. To serve their purpose these examinations must be taken before the end of the fifth week in the semester in which the student's Notice of Intention is approved.

## 5. *Study Plan*

Shortly after completing the qualifying examinations the student submits a Study Plan which must be approved by his advisory committee and the dean of the Graduate School. Any later changes require the same approvals.

The student's doctoral program is expected to contain breadth as well as depth. The Study Plan is essentially the responsibility of the major professor and the student's committee, subject to review by the Graduate Council.

## 6. *Foreign Languages*

For the Ph.D. degree a reading knowledge of two foreign languages appropriate to the student's program of studies is required as specified by the department. The choice of languages must be approved by the student's advisory committee and proficiency demonstrated by means of formal examinations that will be given under the supervision of the chairman of foreign languages.

For the Ed.D. degree there is no specific foreign language requirement, however, a student whose field of training or whose research project calls for a reading knowledge of one or more foreign languages may be held for a demonstration of the needed linguistic ability.

## 7. *Preliminary Examinations*

Upon the completion of at least four months of academic work following the approval of the Study Plan, after the foreign language requirement has been satisfied (or the professional experience requirement for the Ed.D.),

most of the course work in the Study Plan completed, and the thesis project outlined and approved, the student may secure the consent of his advisory committee and the dean of the Graduate School to take the preliminary examinations.

The preliminary examinations cover the entire area of the student's graduate study. These examinations must be passed at least seven months before the completion of the work for the degree. If the preliminary examinations are failed they may be repeated only once, but the second preliminary examinations must be taken within the period of not less than three months or more than a year following the first attempt.

#### 8. *Admission to Candidacy*

The student is eligible for admission to candidacy upon passing the preliminary examinations.

#### 9. *Thesis*

Two copies of the student's thesis are submitted to his advisory committee and subsequently to the Graduate Council for approval. In order to permit ample time for the Graduate Council to review the final draft of the thesis, it must be submitted to the Graduate School at least four weeks before the final examination is given. The student prepares an abstract not exceeding six hundred words and submits it with the thesis.

Candidates for the Ph.D. and Ed.D. degrees pay a fee of \$25 for micro-filming of the thesis in its entirety by University Microfilms. This includes publication of the doctoral abstract in *Dissertations Abstracts* by the same agency.

#### 10. *Final Examination*

After the thesis has been submitted to the Graduate School the candidate may request his final examination. The final examination is usually oral, but a part may be written. The candidate is required to defend his thesis and show a satisfactory knowledge of his major and minor fields.

#### 11. *Application for a Degree*

The candidate must file an application for the degree and pay the necessary fees by March 1 of the year in which the degree is to be awarded.

#### 12. *Commencement*

The candidate is expected to attend Commencement unless permission to be absent has been recommended by the dean of the Graduate School and granted by the President of the University.

### **General Regulations for Doctor's Degrees**

#### 1. *Quality of Work*

Students are expected to complete with distinction all work in formal courses in which they enroll. A grade below "B" is unsatisfactory and will not be counted toward fulfilling the minimum requirements for the degree as outlined on the student's Study Plan.

#### 2. *Residence*

At least three academic years of resident study beyond an acceptable bachelor's degree is the minimum time requirement. Two of these years shall be at the University of Idaho, and at least two semesters above the master's degree or two of the last four semesters must be spent in continuous full-time residence on the Moscow campus. This requirement of continuous residence

is normally met by completion of a full graduate program during each semester of a single academic year beyond the level of the master's degree. In order to obtain residence credit for any semester during this period, the candidate must complete satisfactorily at least 9 credits of work on the graduate level. A full-time employee, most of whose work is research provided for in his Study Plan, may be considered in full-time residence although registered for less than the normal credit requirement. The residence requirement may not be satisfied by summer session attendance only, and a master's degree is considered to represent not more than an academic year of resident study.

After his Study Plan has been approved and he has spent at least one semester in residence, a student may be granted a leave of absence from the University to carry out special investigation in the field or to take advantage of opportunities for research or special subjects not available at the University of Idaho. Residence credit may be granted for such a leave by petition to the Graduate Council, but it cannot abrogate the requirement of two semesters of continuous full-time resident study on the Moscow campus.

### 3. *Time Limit*

If all requirements are not completed within five years after the preliminary examinations are passed, new preliminary examinations must be taken and passed. It is understood that the second preliminary examination will include recent advances in the student's major and minor areas and will require additional preparation on his part.

### 4. *Extension and Correspondence Courses*

Courses taken by extension or correspondence may not be used to fulfill the course requirements included in the Study Plan.

### 5. *Full Load*

A graduate student is considered to be taking a full load: when enrolled for 12 semester credits of course work; or when spending his full time on his research problem; or when devoting his full time to a combination of course work, research and preparation for examinations.

### 6. *Awarding Doctoral Degrees to the Faculty*

Doctor's degrees may not be awarded to a University of Idaho faculty member above the rank of instructor by a department in the College in which he is teaching, unless the faculty member passed his preliminary examination before promotion above that rank.

## **Specific Requirements**

In addition to the general requirements for the doctoral degrees, each division has certain specific requirements for each major which it offers. A prospective student planning to enroll for work leading to a Ph.D. or Ed.D. degree should contact the division in which he wishes to major before coming to the campus. He should secure from it, well in advance of the submission of his application for admission to the Graduate School, a list of the specific requirements for his major, and determine the information and any entrance examinations which will be required by the division before it will sponsor his admission.

## **Doctor of Education**

The Doctor of Education degree is a professional degree sponsored by the College of Education. Candidates for this degree must meet all of the general requirements for doctor's degrees established by the Graduate School and in addition certain specific requirements of the College of Education. Interested persons may obtain details of these requirements from the College of Education.

# Part IV

## The Experiment Stations Agricultural Extension University Research Educational Field Services Summer School Non-Resident Instruction

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### Agricultural Experiment Station

JAMES E. KRAUS, Ph.D. .... Director  
RONALD D. ENSIGN, Ph.D. .... Associate Director

**I**N COMPLIANCE with an enabling act of Congress approved March 2, 1887, the Idaho Agricultural Experiment Station became an integral part of the State University at the time of its organization. That act, commonly known as the Hatch Act, defines the scope and activities of state experiment stations as follows:

That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantage of rotative cropping as pursued in a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of different kinds of foods for domestic animals; the scientific and economic questions in the production of butter and cheese; and such researches or experiments bearing directly on the agricultural industry in the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories.

The Hatch Act of 1887 provided for the establishment of an Agricultural Experiment Station at each of the land-grant colleges and the contribution of Federal Funds annually to the States to partially support research programs carried on by these stations. Several supplementary acts have been enacted since the Hatch Act. The 84th Congress, on August 11, 1956, passed H.R. Bill 5562 which consolidated the Hatch Act of 1887 and other supplementary laws providing for grants to the states, Hawaii, and Puerto Rico for the support of Agricultural Experiment Stations. This consolidation allows much simplification of accounting for expenditure of Federal Funds. Five separate accounts were combined into one.

The Hatch Act Ammended provides for "the continuation of the Agricultural research at State Agricultural Experiment Stations which have been supported by the Hatch Act of 1887, the Adams Act of 1906, the Pur-nell Act of 1925, the Bankhead Jones Act of 1935, and Title I, Section 9 of the Marketing Act of August 1946, and acts amendatory and supple-

mentary thereto, and to promote the efficiency of such research by a codification and simplification of such laws".

The Hatch Act Amended does not change the intent of Congress as was set forth in the original Hatch Act and succeeding acts. The allocations of Federal Funds are to continue on the basis of previous acts which includes matching requirements and the 20 per cent marketing research requirement of funds appropriated pursuant to Section 9 of the Bankhead Jones Act. Funds received from the Hatch Act are supplemented by State appropriations for the investigations of special problems and for the maintenance of branch stations, where some of the work can be most advantageously carried on.

**ORGANIZATION AND WORK.**—The organization of the Agricultural Experiment Station is practically the same as that which prevails in the College of Agriculture. Under the general supervision of a Director, research is carried on by departments, of which there are now 13, viz: Agricultural Chemistry, Agricultural Economics, Agricultural Engineering, Agronomy, Animal Husbandry, Bacteriology, Dairy Science, Entomology, Home Economics, Horticulture, Plant Pathology, Poultry Husbandry, and Veterinary Science. Each Department has a broad conception of its duties and influences and is pushing actively the work it has inaugurated for the ultimate benefit of the agricultural industry it represents.

Many important lines of investigation are in progress. These include a wide range of research projects on production, marketing and utilization of agricultural products. Approximately 200 separate research projects are being actively pursued at the present time. The agricultural research program of the University is a dynamic program, and changes from year to year. As research is completed, the results are published and disseminated for public use and new lines of investigation are begun. This research has a two-fold purpose, first to find practical answers to problems which affect farmers or agricultural industry in day-to-day operations and second to determine basic facts and new knowledge which may serve as the basis for answering problems which may arise in the future.

The director of the Experiment Station is responsible for the administration and operation of the State Seed Laboratory in Boise.

**LABORATORY AND OTHER FACILITIES.**—The Departments of Bacteriology, Agricultural Chemistry, Agronomy, Animal Husbandry, Horticulture, Plant Pathology, Veterinary Science, Entomology, Dairy Science, and Dairy Manufacturing have well-equipped research laboratories in Science Hall, Agricultural Science Building, Entomology Building, Dairy Science Building, and the Agronomy Building. Agricultural Engineering laboratories are located in the engineering shops. Greenhouse facilities are provided for such lines of investigation as require them. The college farm of 990 acres supports splendid herds of beef and dairy cattle, hogs and sheep, from which individual animals are selected for experimental feeding purposes. This farm also provides experimental fields for the use of Departments of Agronomy, Agricultural Chemistry, Horticulture, and Plant Pathology, and range and breeding pens for the Department of Poultry Husbandry.

Farming conditions within the State are so varied that it is necessary to conduct many lines of investigation away from the central station. The branch station farms are admirably located for this purpose. On the Sandpoint farm, experiments designed to point the way to the profitable utilization of the cut-over and burned-over lands are in progress. The farm at Aberdeen is used for experiments in crop production under irrigation. A comprehensive program of potato and cereal research is included. The Caldwell Branch Station supports a dairy herd and is used for investigations in animal feeding and diversified farming. A feeding plant provides for 150 head of cattle and from 200 to 500 head of sheep. At the Branch Station at Tetonia experiments are conducted in the growing of grains, grasses and potatoes, and tests of cultural practices which give promise of adaptability to elevations of more than 6,000

feet. With the purchase of additional land, the Tetonia Branch Station is the key station for production of foundation seed stocks of the cereals, potatoes and legumes. The Parma Branch Experiment Station is primarily a horticultural station at which extensive work is conducted on fruits, vegetables, vegetable seed crops and fresh market vegetables. Land was purchased for a new branch station at Twin Falls in 1950. The primary purpose of this station is for research on all phases of bean production. A fruit and vegetable field station is maintained at Lewiston. Additional points of contact with agricultural problems are found on many farms of the State where cooperative work is carried on during the summer. The splendid public spirit of citizens in the several localities has made possible the work now in progress on these farms. In the work at Aberdeen, Caldwell, Parma, Twin Falls and at Tetonia, the United States Department of Agriculture, through its Agricultural Research Service and Soil Conservation Service, is cooperating. The Experiment Station actively cooperates with the U. S. Sheep Experimental Station at Dubois, Idaho. The University of Idaho owns and maintains approximately 9,000 head of sheep at that Station. University personnel headquartered at the Dubois Station work jointly with Federal personnel.

**PUBLICATIONS.**—To disseminate research results and helpful information to the farmers of the state, the University of Idaho Agricultural Experiment Station issues a large number of publications every year. Each type has its specific mission. Research bulletins add to the world's permanent store of knowledge the new information coming from the Idaho studies. Experiment Station bulletins are of a more popular nature, aimed at guiding individuals engaged in the state's agriculture in taking advantage of the experimental results. Research Progress Reports and the quarterly publication, Idaho Agricultural Science, keep the state constantly informed on the broad scope of the research program in the College of Agriculture. County agent offices throughout the state maintain a complete file of Idaho agricultural publications, as well as those available from the United States Department of Agriculture. Although all agricultural research is conducted primarily for the benefit of all those engaged in this big basic industry, students in the College of Agriculture also are aided. For the most part, the men who conduct the agricultural research also teach classes. Thus the students receive in their normal classwork the latest information on research appropriate to their field of specialization.

## Agriculture and Home Economics Extension

JAMES E. KRAUS, Ph.D. ....	<i>Director</i>
C. O. YOUNGSTROM, M.S. ....	<i>Associate Director</i>
D. E. WARREN, B.S. ....	<i>State 4-H Club Leader</i>
MILDRED HABERLY, M.S. ....	<i>State Home Demonstration Leader</i>

**F**OR many years the College of Agriculture and the University have rendered service to the farmers of the State through farmers' institutes, the publishing of bulletins and circulars, judging at fairs, answering letters of inquiry upon topics of interest to the farmers, and through special meetings held in all parts of the state.

Extension work, as it is known today, is an outgrowth of the Smith-Lever Act of Congress, approved May 8, 1914. With the aid of Federal Funds supplied by the terms of this Act and subsequent acts and special appropriations of the State, the Extension Service within the last few years has contributed in a large measure to the development of an efficient and progressive agriculture.

General administration of extension work in Idaho is in charge of the Director of Extension. The offices of the Director and other leaders are at Moscow. Offices of Associate Director, field specialists and district agents are at Boise, Pocatello, and Moscow. General supervision of the 42 county agents is under three District Extension Agent Supervisors. The State 4-H Club Leader directs the club work of the State, which has been very popular in the farming section, with an enrollment of approximately 13,000 boys and girls. Field specialists carry on carefully outlined projects of work largely through the county agents, in horticulture, agricultural engineering, entomology, animal husbandry, dairy, agronomy, improvement of soils, poultry husbandry, pure seed production, forestry, agricultural economics, marketing, potato service, conservation, and various phases of homemaking.

Members of the extension staff are the field representatives of the University of Idaho. They are constantly working in the rural communities, assisting in every possible way in agricultural development and home improvement. Through the Agricultural Extension Service the work of the College of Agriculture of the University of Idaho has become statewide, and this service is rendered by the institution not only to those near at hand, but also to those sections of the State farthest removed from the campus.

## Engineering Experiment Station

A. S. JANSSEN, M.S.(C.E.), P.E. .... *Director*  
 C. C. WARNICK, M.S.(C.E.), P.E. .... *Associate Director*

**A**LTHOUGH the Engineering Experiment Station was not formally organized by the Board of Regents until June, 1928, investigational work has been carried on in the materials testing and other laboratories since 1904. During that year and the year following, two bulletins were published, each dealing with the road-making properties of the trap rocks of the Palouse region. To date eleven bulletins and sixteen reprints have been published in printed form and results of numerous studies appear in mimeographed form.

**OBJECT AND ORGANIZATION.**—The station was established to do research work upon engineering problems of importance to industries, municipalities, public utilities, state departments, and engineers of Idaho; to stimulate research activity in the faculty and among the students of the College of Engineering; and to publish the results of investigations and compilations of data of value to the citizens of the State.

The staff of the station is composed of the president of the University, the director and various members of the faculty of the College of Engineering. The laboratories of the departments of civil, mechanical, electrical, chemical, and agricultural engineering are employed in the investigations conducted by the station.

## Forest, Wildlife and Range Experiment Station

ERNEST WOHLTZ, MS. .... *Director*  
 EDWIN W. TISDALE, Ph.D. .... *Associate Director*  
 PAUL D. DALKE, Ph.D. .... *Leader, Coop. Wildlife Research Unit  
 Station Staff:*

E. C. CLARK, L. L. INMAN, G. D. FRAZIER, MINORU HIRONAKA, D. S. OLSON;  
 all members of the academic staff of the College of Forestry;  
 and several Research Fellows.

The research program of the College of Forestry is centered in this Experiment Station which was established through authorization granted by the State Legislature of 1939.

**PURPOSE.**—The Experiment Station is to institute and conduct investigations in problems of forest, range, wildlife and fisheries within the State and disseminate to the public information so obtained. The Station is to cooperate fully with all private and State and Federal agencies. Authority exists for the establishment of experimental sub-stations under approval of the Board of Regents.

**ORGANIZATION AND WORK.**—The Experiment Station staff consists of the President of the University, the Director, Associate Director, full time members of the research staff and other faculty members and graduate fellows of the College of Forestry on a part-time basis. The research program includes all phases of forest, range, and wildlife problems. Fields of current investigation include forest management, forest economics, tree physiology, forest pathology; range improvement, range reseeding, basic studies of range types and resources, and range weed problems; studies of antelope, deer, elk, grouse and pheasants; and research on lake and stream fishery problems. This research work is well distributed geographically, with one or more projects active in every major region of the State.

**FACILITIES.**—The laboratories and research equipment of the College of Forestry are available for the work of the station. Additional facilities of other University Departments are available on a cooperative basis. The 7,200 acre University Experimental Forest, the Clarke-McNary Nursery and the Shattuck Arboretum provide additional facilities on or near the campus. Other facilities are available through cooperation with various individuals and agencies in the State, particularly the U.S. Forest Service, Bureau of Land Management and Idaho Department of Fish and Game.

**IDAHO COOPERATIVE WILDLIFE RESEARCH UNIT.**—The unit exists through a cooperative agreement between the University, the State Department of Fish and Game, the U.S. Fish and Wildlife Service and the Wildlife Management Institute. Under this agreement the federal government assigns a Unit Leader to the University. Through the Unit, funds are provided for a number of Research Fellowships for study of wildlife and fishery problems.

**PUBLICATIONS.**—The research results of the station are made available through the medium of Station research notes, Station bulletins, and by papers in technical and popular journals and magazines.



## Idaho Bureau of Mines and Geology

E. F. COOK, B.S., M.S., Ph.D. .... *Director*

LEWIS S. PRATER, B.S. .... *Assistant Director*

The state statutes under which the Idaho Bureau of Mines and Geology is established and operated specify that the Bureau's office and headquarters shall be at the University of Idaho and that the Dean of the College of Mines is Director of the Bureau. The Bureau functions primarily as a research and service organization in fields pertaining to the mineral industry of the State. Cooperative relations are maintained with federal agencies working in this area, particularly the U. S. Bureau of Mines and the U. S. Geological Survey.

Geological and mineral engineering field studies of a reconnaissance nature as well as those designed to obtain detailed information of particular areas and commodities are conducted throughout the state. Reports are issued incorporating the results of such investigations.

The Bureau maintains laboratories in the College of Mines buildings where research designed to find better or more economical methods for processing ores and mineral products is conducted. Microscopes, black lights, Geiger counters and similar instruments required for mineral identification are used. In the mineral dressing laboratory, crushers, grinding mills, flotation cells, classifiers and various gravity concentration units are used in making metallurgical tests on ores.

At present, the Bureau staff is comprised of six full-time employees—a metallurgist, a minerals engineer, an economic geologist, a minerals analyst, and two secretaries. During the field season this staff is supplemented by College of Mines faculty members and others who are employed for the summer months.

## Research Council and Research Foundation

The Research Council was established to foster research in all legitimate ways, encourage and assist research workers, coordinate the various research programs being carried on by the University, and administer certain research funds. The University of Idaho Research Foundation, Inc., is a separate legal entity which implements the provisions of the University Patent Policy. Its purpose is to protect the interests of the inventor, the public and the University, and handle inventions growing out of University research programs.

The Special Research and the General Research funds are administered by the Research Council. The Special Research program provides for conducting fundamental, exploratory and applied research on problems related to the development of Idaho, the efficient utilization of its resources, and the growth of its economy. General Research funds are available for fundamental research in those fields not served by experiment stations or comparable research units.

The University Research Advisory Council is composed of representative Idaho citizens whose guidance and advice assures Idaho of a research program geared closely to the needs of the State. The membership of the Advisory Council, Research Council and its various committees, and the directors of the Research Foundation are listed in Part VI of this catalog.

## Educational Field Services

HARLOW H. CAMPBELL, B.S.(Ed.), M.S.(Ed.) ..... *Director*

The Department of Educational Field Services was organized in November, 1947, to coordinate and direct through a central office the University's many educational field services, other than those in the College of Agriculture, which has and will continue to have its separate field services—The Agriculture Extension Division.

Included in this department are the University's important and long-standing services in Non-Resident Instruction and Placement, previously in the College of Education. To complete the organization other services informally conducted by various divisions and departments of the University also are grouped in this new department. They include general field service.

### NON-RESIDENT INSTRUCTION

The purpose of Non-Resident Instruction is to provide an opportunity for a large number of residents of the state to accumulate credits toward a degree, and others desiring to study merely to improve their general educational and cultural background. (For details see page ???.)

### PLACEMENT BUREAU

The Placement Bureau now serves all divisions of the University and is the central contact agency between the University and employers. However, this does not preclude direct contact with the various academic divisions.

### GENERAL FIELD SERVICE

General Field Service includes an informal packet service in response to specific requests. For example, the University has available about 3,400 plays which may be borrowed for limited periods of time. List of these plays may be obtained upon request.

### EDUCATIONAL EXTENSION COURSES

#### PURPOSE OF EDUCATIONAL EXTENSION COURSES

The University renders service to teachers and administrators throughout the state of Idaho. Educational extension courses are offered, as a convenience and opportunity, for those people in the field desirous of upgrading their professional qualifications and improving their effectiveness on the job. Also courses in any field may be offered where it is feasible and a sufficient number of people will justify an extension course. To that end the University establishes Extension Centers throughout the state.

#### STATEMENT OF STANDARDS

Educational extension class work is so organized that assignments, student output and achievement, grades, and the number of class and study hours expected approximate University standards for on-campus courses bearing similar credits.

**ESTABLISHING LOCAL CENTERS**

Educational extension courses are offered at given centers if:

1. There is sufficient expressed interest by educators in the surrounding areas to justify the course.
2. Facilities are available for the proper conduct of the courses.
3. Local qualified leadership may be secured to assist in conducting the classes.
4. Cooperation is freely given by everyone concerned.

**LOCATION**

Classes will be located throughout the State in centers which meet the four major considerations listed above.

**INSTRUCTION**

A University professor will be in charge of the classes assisted by a local assistant instructor who must be approved by the University authorities.

**SESSIONS**

Sixteen class sessions, including the organizational meeting, each session to be three hours in length or the equivalent number of total class hours. A calendar of time, place and meeting dates should be adopted at the organizational meeting.

**COURSES, ASSIGNMENTS, AND GRADING**

The courses of study, assignments, and the evaluation technique shall be furnished by the University professor and shall correspond to the usual University standards. The grading system used in residence instruction applies to University educational extension courses.

**CREDIT**

Three semester credit hours per course.

Not more than ten semester credit hours of educational extension work offered by the University of Idaho may be accepted toward a Master's degree.

Undergraduates may apply a maximum of 32 semester credit hours earned in correspondence and extension courses or a combination of both toward the Bachelor's degree; however, such courses do not count toward residence requirements.

Resident students are not permitted to carry extension work unless they have prior approval of their dean.

**CLASS ATTENDANCE**

Class attendance limited to persons having official enrollment cards beginning the second meeting. Refunds and transfers are not granted after the second meeting.

**DISCONTINUED CLASSES**

University Educational Extension, University of Idaho, reserves the right to discontinue, postpone, or combine classes, and to change instructors. If a class is discontinued by University Extension, all fees will be refunded to the student.

**PREREQUISITES**

Information regarding prerequisites for a class, if any, may be obtained from the instructor or the University of Idaho Catalog.

**COURSE NUMBERING**

Courses in the 100's group are for advanced undergraduates and graduates and those in the 200's group are primarily for graduates. The current University of Idaho Catalog issue shall be the guide for course number, title and description.

An X shall be used before the course number to designate extension courses.

**REGISTRATION**

Forms and directions for registration shall be furnished by the Educational Field Services.

**BOOKS AND SUPPLIES**

Text books and other required supplies shall be arranged, ordered, and paid for by the enrollees. Materials are sent C. O. D., on request.

# Non-Resident Instruction

HARLOW H. CAMPBELL, B.S.(Ed.), M.S.(Ed.), ..... *Director*

## PURPOSE AND AIMS

**N**ON-RESIDENT courses are given for the benefit of those persons who cannot take advantage of the training offered in residence at the University. These courses are prepared and taught by regular members of the University faculty who are in charge of similar courses in residence.

## GENERAL INFORMATION

The University of Idaho, through the Bureau of Non-Resident Instruction of the Department of Educational Field Services, offers two kinds of non-resident instruction. First, for individual students, representative courses in most departments are given by correspondence. Second, where it is feasible, and a number of persons desire the same subject, the University organizes an Educational Extension course. A member of the faculty actively directs and, when it seems practical, visits classes from time to time.

Each course represents a definite amount of work corresponding to an equivalent amount of work done by students in similar courses on the campus. Credit for correspondence courses is listed in semester hours. Each course has eight assignments for each semester hour of credit; for example: 16 assignments for a two-hour course, and 24 assignments for a three-hour course.

## HOW DOES IT WORK?

Instruction by correspondence study is continuous throughout the year, and students may begin courses any time. Each lesson assignment contains instruction, questions, references, and helps so that the student may have accurate information regarding the course to be covered. The student then prepares and mails to the Non-Resident Department the lesson report on the first assignment which is corrected and graded by the instructor in charge and returned to the student with corrections, explanations, and suggestions as may be needed. Do not send in more than four assignments at a time. This procedure is continued until the course is completed, at which time an examination is given.

To get the most out of a course, the instructions in the study guide should be followed closely. The assignments call for very definite work on the student's part, consisting of a written report or analysis, the solution of problems, or the investigation of special topics as the nature of the course may demand.

All reports, unless otherwise specified, must be prepared on 8½ inch by 11 inch paper. Carriage charge must be fully prepaid. The use of reasonably thin paper is recommended to reduce these charges.

## WHO MAY ENROLL

1. Anyone who feels he is qualified by education, training or experience, is eligible to enroll. Students who expect to secure credit toward a university degree must, of course, satisfy all entrance requirements and prerequisites, but those who do not desire or expect such credit are permitted to register for any course in which they have an interest and sufficient preparation to enable them to do the work of the course. Students of this type are given the same careful instruction and criticism as those who are candidates for a degree.

2. Resident students are not permitted to carry non-resident work unless they have prior approval of their dean. Courses not completed before students register or re-register in the University are automatically dropped. This rule may be waived only by the action of the Dean of his college.

3. Non-Resident students failing to complete a course within 12 months after registration will be dropped; but at any time within the following 6 months may re-register for the course (re-registration fee, \$1.00) and must complete it within 12 months from that date, and no further registrations allowed.

4. If applicant is enrolled in any educational institution, he must have written permission from his school authorities to take a course.

### THE HONOR SYSTEM

All work shall be the student's own, both on lessons and examination, except where proper acknowledgment is made. Any evidence of unacknowledged borrowing, including close paraphrase, will warrant the assigning of a failing grade in the course, the forfeiture of all fees, and the denial of future service by this department.

### CREDITS

A maximum of 32 semester credits, (one year of undergraduate work earned in correspondence and extension courses or a combination of both) may be counted toward degree requirements. As a rule, students are advised to carry no more than one course at a time. However, if a student has unlimited leisure time, he may safely carry two courses at one time.

### EXAMINATIONS

To receive credit the student must take a written examination on the completion of each course. Other examinations may be required from time to time at the instructor's discretion. All examinations in non-resident courses of University standing must be supervised by a superintendent or principal of a high school or dean of a university.

Final grades must be filed in the Registrar's office three weeks prior to the day of commencement for all courses which the student wishes to be placed on his record to be used for his degree.

Moderate fees are charged by the University of Idaho for correspondence course instruction.

1 Correspondence fees are based on a uniform charge of \$6.00 per credit hour. Therefore, the correspondence courses cost as follows:

\$12.00 for a two semester hour course

\$18.00 for a three hour course

\$24.00 for a four semester hour course

2. Text books and other required supplies shall be arranged for, ordered and paid for by the enrollees in addition to the above fees.

3. Additional charges for postage will be made for mailing books, correspondence courses and lesson assignments outside continental United States.

4. Fees must be paid at the time of enrollment and are subject to refund upon the rejection of the student by the University or failure to give the course. After the student has completed enrollment, it constitutes an agreement on his part to complete the course and he must take the responsibility for any failure on his part to finish the course.

5. Refund. If application for refund is made within three (3) months of the date of registration the course fee less \$5.00 for registration costs will be refunded.

6. A transfer may be made from one correspondence course to another within one year from the date of enrollment, providing no lessons have been completed, upon payment of \$2.00. If not more than five assignments have been completed and upon payment of \$2.00 plus \$1.00 for each lesson submitted in the original course. The date of the initial enrollment remains effective on a transfer to a new course; an enrollment may be transferred only once in a course.

7. Make all checks or money orders payable to the University of Idaho.

**UNDERGRADUATE AND ADVANCED UNDERGRADUATE COURSES**

1. It will be observed that courses primarily for undergraduates are numbered between 1 and 99 and courses for advanced undergraduates between 100 and 199.

2. All communications should be addressed to the Director of Non-Resident Instruction, University of Idaho, Moscow, Idaho.

**U.S.A.F.I. & V.A.**

THE UNITED STATES ARMED FORCES INSTITUTE AND THE VETERANS ADMINISTRATION HAVE APPROVED ALL OF THE COLLEGE NON-RESIDENT STUDY COURSES OFFERED BY THE UNIVERSITY OF IDAHO, AND AUTHORIZED UNDER CONTRACT THE NON-RESIDENT BUREAU TO ADMINISTER AND DIRECT THESE COURSES.

**G.I. BILL OF RIGHTS**

A veteran making application for a correspondence course under the G.I. Bill of Rights, must apply to his Sub-Regional Office or Regional Office of the Veterans Administration (In the State of Idaho, the Regional office is in Boise, Idaho) for a certificate of eligibility, which entitles him to enroll for a course by correspondence. The above regulation applies to students who wish to enroll under Public Law 894 or 550.

If for any reason the veteran cannot register according to the above regulations, he should write to the Non-Resident Department, University of Idaho, Moscow, Idaho.

Course	Semester Credits	Course	Semester Credits
<b>AGRICULTURAL ECONOMICS</b>			
C55 Agricultural Economics .....	3	C4 Design I .....	2
C108 Farm Management .....	3	C101 Water-Color .....	2
C119 Marketing Farm Products .....	3	C102 Water-Color .....	2
C121 Cooperatives .....	2	<b>BACTERIOLOGY</b>	
C150 Land Economics .....	3	C54 Public Health and Hygiene .....	3
<b>AGRICULTURAL EDUCATION</b>			
C150 Extension Methods in Agriculture .....	2	<b>BUSINESS ADMINISTRATION</b>	
C151 Vocational Education .....	2	C31 Principles of Accounting .....	3
<b>AGRONOMY</b>			
C1 General Crop Production .....	3	C32 Principles of Accounting .....	3
<b>ANIMAL HUSBANDRY</b>			
C106 Livestock Feeding .....	3	C91 Intermediate Accounting .....	3
<b>HORTICULTURE</b>			
C52 Introduction to Horticulture .....	3	C92 Intermediate Accounting .....	3
<b>ART</b>			
C3 Design I .....	2	C107 Transportation .....	3
		C119 Real Estate .....	3
		C165 Business Law .....	3
		C166 Business Law .....	3
		C169 Marketing .....	3
		C175 Principles of Advertising .....	3
		C185 Managerial Cost Analysis .....	3
		C186 Cost Accounting .....	3

(For Office Management see Office Administration)

Course		Semester Credits	Course		Semester Credits
<b>ECONOMICS</b>					
C51	Principles of Economics .....	3			
C52	Principles of Economics .....	3			
C103	Money and Banking .....	3			
<b>EDUCATION</b>					
C1	Introduction to Education .....	2			
C51	General Elementary Methods .....	3			
C102	The Child and Society .....	3			
C107	History of Education .....	3			
C108	Educational Sociology .....	3			
C111	The Junior High School .....	3			
C112	Principles of Elementary Education .....	3			
C113	Principles of Secondary Education .....	3			
C114	High School Methods .....	3			
C121	Methods and Materials in Social Studies .....	3			
C126	Methods and Materials in Mathematics .....	3			
C129	The Elementary School Curriculum .....	3			
C134	Children's Literature and Storytelling .....	3			
C137	Secondary Social Science Methods .....	3			
C138	Methods and Materials in Language Arts .....	3			
C150	Modern Trends in Education .....	3			
C155	Idaho School Problems Law and History .....	2			
C165	Curriculum Construction .....	3			
C166	Diagnostic and Remedial Instruction .....	3			
C168	The Teacher and Educational Administration .....	3			
<i>(For Industrial Arts see Industrial Arts Section)</i>					
<b>ELECTRICAL ENGINEERING</b>					
C1	Elementary Electrical Theory .....	0			
C20	Elements of Radio II .....	2			
C32	Direct Current Machinery .....	3			
C130	D.C. and A.C. Machinery Theory .....	4			
<b>ENGINEERING SCIENCE</b>					
C66	Mechanics (Statics) .....	2			
C101	Mechanics (Dynamics) .....	2			
C102	Fluid Mechanics .....	2			
C103	Mechanics of Materials .....	3			
<b>ENGLISH</b>					
C65	Introduction to Literature .....	3			
C66	Introduction to Literature .....	3			
C67	Survey of English Literature .....	3			
C68	Survey of English Literature .....	3			
C111	Engineering Reports .....	3			
C113	Business Writing .....	3			
C115	Technical Writing .....	3			
C131	Chaucer .....	3			
C163	The Seventeenth Century .....	3			
C165	The Romantic Period .....	3			
C175	Survey of American Literature .....	3			
C176	Survey of American Literature .....	3			
C187	Modern European Literature .....	2			
<b>FRENCH</b>					
C1	Elementary French .....	4			
C2	Elementary French .....	4			
C13	Intermediate French .....	4			
C14	Intermediate French .....	4			
C191	French for Teachers .....	2			
C192	French for Teachers .....	2			
<b>FRESHMAN ENGINEERING</b>					
C1	Engineering Graphics .....	3			
C2	Engineering Graphics .....	3			
<b>GEOGRAPHY</b>					
C12	Economic Geography .....	3			
			<b>GERMAN</b>		
			C1	Elementary German .....	4
			C2	Elementary German .....	4
			C13	Intermediate German .....	4
			C14	Intermediate German .....	4
			C121	Survey of German Literature .....	3
			<b>GREEK</b>		
			C1	Elementary Greek .....	4
			C2	Elementary Greek .....	4
			<b>HISTORY</b>		
			C3	History of Civilization .....	3
			C4	History of Civilization .....	3
			C9	Introduction to United States History (to 1865) .....	3
			C10	Introduction to United States History (since 1865) .....	3
			C57	History of England (to 1688) .....	3
			C58	History of England (since 1688) .....	3
			C137	Classical Civilization .....	3
			C138	Classical Civilization .....	3
			<b>HOME ECONOMICS</b>		
			C135	Child Development .....	2
			C136	Economic Problems of the Family .....	2
			<b>INDUSTRIAL ART EDUCATION</b>		
			C101	Principles of Industrial Arts Education .....	3
			C151	Organization and Administration of Industrial Arts Program .....	3
			<b>LATIN</b>		
			C1	Elementary Latin .....	4
			C2	Elementary Latin .....	4
			C13	Intermediate Latin .....	4
			C14	Intermediate Latin .....	4
			C101	Advanced Latin .....	3
			C102	Advanced Latin .....	3
			C107	Teachers Review of Latin .....	3
			C108	Teachers Review of Latin .....	3
			<b>MATHEMATICS</b>		
			C1	Freshman Mathematics .....	4
			C2	Freshman Mathematics .....	4
			C11	Freshman Mathematics .....	5
			C12	Freshman Mathematics .....	5
			C14	Mathematics of Finance .....	3
			C51	Calculus .....	4
			C52	Calculus .....	4
			<b>MECHANICAL ENGINEERING</b>		
			C63	Kinematics .....	3
			<b>MINING</b>		
			C108	Mine Survey .....	2
			<b>OFFICE ADMINISTRATION</b>		
			C162	Office Management .....	2
			<b>PHILOSOPHY</b>		
			C61	Ethics .....	3
			C109	History of Ancient Philosophy .....	3
			C110	History of Modern Philosophy .....	3
			<b>PHYSICAL EDUCATION</b>		
			C47	History of Physical Education .....	2
			C171	Principles of Physical Education .....	3
			<b>POLITICAL SCIENCE</b>		
			C1	American Government .....	3
			C2	American Government .....	3
			C75	State Government .....	3
			C76	City and County Government .....	3



Course	Semester Credits	Course	Semester Credits		
C85	Comparative Government I .....	3	C121	The Family .....	3
C86	Comparative Government II .....	3	C145	Rural Sociology .....	3
C137	International Relations .....	3	C152	Social Problems .....	3
PSYCHOLOGY		SPANISH			
C1	General Psychology .....	3	C1	Elementary Spanish .....	4
C55	Human Growth and Development 3		C2	Elementary Spanish .....	4
C56	Human Growth and Development 3		C13	Intermediate Spanish .....	4
C102	The Exceptional Individual .....	3	C14	Intermediate Spanish .....	4
C115	Principles and Practices in Guidance 3		ZOOLOGY		
C151	Educational Psychology .....	3	C58	Heredity and Eugenics .....	2
SOCIOLOGY			C107	Organic Evolution .....	3
C51	Introduction to Sociology .....	3			

## High School Non-Resident Instruction

### CORRESPONDENCE STUDY

High School supervised study by correspondence is especially written and taught for high school students. The courses are one means of satisfying requests for supplementary instruction. Applicants may enroll at any time in subjects which fit their own needs and interests.

Nearly all the offerings are intended for general education. Since they have been legally authorized and accepted by State and local school officials, the applicant may apply them toward high school graduation. The applicant may also offer them to fulfill entrance requirements to the University of Idaho as well as to many other schools and colleges. In addition they may select courses to pursue their special interests.

Other courses will be added from time to time as the need for them arises. We shall appreciate cooperation and suggestions from superintendents and the high school principals as to the expansion of the program; i. e., additional subjects which should be offered and any other service which they feel might be rendered through this division.

### WHO MAY ENROLL?

1. Students in high school, or in any secondary school, or young people out of school, may enroll in any course at any time in accordance with the regulations of the school attended and of correspondence study. However, resident students in high schools are not permitted to carry non-resident work unless they have permission from some superintendent or principal of a high school to accept the credit for a diploma. **THE UNIVERSITY OF IDAHO DOES NOT ISSUE A HIGH SCHOOL DIPLOMA.**

2. High School Non-Resident students failing to complete a course in twelve (12) months after registration will be dropped; but at any time within the following six (6) months may re-register for the course (re-registration fee \$1.00) and must complete it within twelve (12) months from that date or the student is dropped and is not allowed to complete the course.

3. As a rule, students are advised to carry not to exceed one course at a time. However, if a student has unlimited leisure time, he may safely carry two courses at one time.

4. Not more than two lessons in any high school course may be submitted in any calendar week.

### THE HONOR SYSTEM

All work shall be the student's own, both on lessons and examination, except where proper acknowledgment is made. Any evidence of unacknowledged borrowing, including close paraphrase, will warrant the assigning of a failing grade in the course, the forfeiture of all fees, and the denial of future service by this Department.

### WHAT CREDIT MAY YOU EARN?

After the applicant finishes a course, the University Non-Resident Department will issue a card of completion. In addition, if the student has the approval of a secondary school administrator, usually a principal, he may secure credit toward graduation according to policies and practices in the school. Customarily, Idaho schools allow one-half unit (or one credit) for one term or semester. Only high school administrators can grant high school credit for supervised or independent study. School authorities control the use of this cooperative service which the University Non-Resident Instruction provides.

### EXAMINATIONS

To receive credit the student must take and pass a written examination on completion of each course. Other examinations may be required from time to time at the instructor's discretion. All examinations in Non-Resident Instruction courses of High School standing must be supervised by a superintendent or principal of a high school or a County Superintendent.

### FEES

1. Nine dollars and fifty cents (\$9.50) per credit or one-half unit. Courses listed for example, English I, is the first half year's work and English II is the second half in the same subject.

2. FEES WILL NOT BE REFUNDED.

3. Supplies.—In addition to the enrollment fee is the cost of the books and supplies listed for each course. These may be purchased at the Student Union Bookstore and are sent C.O.D. on request of the applicant. However, the books and supplies to foreign countries must be paid for in advance.

4. Postage.—Postage on lesson materials mailed to Non-Resident Instruction is paid by the student. Return postage is paid by Non-Resident Instruction. Special arrangements must be made for air mail return of lessons for students in foreign countries by writing to Non-Resident Instruction.

## High School Non-Resident Courses

These courses are offered for high school students who have not completed their work for high school graduation.

The following high school subjects are offered through the Non-Resident branch of service.

#### COMMERCIAL

Bookkeeping I, 1st Semester  
Bookkeeping II, 2nd Semester

#### ENGLISH

Freshman English I, 1st Semester,  
Grammar and Composition  
Freshman English II, 2nd Semester,

English Literature and Composition

Sophomore English I, 1st Semester,  
Grammar and Composition

Sophomore English II, 2nd Semester,  
English Literature and Composition

Junior English I, 1st Semester, Am-

erican Literature and Composition  
 Junior English II, 2nd Semester,  
 Modern Literature and Composition  
 Senior English I, 1st Semester, English  
 Literature and Composition  
 Senior English II, 2nd Semester,  
 English Novels and Composition  
 Senior English III, 2n Semester,  
 English Review—Grammar

**FRENCH**

Freshman French I, 1st Semester  
 Freshman French II, 2nd Semester  
 Sophomore French I, 1st Semester  
 Sophomore French II, 2nd Semester

**MATHEMATICS**

Algebra I, 1st Semester  
 Algebra II, 2nd Semester  
 Advanced Algebra III, 1st Semester  
 Plane Geometry I, 1st Semester  
 Plane Geometry II, 2nd Semester  
 Solid Geometry III, 1st Semester

Trigonometry I, 1st Semester  
 Advanced Arithmetic I, 1st Semester  
 Advanced Arithmetic II, 2nd Semester

**SCIENCE**

Biology I, 1st Semester  
 Biology II, 2nd Semester  
 General Science I, 1st Semester  
 General Science II, 2nd Semester

**SOCIAL SCIENCE**

American History I, 1st Semester  
 American History II, 2nd Semester  
 American Government I, 1st Semester  
 American Government II, 2nd Semester  
 Sociology I, 1st Semester

**SPANISH**

Freshman Spanish I, 1st Semester  
 Freshman Spanish II, 2nd Semester  
 Sophomore Spanish I, 1st Semester  
 Sophomore Spanish II, 2nd Semester

# Summer School of 1957

J. FREDERICK WELTZIN, Director

Eight-Week Term, June 17 to August 9, 1957

## VISITING FACULTY

- ANN A. ANDERSON, M.A., *Visiting Instructor in Library Science.*  
Librarian in Longview High School, Longview, Washington
- EDWARD D. BENTER, M.A., *Visiting Specialist in Speech Therapy in Child Guidance Clinic.*  
Specialist in Kern County Schools, Speech and Hearing Program,  
Bakersfield, California
- LYLE V. BRENNAN, B.S.(Ed.), *Visiting Lecturer in Business and Distributive Education.*  
Supervisor for Business Education, Idaho State Board for Vocational  
Education, Boise, Idaho
- JOHN L. BUTLER, M.S., *Visiting Director of Mental Hygiene Workshop.*  
Director of Department of Mental Health, Idaho State Health Department,  
Boise, Idaho
- DOYLE CAIN, *Visiting Consultant in Radio-TV Summer Institute.*  
Station KFXD, Nampa, Idaho
- K. CLARK, *Visiting Consultant in Radio-TV Summer Institute.*  
Station KBAR, Burley, Idaho
- SARAH A. CULTON, M.Ed., *Visiting Supervising Teacher in Summer Elementary School and Consultant in Arithmetic Workshop.*  
Teacher in Lewis-Clark Normal School, Lewiston, Idaho
- MARION EGBERT, M.Mus., *Visiting Specialist in Music Education.*  
Member of Staff of American Music Conference, Chicago, Illinois
- EARL GLADE, *Visiting Consultant in Radio-TV Summer Institute.*  
Station KBOI, Boise, Idaho
- GEORGE M. HENDERSON, M.S.(Ed.), *Visiting Director of Guidance Workshop.*  
Assistant Superintendent of Lebanon Public Schools, Lebanon, Oregon
- CLYDE W. HUMPHREY, *Visiting Specialist in Distributive Education Workshops.*  
Program Specialist in Distributive Education, U. S. Office of Education,  
Washington, D. C.
- STOWELL JOHNSTON, B.S.(Ed.), *Visiting Instructor in Dramatics and Technical Director of Summer Theatre.*  
Teacher of Dramatics in Moscow High School, Moscow, Idaho
- WINIFRED LANDE, M.S.(Ed.), *Visiting Instructor and Principal of Summer Elementary School.*  
Principal of West Park School, Moscow, Idaho
- C. N. LAYNE, *Visiting Consultant in Radio-TV Summer Institute.*  
Station KID-TV, Idaho Falls, Idaho
- CALVIN C. LYON, B.S.(Mus.Ed.), *Boys' Proctor and Recreational Director in High School Summer Music Camp.*  
Director of Music in Grangeville High School, Grangeville, Idaho
- MARY MARGARET MCKEAN, M.Mus., *Visiting Instructor in Music.*  
Teacher and Graduate Assistant at University of Illinois, Urbana, Illinois

- FLOYD I. MARCHUS, Ed.D., *Visiting Associate Professor of Education.*  
Director of Research in Office of County Superintendent of Schools,  
Contra Costa County, California
- CECIL MATSON, M.A. (Drama), *Visiting Instructor in Dramatics and Associate  
Director of the Summer Theatre.*  
Teacher of English and Dramatics in Oswego High School,  
Oswego, Oregon
- ERHARD ROSTLUND, Ph.D., *Visiting Assistant Professor of Geography.*  
Assistant Professor of Geography at University of California,  
Berkeley, California
- EUGENE H. SMITH, M.A., *Visiting Instructor in Child Guidance Clinic.*  
Supervisor of Instructor for Exceptional Children, Longview Public  
School, Longview, Washington
- DON THOMAS, *Visiting Consultant in Radio-TV Summer Institute.*  
Station KRLC, Lewiston, Idaho
- FAYE UDELL, B.Mus., *Visiting Girls' Advisor and Social Director in High School  
Summer Music Camp.*
- HARVEY WALKER, M.S. (Ed.), *Visiting Instructor in Driver Education.*  
Teacher in Lewiston High School, Lewiston, Idaho

## Summer School of 1958

J. FREDERICK WELTZIN, Director

Eight-Week Term, June 16 to August 8, 1958

### VISITING FACULTY

- LEWIS M. ALEXANDER, Ph.D., *Visiting Associate Professor of Geography.*  
Associate Professor of Geography at Harpur College, State University of  
New York, Endicott, New York
- ANN A. ANDERSON, M.A., *Visiting Instructor in Library Science.*  
Librarian in Longview High School, Longview, Washington
- HELEN AUPPERLE, *Visiting Instructor in Painting Workshop on Wheels.*  
Art Teacher in Idaho Falls Public School System, Idaho Falls, Idaho
- NORMA BAKER, Ph.D., *Visiting Director of Reading Clinic.*  
Associate Professor of Education at San Jose State College,  
San Jose, California
- ELMER BITTLESTON, M.S. (Bus.Ed.), *Visiting Instructor in Business Education  
Workshop in Distributive Education.*  
Head of Department of Business Education, Nampa High School,  
Nampa, Idaho
- C. GRIFFITH BRATT, M.Mus., *Visiting Professor of Music and Director of  
Church Music Techniques Workshop.*  
Head of Department of Music, Boise Junior College, Boise, Idaho
- LYLE V. BRENNAN, B.S. (Ed.), *Visiting Lecturer in Business Education  
Workshop in Distributive Education.*  
State Supervisor of Business Education, Idaho State Board for Vocational  
Education, Boise, Idaho
- CLAIRE C. CAHILL, B.S. (Ed.), *Visiting Boys' Proctor in High School Summer  
Music Camp.*  
Teacher of Music and History at Rose Lake School, Rose Lake, Idaho

- JOE CHATBURN, M.A., *Visiting Instructor in Education.*
- BERYL CLOTFELTER, Ph.D., *Visiting Associate Professor in Physics.*  
Professor of Physics at Oklahoma Baptist University, Shawnee, Oklahoma
- SARAH A. CULTON, M.Ed., *Visiting Supervising Teacher in Summer Elementary School and Consultant in Arithmetic Workshop.*  
Teacher in Lewis-Clark Normal School, Lewiston, Idaho
- JOHN B. EDLEFSEN, Ph.D., *Visiting Associate Professor of Sociology.*  
Associate Professor in the Department of Sociology, State College of Washington, Pullman, Washington
- RONAN ELLIFF, *Visiting Associate Professor of Home Economics Workshop.*  
Associate Professor of Home Economics, Oklahoma State University, Stillwater, Oklahoma
- CLIFFORD C. FROELICH, Ph.D., *Visiting Lecturer in Guidance and Counseling.*  
Head of Department of Guidance, University of California, Berkeley, California
- MARTHA GRAVES, *Visiting Consultant in Home Economics Education Workshop.*  
Idaho State Supervisor of Home Economics Education, State Board for Vocational Education, Boise, Idaho
- HALVOR P. HANSEN, Ph.D., *Visiting Instructor in Child Guidance Clinic.*  
Teacher of Remedial Speech, Eastern Montana College of Education, Billings, Montana
- WILBUR HARRIS, M. (Mus.Ed.), *Visiting Assistant Professor of Music and Specialist in Instrumental Repair Laboratory.*  
Director of Instrumental Music in Public Schools of Lohrville, Iowa
- CHARLES E. HAWORTH, Ed.D., *Visiting Associate Professor of Education.*  
Superintendent of Pittsburg Public Schools, Pittsburg, California
- VALETA HERSHBERGER, M.S. (Ed.), *Visiting Social and Recreational Director of High School Summer Music Camp.*  
Teacher at Boise Junior College, Boise, Idaho
- RUSSELL S. HOWLAND, M.Mus., *Visiting Assistant Professor of Music and Co-director of High School Band Activities Workshop.*  
Teacher of Music, Fresno State College, Fresno, California
- KAREN HURDSTROM, B.A. (Mus.), *Visiting Girls' Advisor in High School Summer Music Camp.*
- CLYDE KEUTZER, Ed.D., *Visiting Professor of Music.*  
Musical Director of Hartford School of Music, Hartford, Connecticut
- WINIFRED LANDE, M.S. (Ed.), *Visiting Instructor in Education and Principal of Summer Elementary School.*  
Principal of West Park Elementary School, Moscow, Idaho
- ANAND MALIK, Ph.D., *Visiting Lecturer in Education.*
- AGNES O. RISETTER, M.A., *Visiting Instructor in Dramatics and Associate Director of Summer Theatre.*  
Teacher of English and Dramatics in Sparta High School, Sparta, Wisconsin
- ANNE SARBIN, Ph.D., *Visiting Instructor in Child Guidance Clinic.*
- HAROLD SPEARS, Ed.D., *Visiting Consultant in School Administrator's Conference.*  
Superintendent of Schools, San Francisco, California
- UNA R. WOOD, *Visiting Lecturer on Nutrition.*  
Nutritionist for Consumer Education Department, American Institute of Baking, Chicago, Illinois

# Part V

## Departments of Instruction

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### Course Numbering

Courses primarily for undergraduates are numbered between 1 and 99; courses for advanced undergraduates and graduates are numbered between 100 and 199; and courses primarily for graduates are numbered 200 and above.

Courses with odd numbers are usually given the first semester; those with even numbers, the second semester; courses numbered 1-2, 101-102, etc., continue through the year.

Courses marked with an *n* are those in which credit will not be given for the first semester's work until that of the second semester has been completed.

Course numbers with the prefix X indicate courses offered by extension only.

A number in parenthesis following a course title indicates a change in the course number, the old number being placed after the title such as: A.H. 2 The Livestock Industry (1).

### Designations of When Courses Will Be Offered

**Each Semester**—Indicates the course will be offered both semesters.

**Either Semester**—Indicates the course may be offered either the first or second semester but not both semesters.

**If no semester is indicated** for year-courses the course is to be offered as a continuous course and will not be repeated.

**Summer School**—Indicates the course will be offered only at that session.

Other designations are self explanatory.

## Agriculture

**Ag. 1 Orientation**      1 credit

First semester

An orientation and guidance course for freshmen. This course acquaints the student with the educational and research organizations in agriculture and its various subdivisions and their relationship to agricultural occupations. Required of first-semester Freshman in Agriculture.

**Ag. 201-202 Professional Problems in Agriculture**

1-4 credits Each semester

Students in the Master of Agriculture curriculum will register for this course under the supervision of the major professor and the advisory committee. Problems for study must be consistent with the students' objectives. (STAFF)

## Agricultural Chemistry

Professor WIESE (Head); Associate Professors JORDAN and LETOURNEAU;  
Assistant Professor LEWIS

**80 General Agricultural Chemistry** 4 credits First semester

Lectures and laboratory work on chemistry as applied to agriculture including the following topics: the chemical principles that underlie the growth and nutrition of farm crops, their composition and utilization in animal nutrition; soils, fertilizers, and manures; milk and dairy products. Two lectures, one quiz and one three-hour laboratory period per week. Prerequisite: Chem. 2. (LEWIS)

†112 **Soil Chemistry** 3 credits Second semester

Laboratory training in various phases of soil chemistry. One lecture and two three-hour laboratory periods per week. Prerequisites: Chem. 56 and 75, or concurrent registration in Chem. 75. (JORDAN)

†128 **Food Chemistry and Analysis** 3 credits Second semester

The chemistry and methods of analysis of foods and food products. Two lectures and one three-hour laboratory period per week. Prerequisites: Chem. 52 and 72 or equivalent. (STAFF)

\*131 **The Chemistry and Physiology of the Vitamins** 2 credits First semester

The chemistry and physiology of the vitamins and their relation to human and animal nutrition. Two lectures per week. Prerequisite: A course in Organic Chemistry. (WIESE)

\*141 **Vitamin Analysis** 4 credits Second semester

Lecture and laboratory work on the chemical and microbiological methods of vitamin analysis. Two lectures and two three-hour laboratory periods per week. Prerequisites: Agr. Chem. 131 or equivalent and Bact. 51. (WIESE)

**151-152 Advanced Agricultural Chemistry**

Lecture and laboratory studies in advanced Agricultural Chemistry. Majors in Agricultural Chemistry will normally enroll for 2 credits of the selected sub-topic.

- (a) Application of Radioisotopes to Agriculture  
1 to 2 credits First semester
- (b) Soil Chemistry  
1 to 2 credits Each semester
- (c) Animal Biochemistry  
1 to 2 credits Each semester
- (d) Plant Biochemistry  
1 to 2 credits Each semester

† Offered in alternate years; given in 1960-61.

\* Offered in alternate years; given in 1959-60.



Each sub-topic may be repeated for a maximum of 4 credits provided that no more than 8 credits can be earned in Ag. Chem. 151-152. Prerequisites: Chem. 56 and 75 or equivalent and consent of instructor. (STAFF)

- 153-154 Pro-Seminar** 1 credit Each semester  
 Discussion of the literature and special topics in Agricultural Chemistry. Prerequisites: Junior standing and consent of instructor. (STAFF)
- \*161 Plant Biochemistry** 3 or 4 credits First semester  
 A survey of the biochemistry of higher plants. Laboratory training in methods and techniques for analyzing plant material. Three lectures and one three-hour laboratory period per week. Prerequisites: Bot. 3, Chem. 56 and 72 or equivalent. (LeTOURNEAU)

*Primarily for Graduates*

- 201-202 Research and Thesis** Credits to be arranged Each semester  
 (STAFF)
- 203-204 Seminar** 1 to 2 credits Each semester  
 (STAFF)
- 205-206 Advanced Laboratory Techniques** 2 credits Each semester  
 A course on the techniques used in the preparation and determination of natural occurring compounds and the use of special laboratory equipment as it applies to microanalysis. (STAFF)
- \*211 Advanced Soil Chemistry** 3 credits First semester  
 The chemistry of the soil system including the mineral and organic colloids, cation and anion exchange, and other physico-chemical reactions in soils. Three lectures per week. Prerequisite: Ag.Chem. 112 or equivalent. (JORDAN, LEWIS)
- \*212 Soil Colloidal Chemistry** 2 credits Second semester  
 Study of the chemical properties of the clay and organo-mineral fractions of soils. One lecture and one recitation per week. Prerequisites: Ag. Chem. 211 and consent of instructor. (JORDAN, LEWIS)
- †213 Soil Chemistry of the Micro-nutrients** 2 or 3 credits First semester  
 Lecture and laboratory instruction on the soil chemistry of the essential and certain non-essential micronutrient elements found in soils. One lecture, one recitation, and one three-hour laboratory period per week. The laboratory is optional for non-Agricultural Chemistry majors. Prerequisites: Chem. 52 and Ag.Chem. 112 or equivalent and consent of instructor. (JORDAN)
- †231 Enzymes and Intermediary Metabolism** 3 or 4 credits First semester  
 The chemistry of enzymes and intermediary metabolism of carbohydrates, lipids and proteins of animals and plants. Three lectures and one three-hour laboratory period per week. Prerequisite: Chem. 181 or equivalent. (WIESE, LeTOURNEAU)
- 281 (Chem. 281) Carbohydrates and Lipid Chemistry** 3 credits First semester  
 See Chemistry 281 for course description.
- 282 (Chem. 282) Amino Acid and Protein Chemistry** 3 credits Second semester  
 See Chemistry 282 for course description.

\* Offered in alternate years; given in 1959-60.

† Offered in alternate years; given in 1960-61.

## Agricultural Economics

Professor FOLZ (Head); Associate Professors BEVAN and WALKER;  
Assistant Professors EDWARDS and WEBER

*Primarily for Undergraduates*

- 52 Farm Accounting**      3 credits      Second semester  
A study of essential farm records and of their use in analyzing the farm business and in preparing farm income tax returns. Discussion of income tax management problems. Two one-and-one-half hour lectures per week. (BEVAN)
- 55 Agricultural Economics**      3 credits      Each semester  
Introductory study of material included in the field of agricultural economics. Consists of a survey course of farmers' problems in farm management, marketing, use of land, cooperatives, agricultural policies and programs, agricultural credit, and agricultural labor and tenancy. Three lectures per week. (FOLZ)

*For Advanced Undergraduates and Graduates*

- 108 Farm Management**      3 credits      First semester  
Study of the planning and operating of the farm business to secure maximum profits. Application of economic principles to decision making on a farm. Discussion of methods of comparing alternative farming combinations and alternative farm practices. Practice in planning the organization of an actual farm. Three lectures per week. (BEVAN)
- 119 Marketing Farm Products**      3 credits      First semester  
Description of marketing structures, agencies, and services involved in marketing farm products. Demand, supply, cost and price theories considered. Three lectures per week. Prerequisite: 3 credits of principles of economics. (STAFF)
- 120 Advertising and Promotion of Agricultural Products**  
3 credits      Second semester  
The economic effects of advertising as they apply to agricultural products, stressing differences between commodity and brand promotion. Three lectures per week. (WEBER)
- 121 Cooperative Farm Organizations**      2 credits      First semester  
Study of the organization and history of farmer-producer and consumer cooperatives, economic principles of cooperatives, types of cooperatives, problems of these cooperatives, legal aspects, their possibilities and limitations. (WALKER)
- 150 Land Economics**      3 credits      First semester  
A study of land utilization, land characteristics and classification with emphasis on agricultural, forest and mineral lands. Factors affecting land use including land ownership and tenure, taxation, values, credit and governmental policies. (EDWARDS)
- 153 Agricultural Prices**      3 credits      Second semester  
Prices and price cycles analyzed. Factors affecting farm prices and how and where prices are determined within the system. Analysis of price flexibility and economic instability at the farm level. Study of demand and supply theory, including elasticity. Study of farm price policy and action programs. Prerequisite: 3 credits of economics. (STAFF)

**156 Agricultural Programs and Policies**      3 credits      First semester

An analysis of the development of national and state economic policies and programs applied to agriculture. Special emphasis is placed upon current agricultural price, income, and credit policies, with an evaluation of degree of their success or failure in accomplishing their objectives. (FOLZ)

**161 Farm Appraisal**      3 credits      Second semester

A study of the factors affecting the price of farm land. Relationship of farm prices, taxes, and interest rates to value. Commercial and federal appraisal methods with emphasis on procedures. Two one-day field trips. Prerequisite: Consent of instructor. (BEVAN)

**191 Agricultural Business Management**      3 credits      First semester

Management's role in agricultural processing and service firms in the present agricultural economy demonstrating the use of such tools as accounting, efficiency studies, and statistics in analyzing managerial problems. Three lectures per week. Prerequisite: 3 credits of principles of economics. (WALKER)

**193 Agricultural Production Economics**      3 credits      First semester

An exposition of economic theory as it relates to agricultural production at the enterprise, firm, and industry levels. Three lectures per week. (EDWARDS)

*Primarily for Graduates*

**201-202 Research and Thesis**      Credits to be arranged      Each semester  
(STAFF)

**207 Marketing and Research Methods**      3 credits      First semester

Theoretical background of the scientific method applied to agricultural marketing research including tools of measurement, use of theory, hypothesis, bias, interviewing, sampling, and questionnaires. Three lectures per week. Prerequisite: Ag.Econ. 119. (STAFF)

**208 Problems in Agricultural Production Economics Research**  
4 credits      Second semester

The objectives and techniques employed in production economics research. The development of theoretical, mathematical, and stochastic models and their evaluation employing a number of econometric techniques. Four lectures per week. Prerequisite: Ag.Econ. 193. (EDWARDS)

**209 The Dynamics of Agricultural Business Management**  
3 credits      First semester

Analytical methods applied to the special problems of agricultural business. Procurement, processing and marketing integrated within competitive and non-competitive economic models. Major areas of risks and uncertainties for each model developed for various types of farm orientated businesses. Three lectures per week. Prerequisite: Ag.Econ. 193. (WALKER)

**210 The Economics of Agricultural Resources Development**  
3 credits      Second semester

An analysis of macro-dynamic theory as it relates to economic growth. The study of agricultural resources and their significance to general economic development in new areas and in under-developed regions. Three lectures per week. (FOLZ)

## Agricultural Education

Professor WINNER (Head); Associate Professor KINDSCHY;  
Assistant Professor HAYNES

*Primarily for Undergraduates*

- 150 Extension Methods in Agriculture**      2 credits      Second semester  
Methods used in the field by county agents, college faculty, extension specialists, and teachers of vocational agriculture. Should be of value to all who expect to enter any field of public work in agriculture. (WINNER and OTHERS)
- 151 Principles of Vocational Education**      2 credits      First semester  
Vocational education: its history, meaning, aims, administration and place in the school system. Required in Agricultural Education Curriculum. (Not open to freshmen.) (KINDSCHY)
- 152 Beginning Methods**      2 credits      Second semester  
For juniors. Required in Agricultural Education Curriculum. (WINNER)
- 153 Advanced Methods**      3 credits      First semester  
For seniors. A continuation of Ag.Ed. 152. Required in Agricultural Education Curriculum. (WINNER)
- 154 Methods of Teaching Farm Shop**      2 credits      Second semester  
A study of the application of efficient organization and management practice in teaching farm mechanics in vocational education in agriculture. Required in Agricultural Education Curriculum. (KINDSCHY)
- ‡155-156 Practice Teaching**      1 to 6 credits      Each semester  
Required in Agricultural Education Curriculum. Prerequisite: Agr.Ed. 152. (WINNER and KINDSCHY)
- Note: Generally students will be allowed to complete four weeks of practice teaching prior to registration as arranged by the Department of Agricultural Education and the high school involved. The students will register for this course for the fall semester as a part of their academic program and will pay only the regular registration fees at the time of registration in the fall. Normally practice teaching will be completed not later than 10 days after the last regular registration date and students who complete registration within the time provided may register without penalty of the late registration fee. Provided, however, that the Dean of the College of Agriculture can authorize registration of any student at a later date without penalty when additional time is needed, through prior arrangements with his teacher training center, to complete his assignment.
- 157 Adult Agricultural Education Methods**      2 credits      First semester  
Methods used by teachers of vocational agriculture in organizing and conducting young farmer and adult farmer classes. Required in Agricultural Education Curriculum. (KINDSCHY)
- 158 Supervision of the F.F.A.**      2 credits      Second semester  
Supervision of the Future Farmer Organization, community work and other problems not covered in Agr.Ed. 153. Required in Agricultural Education Curriculum. Prerequisite: Agr.Ed. 153. (KINDSCHY)

‡ (Note: Registrants for student teaching should assure themselves through consulting their advisors or the state teacher certification officials that they are registering for sufficient credits to meet state certification requirements. These requirements change from time to time and from state to state.)

- 161-162 Pro Seminar** 1 credit Each semester  
Study of agricultural education problems; presentation of papers and discussion. (WINNER and KINDSCHY)

*Primarily for Graduates*

- 251-252 Seminar** 1 to 3 credits Each semester  
(WINNER)

- 253-254 Research and Thesis** Credits to be arranged Each semester  
(WINNER)

- 257 Problems in Teaching Vocational Agriculture** 3 credits  
For regularly employed teachers of vocational agriculture in Idaho. Includes attendance at summer conference for teachers of vocational agriculture, problems of methods, and new developments in the field of vocational agriculture. The course may be repeated three years with credit. (WINNER)

- X258 Directed Planning Workshop** 1-6 credits Summer Extension  
A workshop designed primarily for teachers of vocational agriculture. It includes a study of problems in curriculum construction, methods, course content, and modern trends in agriculture. The course may be repeated for a maximum of 6 credits. (STAFF)

- 281-282 Professional Problems** 1-3 credits Each semester  
This is for students working for the master's degree. It is done under the direction of the professor in whose subject the greater part of the work is offered. (STAFF)

## Agricultural Engineering

Professor MARTIN (Head); Associate Professor COREY;  
Assistant Professors DIXON, HAYNES, WORKS; Instructor WILLIAMS

*Primarily for Undergraduate Students of Agriculture*

- 4 Farm Mechanics** 3 credits Second semester  
A study of farm equipment, farm electrification, farm buildings, and irrigation. Special emphasis on the practical application of mechanical power to agricultural production including the selection, operation and care of farm equipment. Three recitations per week. (STAFF)

- 35 Oxy-Acetylene Welding** 1 credit Each semester  
Fundamental training in the use of the oxy-acetylene torch. One three-hour laboratory period per week. Required in the agricultural education curriculum. Other students must have instructor's permission to enroll. (HAYNES)

- 37 Arc Welding** 1 credit Each semester  
Fundamental training in the use of arc welding equipment. One three-hour laboratory period per week. Required in the agricultural education curriculum. Other students must have instructor's permission to enroll. (MARTIN)

*Primarily for Advanced Undergraduate and Graduate Students of Agriculture*

- 103 Farm Shop Practice Laboratory** 3 credits First semester  
Primarily for agricultural education students. Other students must have instructor's permission to enroll. Practice is given in the care and use of farm shop tools and equipment. One recitation and two three-hour laboratory periods per week. (HAYNES)
- 114 Farm Buildings** 2 or 3 credits Second semester  
Requirements, details, arrangements and materials of construction for farm buildings; engineering drawing principles, preparation of plans, bills of materials and cost estimates. Two recitations or two recitations and one three-hour laboratory period per week. Three credits required of all students in agricultural education. (DIXON)
- 121 Farm Machinery and Equipment** 2 credits First semester  
The construction, operation, adjustment, use, servicing and repair of farm machines. Two recitations per week. (STAFF)
- 131 Farm Tractors** 2 credits First semester  
Principles of farm tractor operation. A study of carburetion, valve timing, ignition, cooling, lubrication, and fuels. The servicing and repair of farm tractors and engines. Two recitations per week. (MARTIN)
- 132 Electricity in Agriculture** 2 credits Second semester  
Principles of the application of electricity to the farm and home. A study of the economic uses of electrical equipment on the farm and for better living in the home. Special emphasis will be given to the use of electricity for light, heat, and power. Two recitations per week. (MARTIN, WILLIAMS)
- 138 Farm Equipment Repair** 3 credits Second semester  
Primarily for agricultural education students. Other students must have instructor's permission to enroll. Practical training in the service and repair of tractors and farm machinery. One recitation and two three-hour laboratory periods per week. (HAYNES)
- \*141 Food Plant Construction and Equipment** 3 credits Second semester  
Primarily for food technologists and dairy manufacturing majors. A study of food plant plans, construction, refrigeration, air conditioning, and practical maintenance and operation of food plant machinery. A one-day field trip normally will be required. Two recitations and one two-hour laboratory period per week. (DIXON)
- 161 Irrigation and Drainage Practice** 3 credits First semester  
Irrigation methods; conservation of irrigation water; irrigation relationship to plant life and the soil; alkali and drainage; pumps and pipelines; and sprinkler irrigation. Two recitations and one three-hour laboratory period per week. Prerequisite: junior standing. (COREY)

*For Undergraduate Professional Engineering Students*

- 51 Introduction to Agricultural Engineering** 1 credit First semester  
Survey of the field of agricultural engineering. Problems in the application of engineering principles to the solution of agricultural problems. A study of the history and development of agricultural engineering. A one-day field trip to inspect agricultural engineering applications normally will be required. One two-hour laboratory period per week. Prerequisite: Math. 11. (MARTIN)

\* Offered in alternate years; to be offered in 1960-61.

- 52 Introduction to Agricultural Engineering** 1 credit Second semester  
Special emphasis is given to the elements of design of farm equipment, farm electrification, farm buildings and irrigation systems. A one-day field trip normally will be required. One two-hour laboratory period per week. Prerequisite: Math. 11. Can be taken before Ag.E. 51. (MARTIN)

*For Advanced Undergraduate and Graduate Engineering Students*

- 105 Pro-Seminar** 1 credit Each semester  
(STAFF)
- 116 Farm Structures Design** 3 credits Second semester  
Structural analysis of farm buildings; farm applications of standard materials. Design problems in livestock and storage structures. Floor planning, lighting, insulation, and ventilation of farm buildings. Material estimates, methods of construction and cost computation. Two recitations and one three-hour laboratory period per week. Prerequisite: E.S. 103. (DIXON)
- 123 Agricultural Machinery Design** 3 credits Second semester  
A comprehensive study of the development, design, construction, economics, power requirements, use, and servicing of agricultural machines. A one-day field trip normally will be required. Two recitations and one three-hour laboratory period per week. Prerequisite: E.S. 103. (MARTIN)
- 124 Agricultural Tractor Power** 3 credits Second semester  
Theory, design, operation, and adjustment of the farm tractor, thermodynamic principles and construction of tractor engines. A study of tractor fuels, carburetion, ignition, rating, and testing. A one-day field trip normally will be required. Two recitations and one three-hour laboratory period per week. Prerequisite: E.S. 120. (MARTIN)
- 140 Rural Electrification** 2 credits First semester  
The application of electricity to agriculture, including problems of area analysis and distribution. Special emphasis is given to the design of electrical equipment and processes for the handling of crops and livestock. Two recitations per week. Prerequisite: E.E. 102. (STAFF)
- 148 Agricultural Engineering Project** 2 or 3 credits Each semester  
The solution of a suitable agricultural engineering project. The project may be in farm power or machinery, rural electrification, farm structures or soil and water conservation. Prerequisite: senior standing. (STAFF)
- 152 Agricultural Engineering Application (52)** 2 credits Second semester  
The engineering elements of agricultural processing. A study of fans, heat transfer, instrumentation, drying, cooling, size reduction, crop conditioning and materials handling. Two recitations per week. Prerequisite: E.E. 120. (STAFF)
- 157-158 Conferences and Field Trips**  
Conferences, supervised inspection of engineering works (one major trip 3 to 6 days in length and normally two minor one-day trips), and group study of special professional subjects including safety, fire prevention, and professional recognition. Approved written reports required. One credit given upon completion of both courses. Prerequisite: senior standing. (STAFF)
- 165 Conservation Engineering** 2 credits First semester  
A study of the engineering phases of soil and water conservation. The design, construction and maintenance of structures and systems for soil erosion control, flood control, and land clearing. Two recitations per week. Prerequisite: C.E. 140. (COREY)

**166 Irrigation Engineering**      3 credits      First semester  
 Engineering principles and practices in irrigation. Soil moisture relationships; water requirements; irrigation system planning; drainage investigation; irrigation pipelines and structures; and design, operation and testing of pumps and sprinkler equipment. A one-day field trip normally will be required. Two recitations and one three-hour laboratory period per week. Prerequisite: C.E. 140. (COREY)

**168 Irrigation Systems**      2 credits      Second semester  
 The planning, operation and maintenance of irrigation systems. Irrigation pumping plants and pipelines; reclamation through irrigation and drainage. Two lectures per week. Prerequisite: Ag.E. 166. (COREY)

**181-182 Agricultural Engineering Thesis**      2 or 3 credits      Each semester  
 (STAFF)

*For Graduate Professional Engineering Students*

**201-202 Seminar**      1 to 3 credits      Each semester

**203-204 Research and Thesis**      Credits to be arranged      Each semester  
 Research in farm power and machinery, rural electrification, rural structures, land reclamation, irrigation and conservation. (STAFF)

**205-206 Advanced Agricultural Machinery Design**  
    1 to 3 credits      Each semester  
 An advanced study into the theory and design of farm machines and farm tractors. (STAFF)

**207-208 Advanced Rural Electrification Design**  
    1 to 3 credits      Each semester  
 An advanced study into the theory of operation and design of electrical equipment used in agricultural production and processing. (STAFF)

**209-210 Advanced Hydrology and Conservation Engineering**  
    1 to 3 credits      Each semester  
 The principles of watershed project planning; agricultural hydrology; advanced hydrologic principles; and the application of statistical analysis to hydrology. (STAFF)

**211-212 Advanced Irrigation Engineering**      1 to 3 credits      Each semester  
 Advanced study of irrigation engineering. Construction, operation and management of irrigation projects. (STAFF)

**213-214 Advanced Farm Structures Design**      1 to 3 credits      Each semester  
 Advanced study in the theory of the design of farm buildings. (STAFF)

**236 Agricultural Engineering Design and Analysis**  
    2 or 3 credits      Each semester  
 This course deals with defining the research problems, deciding the engineering principles to use and the application of professional methods to advanced agricultural engineering problems. (STAFF)



## Agronomy

Professors KLAGES (Head), BAKER, and SEELY;  
Associate Professors POPE, ERICKSON and FOSBERG;  
Assistant Professors HARDER and SLINKARD

*Primarily for Undergraduates*

**1 General Crop Production**      3 credits      First semester

An introductory course dealing largely with the principal factors underlying crop production. Discussions and recitations, upon the classification, distribution, improvement, cultural practices, harvesting, and marketing of grain and forage crops. Three lectures per week. (KLAGES)

**51 General Soils**      3 or 4 credits      Each semester

An introductory course which considers composition, structure, organic matter, moisture, air, formation and fertility of soil in relation to growth of plants. Agricultural engineering and forestry majors and advanced students need not take the laboratory. (Register for only three credits.) Three lectures and one two-hour laboratory period per week. (BAKER, HARDER)

*For Advanced Undergraduates and Graduates*

**101 Genetics**      3 credits      First semester

The introduction to genetics with emphasis upon application to plant and animal breeding and human welfare. Three lectures per week. (POPE)

**102 Crop Improvement**      3 credits      First semester

Application of the principles of genetics to the improvement of agronomic and horticultural crops. Two lectures and one two-hour laboratory period per week. (SLINKARD)

**106 Seed and Plant Identification**      3 credits      First semester

Identification of economic plants and seeds, laboratory analysis of seeds for germination and purity, and discussion of legislative measures relating to the sale of agricultural seeds. One lecture and two two-hour laboratory periods per week. (ERICKSON)

**108 Forage Crops**      3 credits      Second semester

The production and utilization of annual and perennial forage plants; the establishment and care of tame meadows and pastures as well as the conservation, management and improvement of native meadow and pasture lands. Three lectures per week. (SLINKARD)

**110 Cereal and Sugar Crops**      3 credits      Second semester

The production of small grains, corn, sugar beets, and the evaluation of these crops in American and Idaho agriculture. Three lectures per week. (KLAGES)

**111 Crop Ecology**      3 credits      First semester

The study of crop plants in relation to their physiological and social environment and the main underlying factors determining the geographical distribution of field crops. Three lectures per week. (KLAGES)

**113-114 Pro-Seminar (Crops or Soils)**      1 or 2 credits      Each semester

A review of experiment station literature; papers by members of the department on investigations in progress; papers by students on special topics. One hour per week. (STAFF)

- 115-116 Special Problems** 1 to 3 credits Each semester  
Problems in crops or soils. Students preparing for federal or state experiment station work should complete a research problem. Results are to be written up as a technical paper. This course may be taken during the summer. Amount of credit to be arranged after consultation. (STAFF)
- 120 Biometry** 2 credits First semester  
Statistical analysis of biological data with special reference to field plot technic; the planning and laying out of field experiments and the interpretation and presentation of results. Two lectures per week. (SLINKARD)
- 122 Weed Control** 3 credits Second semester  
A study of weed characteristics, weed distribution on agricultural range and non-agricultural lands, weed laws, and weed control methods. Two lectures and one two-hour laboratory period per week. (SEELY)
- \*154 Origin and Classification of Soils** 3 credits Second semester  
A study of the factors which influence soil development, the relationship of these factors to problems of land utilization, classification of soils with particular emphasis on Idaho soils, and practice in field mapping. Two lectures and one three-hour laboratory period per week. Two one-day field trips. Prerequisite: Agron. 51. (FOSBERG)
- 157 Soil Physics** 3 credits First semester  
The course deals with the physical constitution and properties of soils; their relation to structure, moisture, aeration and temperature, with practical application to cultural practices and erosion problems. Two lectures and one three-hour laboratory period per week. Prerequisite: Agron. 51. (HARDER)
- 158 Conservation Methods** 3 credits Second semester  
A study of the causes and control of erosion, the relationships of soil type, slope, climate and erosion to land capability, conservation practices, and the development of conservation farm plans. Three lectures per week. Two half-day and one full-day field trips. Prerequisite: Agron 51. (HARDER)
- 160 Soil Management and Fertility** 3 credits Second semester  
A study of the fundamental principles of soil maintenance. The main factors to be considered are the effects of organic matter, manures, rotations, fertilizers, fixation and liberation of plant nutrients, functions of these nutrients and soil testing. Three lectures per week. Prerequisite: Agron. 51. (BAKER)
- 213-214 Research and Thesis** 3 to 5 credits Each semester  
Problems in plant breeding, crop production, weeds, soil physics, or soil management may be selected. (STAFF)
- 215-216 Seminar (Crops or Soils)** 1 or 2 credits Each semester  
Review of experimental work. Papers by members of the department on investigations in progress. Student report on special topics. One hour per week. (STAFF)
- 218 Advanced Genetics** 3 credits Second semester  
A study of methods of genetic testing and analysis. Emphasis is upon review of the literature. Subject matter varies according to the needs and interests of those taking the course. (POPE)

\* Offered in alternate years; to be offered in 1959-60.

**221-222 Advanced Crop Production** 1-3 credits

A course designed to offer graduate students specialized training in selected phases of crop production. (STAFF)

**231-232 Advanced Weed Studies** 1-3 credits

A course designed to offer graduate students specialized training in selected phases of weed investigations. (STAFF)

**251-252 Advanced Soils** 1-3 credits

A course designed to offer graduate students specialized training in selected phases of soils investigations. (STAFF)

## Air Force ROTC

Col. MERRILL A. KEMPTON, Professor of Air Science; Major PAUL F. ROSS,  
Captain DONALD C. HANTO, Captain EWARD C. SAYRE,  
Captain RICHARD E. DENFELD, 1st Lt. DONALD L. CARNS

(The Air Force AFROTC is one unit of the Reserve Officers' Training Corps)

The four year AFROTC course is divided into the basic and advanced courses, each of two years' duration. The basic course satisfies the subject requirement for men of four semesters of military courses to be taken during the freshman and sophomore years. Freshmen may choose this ROTC department; however, if they desire to obtain a commission through ROTC, they should take into consideration the AFROTC standards for enrollment in the advanced course as outlined below. Once enrolled, the basic cadet may be eligible for a deferment from induction under present Selective Service laws so long as he remains in good academic standing both in the institutional and the AFROTC program and indicates the potential abilities desired in an Air Force Officer. Basic cadets are issued Air Science textbooks and an Air Force uniform; they do not receive a monetary allowance. In the basic course, the AFROTC cadet attends Air Science instruction four hours per week, of which one hour is devoted to leadership laboratory. The basic course serves two purposes: (1) it serves as a base from which to select advanced course cadets who will become junior officers of the Air Force and eventually its leaders; (2) it provides an opportunity to offer an air-age citizenship course to a large segment of the male undergraduate population. Selected first and second year AFROTC cadets may enroll in the ROTC band for additional credit. See Music)

Entrance into the advanced course is highly selective. Since the major requirement of the Air Force is for flying officers, priority for enrollment in the advanced course will be given to those cadets who are qualified for and desire training as pilots and navigators. There are also a very small number of openings for cadets who specialize in the scientific and technical fields. Selection is based upon such factors as relatively high academic standing, outstanding leadership characteristics, physical qualification, interest in the Air Force and in undergoing flight training after graduation, and the attainment of acceptable scores in aptitude tests. If selected, the cadet signs a contract agreeing to complete officer training, accept a commission as a second lieutenant, Air Force Reserve, if tendered, and serve three years of active duty and five years in the Air Force Reserve. An active duty tour of 5 years is required if the cadet enters pilot or navigator training. In addition to uniform and textbooks, the advanced cadet receives approximately \$27 per month.

The advanced course, like the basic, is made up of generalized courses; it is designed to provide that fundamental training, both personal and professional, which will best fit the cadet to become a junior officer possessing a high growth potential. The advanced cadet attends AFROTC instruction five

hours per week, of which one hour is devoted to the development of leadership. He is also required to attend a summer training unit at an Air Force base between his junior and senior years.

Veterans may have the military requirements for graduation waived. If a veteran desires a commission through AFROTC, however, and enrolls in the institution at freshman or sophomore level, he must take inphase with non-veteran contemporaries the portion of the basic program which remains and qualify for acceptance into the advanced course. He does not have to meet flight qualifications unless he desires to apply for flight training.

Military societies for AFROTC cadets are the Arnold Air Society and the Scabbard and Blade. Other extracurricular activities include a rifle team, a drill team, a choir, and a cadet newspaper.

### COURSES

*Basic Course: Foundations of Air Power*

**1-2 Air Science I** 1½ credits

A general survey of air power designed to provide the student with an understanding of the elements of air power and basic aeronautical science. (CARNS, HANTO) (One 1-day field trip, to be taken either in Air Sc. I or II.)

**3-4 Air Science II** 1½ credits

A year-long survey of the development of aerial warfare, with emphasis on principles of war, concepts of employment of forces, and changing weapon system. Treatment of aerial warfare covers targets, weapon systems, delivery vehicles, bases and operations. (ROSS) (One 1-day field trip to be taken either in Air Sc. I or II.)

*Advanced Course: Air Force Officer Development*

**7-8 Marksmanship** No credit

Open only to students registered in AFROTC program. Members of the AFROTC rifle team are expected to register for this course. It can be repeated each year.

**113-114 Air Science III** 3 credits

A year-long treatment of the knowledge and skills required of a junior officer in the Air Force with special emphasis on staff duties and leadership. Includes Air Force leadership doctrine, staff organization and functions, communicating, instructing, problem solving techniques, leadership principles and practices, and the military justice system. (SAYRE) (One three-day field trip to be taken either in Air Sc. III or IV.)

**117-118 Air Science IV** 3 credits

A study of global relations of special concern to the Air Force officer with attention to such aspects as weather, navigation, geography, and international relations. (DENFELD) (One 3-day field trip, to be taken either in Air Sc. III or IV.)

## Animal Husbandry

Professors BELL (Head), and KEITH; Associate Professors HODGSON and LEHRER; Assistant Professor CHRISTIAN

*Primarily for Undergraduates*

**2 The Livestock Industry** 3 credits Second semester

History and development; principles underlying the production and distribution of livestock and livestock products; relation to agriculture and

other industries; commercial and purebred types of horses, cattle, sheep and swine; characteristics and adaptation of the various breeds. Lectures, problems and reference reading. Two lectures and one two-hour laboratory period per week. (LEHRER, HODGSON)

**\*56 Meats** 1 credit First semester

A study of the factors affecting the quality and palatability of meat; identification and selection of wholesale and retail cuts of meats. This course is offered for students in Home Economics. One hour per week. One one-day field trip. (LEHRER)

*For Advanced Undergraduates and Graduates*

**104 Livestock Judging** 2 credits Second semester

The judging of horses, cattle, sheep and swine in groups with reference to breed and market types. Two three-hour judging periods per week. Two one-day field trips and four half-day field trips. Prerequisite: A.H. 2. (HODGSON)

**105 Principles of Nutrition** 3 credits First semester

Designed to give fundamental knowledge in the field of nutrition with a discussion of metabolism and energy relations, proteins, fats, carbohydrates, minerals, vitamins, enzymes, physiology of digestion and absorption, and hormones. The laboratory will consist of feeding experiments with rats, chickens, and guinea pigs. Required of juniors in Animal Husbandry. Three lectures per week and a laboratory project. Prerequisite: Ag.Chem. 80 or equivalent. (KEITH)

**106 Livestock Feeding** 3 credits Second semester

Physiology of nutrition; digestion, absorption, metabolism, protein requirements, energy requirements, and utilization. Feeding stuffs; digestible nutrients, energy values, classification, description and use of feeds. Feeding; maintenance, growth, and production requirements. Required of juniors in Animal Husbandry. Three lectures per week. Prerequisite; Junior standing. (KEITH)

**111 Advanced Livestock Judging** 1 or 2 credits First semester

Primarily for seniors. Excursions are made to livestock farms and shows within reach of the University. One or two three-hour judging periods per week. May be repeated for credit with the consent of the instructor for a maximum of 2 credits for the course. Five one-day field trips and one five-day field trip. Prerequisite: A.H. 104. (HODGSON)

**112 Animal Breeding** 3 credits Second semester

Coordination of physiological background; general laws of heredity; methods of investigation; interpreting experimental data; application of principles to livestock improvement; problems and reference reading. Three lectures per week. Required of students in Animal Husbandry. Prerequisite: Agron. 101. (CHRISTIAN)

**113 Meats** 2 credits First semester

Butchering, cutting, and care of meats; yield, quality, and values of meat and by-products as influenced by breeding, feeding and health of meat animals; market classes, grades, and cuts of meat in wholesale and retail markets. One lecture and one three-hour laboratory period per week. One one-day field trip. Prerequisites: A.H. 2 and Junior standing. (CHRISTIAN)

**114 Beef Cattle Production** 3 credits First semester

Breeding, feeding, management and marketing of commercial and purebred cattle. Three lectures per week. Prerequisite: A.H. 2. (HODGSON)

\* Offered in alternate years; given in 1959-60.

- 115 Sheep Production** 2 credits Second semester  
Breeding, feeding, management and marketing of commercial and purebred sheep. Two lectures per week. Prerequisite: A.H. 2. (BELL)
- \*116 Horse Production** 1 credit Second semester  
Breeding, feeding, and management of horses. One lecture per week. Prerequisite: Junior standing. (LEHRER)
- 117 Swine Production** 2 credits First semester  
Breeding, feeding, management and marketing of commercial and purebred swine. Two lectures per week. Prerequisite: A.H. 2. (LEHRER)
- 120 Senior Inspection Trip** 1 credit Second semester  
A 5-7 day field trip to major livestock producing areas selected by A.H. staff. (STAFF)
- 152 Practicum** 1 credit Second semester  
Laboratory practice in training, fitting, showing, and management of livestock. One three-hour laboratory period per week. Prerequisite: A.H. 2. (STAFF)
- 157-158 Pro-Seminar** 1 credit  
Investigation in selected lines of Animal Husbandry. Senior year. (STAFF)
- 161-162 Special Problems in Animal Husbandry** 1-2 credits Each semester  
Problems in animal husbandry. Credit to be arranged. (STAFF)

*Primarily for Graduates*

Graduate courses offered jointly by the Departments of Animal Husbandry, Dairy Science and Poultry Husbandry are listed under an Animal Science course section, see below.

Graduate students receive the degree of Master of Science in Agriculture with a major in Animal Husbandry.

## Animal Science

Professors BELL, FOURT, KEITH, LAMPMAN, ROSS, JOHNSON and PETERSEN  
Associate Professors HODGSON and LEHRER  
Assistant Professor CHRISTIAN

*Primarily for Graduates*

Offered in the animal science departments (Animal Husbandry, Dairy Science, Poultry Husbandry).

Graduate students receive the degree of Master of Science in Agriculture with a major in Animal Husbandry, Dairy Science or Poultry Husbandry.

- 201-202 (A.H. 201-202; D.S. 231-232; P.H. 201-202) Research and Thesis** Credits to be arranged Each semester  
(STAFFS)
- 203 (A.H. 203; D.S. 229) Seminar** 1-3 credits First semester  
May be repeated for a maximum of 3 credits for the course. (STAFFS)

\* Offered in alternate years; given in 1959-60.

**204 (A.H. 204; D.S. 230) Seminar** 1-3 credits Second semester  
May be repeated for a maximum of 3 credits for the course. (STAFFS)

**206 (D.S. 220) Statistical Research Methods** 3 credits Second semester  
Review of biometric principles; regression and correlation; experimental design; analysis of variance and covariance. Designed to aid in the analysis and interpretation of research problems. Prerequisite: Consent of instructor.

Credit for this course may also be applied toward a graduate major or minor with the consent of major professor and Dean of the Graduate School. (JOHNSON, CHRISTIAN, BELL)

*Nutrition Option*

**221 (A.H. 206) Animal Nutrition** 3 credits First semester  
An advanced study of the fundamental principles and experimental techniques concerned with carbohydrates, fat and protein metabolism. Prerequisite: Consent of instructor. (KEITH, LEHRER, PETERSEN, ROSS)

**222 (A.H. 207) Animal Nutrition** 3 credits Second semester  
Continuation of An.Sci. 221. An advanced study of the fundamental principles and experimental techniques concerned with vitamin, mineral and energy metabolism. Prerequisite: Consent of instructor. (KEITH, LEHRER, PETERSEN, ROSS)

**224 (A.H. 209) Advanced Animal Nutrition** 2 credits Second semester  
An advanced study of nutrition as applied to beef cattle, sheep and swine. Prerequisite: Consent of instructor. (KEITH, LEHRER)

**226 (D.S. 209) Advanced Dairy Cattle Nutrition** 2 credits Second semester  
An advanced study of nutrition as applied to dairy cattle. Prerequisite: Consent of instructor. (ROSS)

**228 (P.H. 209) Advanced Poultry Nutrition** 1-3 credits Second semester  
An advanced study of nutrition as applied to poultry. Prerequisite: Consent of instructor. (PETERSEN)

*Animal Breeding Option*

**241 (D.S. 233) Advanced Animal Genetics** 3 credits First semester  
Advanced concepts of the basic genetic principles, including the nature, origin, stability, and mechanics of distribution of the genes; with special emphasis on genetics of sex, sterility, disease resistance, and other multiple factor inheritance. Prerequisite: Consent of instructor. (JOHNSON, CHRISTIAN, BELL)

**242 (A.H. 208) Advanced Animal Breeding** 3 credits Second semester  
Statistical techniques used in animal breeding research; methods of estimating heritability, genetic and phenotypic correlations, construction of selection indexes, how selection changes the genetic composition of a population; mating systems; genetic homeostasis. Prerequisite: Consent of instructor. (CHRISTIAN, BELL, JOHNSON)

**251 (D.S. 234) Endocrine Physiology of Farm Animals** 3 credits First semester  
The structure of the glands of internal secretion and their role in growth, development, metabolism, production, and reproduction of farm animals. Prerequisite: Consent of instructor. (JOHNSON, CHRISTIAN, BELL)

**252 Experimental Reproductive Physiology of Farm Animals**

3 credits

Second semester

Laboratory techniques used in physiology of reproduction research. Comparative and differential fertility, the effect of endocrine deficiencies and excesses on fertility and sterility, experimental control of reproduction in farm animals. Prerequisite: Consent of instructor. (CHRISTIAN, BELL, JOHNSON)

## Army ROTC

(The Army ROTC Department is one unit of the Reserve Officers' Training Corps)

Colonel GLENN B. OWEN, Professor of Military Science and Tactics

Major ROBERT F. ADAMS, Major EDWIN S. HARRISON, Captain

GEORGE W. ORTON, Captain EUGENE V. NABELL, 1st Lt. CHARLES J.

CHEVES, JR., Assistant Professors of Military Science and Tactics

MSgt. HAROLD P. LYNCH, SFC PAUL J. McELROY, SFC GERD

A. REMUS, SFC EPHRAIM J. SWANN, Sgt. CHARLES F.

JAMES, Assistants to the Professors of Military Science and Tactics.

The purpose of the Army Reserve Officers' Training Corps is to maintain liaison with educational institutions, insure a continuing flow of qualified personnel into the Officer Corps of the Army, conduct pre-commissioning and basic military training programs, stimulate interest in military careers, promote appreciation of the Army as a service, encourage participation in reserve components of the Army of the United States, and to assist the institution in the development of the student toward maturity.

The Army ROTC is divided into the basic and advanced courses. The two year basic course taken during the Freshman and Sophomore years is a prerequisite for the advanced course and in addition satisfies the military requirement directed by the University for all able bodied male students who are not veterans of one or more years active service. Basic cadets are issued Army ROTC textbooks and an Army uniform. Exemption from the first year basic course is authorized a student who has completed three years Junior Division (High School) ROTC, or six months active service. The advanced course consist of two years of military training on-campus plus a summer camp of six weeks following the completion of the Junior (third) year in college. Upon successful completion of the advanced course, cadets are commissioned at graduation as Second Lieutenants in the United States Army Reserve. In addition, outstanding students of the advanced course are designated Distinguished Military Students and as such are afforded the opportunity to apply for commission as Second Lieutenants in the Regular Army. In addition to uniforms and textbooks, the advanced cadets receive approximately \$27.00 per month.

Commissions are awarded in the following branches:

Adjutant General's Corps, Armor, Army Security, Artillery, Chemical Corps, Corps of Engineers, Finance Corps, Infantry, Medical Service Corps, Army Intelligence, Military Police Corps, Ordnance Corps, Quartermaster Corps, Signal Corps, and Transportation Corps.

The Army ROTC Department trains the Army ROTC Rifle and Drill Teams. The Rifle Team competes in postal matches with similar teams of other institutions throughout the country and shoulder-to-shoulder matches are



fired with neighboring institutions. The Rifle Team is affiliated with the National Rifle Association and competes in national matches. The Drill Team competes in several drill team meets each year and in addition gives many demonstrations throughout Idaho and Washington.

Appropriate awards in the form of medals and certificates are presented annually to selected members of the entire Cadet Brigade for outstanding performance in the military course. Military societies for Army ROTC cadets are the Pershing Rifles, Scabbard and Blade, and Association of the United States Army. Other extra-curricular activities include a choir, cadet newspaper, and cadet radio program.

Selected first and second year Army ROTC cadets may enroll in the ROTC Band for additional credit. (See Music)

### COURSES

#### 1-2 Military Science I 1½ credits

A general study of basic military subjects common to all branches of the Army. Four periods per week. (STAFF)

#### 3-4 Military Science II 1½ credits

A continued study of basic military subjects common to all branches of the Army. Four periods per week. (STAFF)

#### 7-8 Marksmanship No credit

Open only to students registered in AROTC program. Members of the AROTC rifle team are expected to register for this course. It can be repeated each year.

#### 105-106 Military Science III 3 credits

A study of more advanced military subjects common to all branches of the Army. A continued development of leadership qualities is stressed. Three lectures and one lab period per week. Prerequisite: Army 1, 2, 3 and 4 or the equivalent. (STAFF)

#### 107-108 Military Science IV 3 credits

A continued study of advanced military subjects common to all branches of the Army. Leadership qualities, officer responsibilities, customs of the service, administration and small unit tactics are stressed. Four lectures and one practical work period per week. Prerequisite: Army 105 and 106. (STAFF)

## Art and Architecture

Professor PRICHARD (Head)

### Architecture

Professor PRICHARD; Assistant Professors BARTELL, SLOAN;  
Instructors BLANTON, ROBERTS

*Primarily for Undergraduates*

#### 11-12 Elements of Architecture 2 credits

Lectures on the elements of architecture, followed by problems in three-dimensional composition, model building and architectural presentation. Should be taken in conjunction with Arch. 13-14. (BLANTON)

- 13 Shades and Shadows** 1 credit First semester  
Elementary shades and shadows. (BLANTON)
- 14 Architectural Perspective** 1 credit Second semester  
Discussion of the phenomena of perspective and methods of representing distance, followed by the exercises in drawing architectural perspective. (BLANTON)
- 51 Design Workshop I** 2-3 credits Summer  
A lower division workshop in architectural design for students who wish to make up, accelerate or advance in planning and design. (PRICHARD)
- 53-54 Architectural Design I** 3 credits  
A series of problems in architectural composition and planning. Individual criticism of assigned problems. (SLOAN)
- 55-56 Building Construction I** 3 credits  
The nature and properties of building materials used in architectural construction. Resistance of building materials to loads and stresses. Three lectures or recitations a week. (SLOAN)
- 57-58 Architectural History** 3 credits  
A study of architecture through the ages. Offered in 1958-59 and in alternate years. Three lectures a week. (PRICHARD)
- For Advanced Undergraduates and Graduates*
- 115-116 Architectural Design II** 4 credits  
A continuation of Arch. 53-54. Individual criticism of assigned problems. One three-day trip during the year, combined with 117-118. (BARTELL)
- 117-118 Architectural Design III** 4-5 credits  
A continuation course in architectural design. Three hours per week per credit. One three-day field trip during the year, combined with 115-116. (PRICHARD)
- 131-132 Building Construction II** 3 credits  
The nature and properties of building materials. Design and use of wood, steel and concrete in architectural structures. (SLOAN)
- 135 Construction Problems (Formerly Materials of Building)** 3 credits First semester  
Working drawings and construction problems. Application of structural theory. (BARTELL)
- 136 Mechanical Plants of Buildings** 3 credits Second semester  
The mechanical plant in its relation to the architectural problem. Insulation, acoustics, plumbing, and electrical installations, their fundamental principles and their application in the details of modern work. Three lectures a week. (BARTELL)
- 151 Design Workshop II** 2-4 credits Summer  
An upper division workshop in architectural design for students who wish to make up, accelerate or advance in planning and design. (PRICHARD)
- 165-166 Thesis** 2-4 credits Each semester  
For students in their senior year. (STAFF)
- 167-168 Office Practice** 3 credits  
A study of professional standards and procedures. (PRICHARD)

*Primarily for Graduates*

- 221-222 Professional Practice** 3 credits  
Study of professional problems. For graduates who request aid with individual problems in the field of architecture. Problems must be presented to a jury of the architectural faculty for approval. (PRICHARD, BARTELL, SLOAN)
- 225-226 Research and Thesis** 1-5 credits Each semester
- 227-228 Seminar** 3 credits Each semester  
Area studies in architecture, presentation and discussion of papers in assigned areas of architectural interest. (PRICHARD)

**Art**

Professors DUNN, KIRKWOOD, PRICHARD;  
Assistant Professors BELL, WESTERLUND; Instructor ROBERTS

*Primarily for Undergraduates*

- 1-2 Drawing I** 2 credits  
The principles of freehand drawing and the elements of composition. Two two-hour laboratory periods a week and assigned work. (ROBERTS, DUNN)
- 3-4 Design I** 2 credits  
Principles of design in line, value, and color, to develop power of appreciation and creation of good design. (WESTERLUND)
- 5-6 Life Drawing** 2 credits  
Drawing from life and nature. For students with acceptable training. Credit will be allowed for both Art 1-2 and 5-6. (ROBERTS)
- 7 Printing in the Classroom** 1 credit Summer school  
Silk screen posters and other graphic art as aids to the classroom teacher. A summer workshop in art. (WESTERLUND)
- 9 Materials Approach to Teaching Art** 1 credit Summer  
A creative approach to teaching based on the natural manipulation of materials. The materials-centered class. (WESTERLUND)
- 31-32 Workshop in Painting I** 1-3 credits Summer  
Travel class in painting known as "Workshop on Wheels." Landscape and other painting in any media. Section A (KIRKWOOD); Section B (DUNN)
- 33 Workshop in Sculpture** 1 credit Summer  
Lectures and experiments on the nature and uses of sculpture. (ROBERTS)
- 41-42 Art Appreciation** 2 credits  
A consideration of the elements of beauty in the various arts. Slides, lectures and discussion of architecture, painting, sculpture, and other arts. The various viewpoints: the philosopher, the artist, the layman. (PRICHARD, WESTERLUND)
- 61-62 Painting I** 2-4 credits  
Painting from life, still-life and nature. Three hours per week per credit. (KIRKWOOD)

- X61-X62 Painting I** 2-4 credits Extension only  
(KIRKWOOD, DUNN, ROBERTS)
- 63-64 Design II** 2 credits  
Advanced design and the crafts. (ROBERTS)
- 65-66 Pottery** 2 credits  
Hand-built pottery; use of wheel; glazing and firing. Classes will be limited. Permission of the instructor required. (WESTERLUND)
- 75-76 Drawing II** 2 credits  
Advanced drawing from life and nature. Three hours per week per credit. Prerequisite: Art 1-2 or 5-6. (ROBERTS)
- 81 Introduction to Photography** 3 credits Either semester  
The technique of photography, history of its development, and present day uses. (BELL)
- 83 Workshop in the Use of the Camera** 1 credit Summer  
An intensive course in the better use of the camera; composition, photographic processing. Lectures and demonstrations. (BELL)
- 85 Freelance Photography Workshop** 2 credits Summer  
A workshop in freelance photographic journalism. Taking pictures for profit. Lectures and laboratory. (BELL, FITZGERALD, GIBBS, WALKER)
- Primarily for Advanced Undergraduates and Graduates*
- 101-102 Water Color** 2 credits  
Development of water color technique. Sketching from still life and from nature. Prerequisite: Art 1-2 or 5-6. (DUNN)
- 107-108 Painting II** 2-4 credits  
Technique of oil painting. Painting from life and nature. Prerequisite: Art 1-2 or 5-6. Three hours per week per credit. (KIRKWOOD)
- 121-122 Commercial Design I** 3 credits  
Basic commercial design. The mechanics of lettering, a study of typography, photo-engraving processes, magazine and newspaper layout. One two-day field trip in one semester. Prerequisite: Limited to advertising or journalism majors and advanced art students. (DUNN)
- 123-124 Composition** 3 credits  
A study of pictorial composition through student problems. Prerequisite: Art 1-2 or 5-6; 75-76 or 107-108. (KIRKWOOD)
- 127-128 Drawing III** 2 credits  
Advanced drawing from life in various media. Three hours per week per credit. (ROBERTS)
- 129-130 History of Painting** 2 credits  
A technical study of the great occidental painters of history. (KIRKWOOD)
- 131-132 Workshop in Painting II** 1-3 credits Summer  
"Workshop on Wheels." For experienced painters with collegiate advanced standing. Admission by consent of instructors. Section A (KIRKWOOD), Section B (DUNN)
- 141-142 Painting III** 2 to 4 credits  
Advanced painting. Portrait, life and creative composition. Three hours per week per credit. (KIRKWOOD)

- 145-146 Interior Architectural Design** 3-4 credits  
A study of the designing and furnishing of interiors. Drawings and models. Three hours per week per credit. Prerequisites: Arch, 53-54 or permission of instructor. (PRICHARD)
- 147-148 Commercial Design II** 3 credits  
Advanced commercial design. A study of working methods from sketch to finished art work. Spot designs, layout, packaging and similar problems. One two-day field trip. (DUNN)
- 161-162 Pro-Seminar** Credits to be arranged  
Critical readings and reports in the field of art and architecture. (KIRKWOOD)
- 163-164 Thesis** 2-4 credits  
For students in their senior year. (STAFF)
- 181 Advanced Photography** 3 credits First semester  
A study of the applications of photography. (BELL)
- 182 Advanced Photographic Techniques** 3 credits Second semester  
A study of advanced photographic techniques. (BELL)

*Primarily for Graduates*

- 201-202 Problems in Media and Techniques** 3 credits Each semester  
Research in methods and materials of painting. Prerequisite: Graduate standing. Competency in drawing and painting. (KIRKWOOD)
- 203-204 Problems in Professional Practice** 3 credits Each semester  
The study and execution of actual professional problems. This course is for graduates who come requesting aid with actual problems in the various fields. Admission will require the presentation of the project for faculty consideration and acceptance. (PRICHARD, DUNN, KIRKWOOD)
- 205-206 Research and Thesis** 1-5 credits Each semester
- 215-216 Seminar** 3 credits Each semester  
Problems in research in aesthetics are carried on in the course and their results presented from time to time for discussion. (STAFF)

## Bacteriology

Professor CHERRINGTON (Head); Associate Professors WEEKS and ANDERSON;  
Assistant Professor BECK; Acting Instructor MAY;  
Dr. CHRISTIANSON\* and Mrs. BAHRENBURG,\*  
Dr. LUDDEN† and Dr. McCARTER‡

*Primarily for Undergraduates*

- 51 General Bacteriology** 4 credits Each semester  
A general survey of the field of Bacteriology, designed for students in the general science courses and as a foundation for advanced work in the subject. Two lectures and two two-hour laboratory periods per week. Prerequisite: Chem. 1. (CHERRINGTON, ANDERSON, BECK)

\* St. Luke's Hospital, Spokane, Washington.  
† Deaconess Hospital, Spokane, Washington.  
‡ St. Luke's Hospital, Boise, Idaho.

- 54 Public Health and Hygiene** 3 credits Second semester  
Applied hygiene and sanitation from the standpoint of bacteriological and related sciences. The prevention of communicable diseases; environment in relation to health and disease. (CHERRINGTON)

*For Advanced Undergraduates and Graduates*

- 102 Food and Applied Microbiology** 4 credits Second semester  
A study of microbiological process of importance to the food and fermentation industries. Problems of spoilage, spoilage control and sanitation, Food poisoning and food-borne infections. Two lectures and two three-hour laboratory periods per week. One field trip. Prerequisite: Bact. 51. (ANDERSON)
- 104 Pathogenic Bacteria** 4 credits Second semester  
A study of the more important disease-producing organisms. Emphasis is placed on cultural, biochemical and morphological characteristics which serve as a means for their identification. Two lectures and two three-hour laboratory periods per week. Prerequisite. Bact. 51. (WEEKS)
- 106 Dairy Bacteriology** 3 credits First semester  
A study of bacteria found in milk, butter, cheese, ice cream, and other dairy products; isolation and study of specific groups; effect of common farm dairy practices on the number of bacteria in milk, etc. One lecture and two three-hour laboratory periods per week. Prerequisite: Bact. 51. (CHERRINGTON)
- 109 Immunology and Serology** 4 credits First semester  
An intensive study of the theory of immunity, with animal experiments in the production of immune sera, use of vaccines, preparation and testing of vaccines, sera, toxins, and anti-toxins. Two lectures and two three-hour laboratory periods per week. Prerequisite: Bact. 51 and 104. (WEEKS)
- 111-112 Bacteriological Literature (Pro-Seminar)** 1 or 2 credits  
(STAFF)
- 114 Clinical Laboratory Methods** 4 credits Second semester  
A course dealing with methods of analysis used in clinical laboratories. Laboratory procedures in hematology, urine analysis, milk and water analysis, isolation and identification of organism, and serological diagnosis of disease. Two lectures and two three-hour laboratory periods per week. Prerequisites: Bact. 51, 104, and 109. (BECK)
- 115-116 Special Problems** 1 to 3 credits  
(STAFF)
- 121 Clinical Diagnosis** 1 to 32 credits Internship  
A twelve months' training course in laboratory methods used in hospital and public health laboratories. Laboratory work to be pursued in approved and designated hospital or public health laboratories containing suitable equipment. Instruction to be given by individuals whose preparation would fit them for positions on the university faculty. Prerequisite: Bact. 114.
- 125 Soil Microbiology** 3 credits First semester  
A study of the activities of the microscopic forms of plant and animal life within the soil and the relationship existing between microbial activities, soil fertility, and crop production. The subject matter is covered by text, lecture, and review of current scientific literature. One lecture and two three-hour laboratory periods per week. Prerequisites: Agron. 51, Bact. 51. (ANDERSON)

*Primarily for Graduates*

- 201-202 Seminar** 1 credit  
(STAFF)
- 203 Physiology of Bacteria** 2 to 4 credits First semester  
A study of cellular physiology as it applies to bacteria. Cell structure and composition, metabolism, growth and variation are included. Two lectures per week or two lectures per week with laboratory work. Prerequisites: Bact. 51 and 104 or consent of instructor. (WEEKS)
- 205 Microbial Fermentations** 2 to 4 credits First semester  
A study of selected industrial and non-industrial fermentations. Emphasis to be upon biochemical mechanism and methods of fermentation analysis. Two lectures per week or two lectures per week with laboratory work. Prerequisites: Bact. 51 and Chem. 72 or 172 and consent of instructor. (BECK)
- 211-212 Research and Thesis** Credits to be arranged Each semester  
(STAFF)
- 215-216 Graduate Problems in Bacteriology** 1 to 3 credits Each semester  
Investigations on special problems involving either experimental or library research in (a) food; (b) medical; (c) metabolism; and (d) soil bacteriology. Open to graduate students in Bacteriology or allied fields. Prerequisite: Bact. 203 or 205 or consent of instructor. (STAFF)

## Biological Sciences

Professor BAKER (Head)

The Department of Biological Sciences includes two subject-matter fields: Botany and Zoology. A student may major in either field. Bridging the two fields are a number of courses in Biology.

For course offerings, see under:

**Biology**

**Botany**

**Zoology**

Special collections of plants and animals are available in the Department of Biological Sciences for the use of all students in the University. The University of Idaho Herbarium lists more than 50,000 named specimens of flowering plants, ferns, and fungi. The bird collection of 2,700 study skins has about 260 species which are found in Idaho. The mammal collection consists of approximately 3,500 specimens.

## Biology

Professor McILVAINE  
Assistant Professor DUMAS

**\*1-2 General Biology** 4 credits

An introduction to the various kinds of plants and animals. The lectures include an interpretation of the classification, morphology and physiology, ecology, embryology, adaptations, genetics and evolution of plants and animals. The laboratory work is designed to demonstrate topics discussed in lectures. Two lectures, one quiz, and two two-hour laboratory periods a week. (DUMAS)

**64 Natural History of Idaho** 3 credits Second semester

An introduction to the common plants and animals of Idaho, their collection, identification, ecology, preservation and maintenance in the laboratory. Two lectures and one three-hour laboratory period a week. Four one-day Saturday field trips. Prerequisites: Biol. 1-2, or Zool. 1, or Bot. 1 or 3. (DUMAS)

**118 Biology for Teachers** 2 credits Summer school

Discussions of the subject matter which should be included in a biology course. The collection, care and preservation of biological material. (McILVAINE)

**262 History of the Biological Sciences** 2 credits Second semester

A chronological survey of the advances in biology as descriptive and experimental science. Contributors, from Aristotle to modern biologists, are considered and the treatment of data from Greek to modern times is described. (McILVAINE)

## Botany

(Botany is one of the subject matter fields within the Department of Biological Sciences.)

Professors BAKER (Chairman) and McILVAINE;  
Assistant Professors McMULLEN, O'CONNELL, ROBERTS, and TYLUTKI

*Primarily for Undergraduates*

**†1-2 General Botany** 4 credits

The study of the plant as a functioning organism with special emphasis on the physiology and anatomy of a flowering plant, followed by a general survey of the entire plant kingdom. Two lectures, one quiz, and two two-hour laboratory periods a week. (McMULLEN)

**†3 Principles of Botany** 4 credits Each semester

The fundamentals of physiology, anatomy, and morphology of plants with special emphasis on the seed plants. Two lectures, one quiz, and two two-hour laboratory periods a week. (McILVAINE)

\* This course is designed for non-science majors. Students who take Biology 1 and 2 may not register for Zoology 1 or Botany 1 for credit. Students who take Biology 1 may register for the following courses for 2 credits only: Zoology 1, Botany 1, and Botany 3.

† Students may not take both Botany 1 and Botany 3 for credit.



**53 Systematic Botany** 4 credits Second semester  
An introduction to the classification and identification of the flowering plants with emphasis on the local flora. Two lectures and two three-hour laboratory periods a week. (BAKER)

**78 Economic Botany** 2 credits First semester  
The influence of plants and plant products on history and civilization, including the important plants affecting international commerce today. (TYLUTKI)

*For Advanced Undergraduates and Graduates*

**101 Plant Physiology** 3 credits First semester  
The basic problems of water exchange, foods, growth and nutrition, and metabolism. Two lectures and one recitation-demonstration period a week. Prerequisites: Bot. 1 or 3, Chem. 2. (ROBERTS)

**102 Plant Physiology** 4 credits Second semester  
A study of the fundamental aspects of physiology applicable to all plants. Two lectures and two three-hour laboratory periods a week. Prerequisites: Bot. 1 or 3, Chem. 2. (ROBERTS)

**103 Plant Anatomy** 4 credits First semester  
Study of tissues of vascular plants from the standpoint of origin, development, and function. Two lectures and two three-hour laboratory periods a week. Prerequisites: Bot. 1-2 or equivalent. (McILVAINE)

**\*104 Botanical Microtechnique** 3 credits First semester  
Methods of treating plant material for microscopic examination or histochemical tests. One lecture and two three-hour laboratory periods a week. Prerequisite: Bot. 3 or equivalent. (McMULLEN)

**105 Plant Ecology** 3 credits First semester  
A study of the major factors of the plant environment and succession, structure, composition and behavior of plant communities. Three lectures a week. Prerequisite: Bot. 53. (O'CONNELL)

**107 Agrostology** 3 credits First semester  
An intensive study of the classification, identification, distribution, and structure of grasses. One lecture and two three-hour laboratory periods a week. (BAKER)

**111 Mycology** 4 credits First semester  
A general survey of the fungi including a study of their structure, life histories, classification, and economic importance. Two lectures and two three-hour laboratory periods a week. Prerequisite: Bot. 1-2, or Bot. 3. (TYLUTKI)

**117 Morphology of Angiosperms** 3 credits First semester  
The theories of origin, phylogeny, and modes of phylogenetic determination of the flowering plants. (O'CONNELL)

**119 Phycology** 4 credits First semester  
The morphology and ecology of fresh water and marine algae and the principles underlying their classification. Collecting, identifying, and the making of permanent microscopical preparations. Prerequisite: Bot. 2 or Bot. 3. (McMULLEN)

\* Offered in alternate years; given in 1959-60.

**†121-122 Plant Morphology** 4 credits

A thorough study of the major groups of plants forms the basis of lectures upon the morphology, life histories and classifications of these groups. Two lectures and two three-hour laboratory periods a week. Prerequisite: Bot. 1-2 or equivalent. (McMULLEN)

**123-124 Independent Study** 1-3 credits

- |                  |                 |
|------------------|-----------------|
| (a) Anatomy      | (g) Morphology  |
| (b) Cytology     | (h) Mycology    |
| (c) Cytotaxonomy | (i) Paleobotany |
| (d) Ecology      | (j) Physiology  |
| (e) Genetics     | (k) Taxonomy    |
| (f) Geography    |                 |

Work is individually assigned and will require reading and/or research. The student may register for only one of the above sections per semester. Not over 6 credits may be earned. Prerequisites: the appropriate basic course in the chosen field, a minimum grade point average of 3.0 in the major, and permission of the instructor. (STAFF)

**125-126 Pro-Seminar** 1 credit

Review of current literature; presentation of original work. (STAFF)

**128 Plant Cytology** 3 credits Second semester

The form and composition of the plant cell with special emphasis on the cell wall, the cytoplasm, and its inclusions. Two lectures and one three-hour laboratory period per week. Prerequisites: Consent of the instructor. (McILVAINE)

*Primarily for Graduates***205-206 Advanced Plant Ecology** 1-3 credits

Intensive study of special phases of ecology. Prerequisite: Bot. 105. (O'CONNELL)

**207-208 Advanced Taxonomy** 2 to 3 credits

Taxonomy and morphology of special groups of plants. Students interested in aquatic botany should register for this course. Prerequisite: Bot. 53. (BAKER)

**\*209 Plant Geography (106)** 3 credits Second semester

Advanced study of environmental factors of distribution and dispersal; the distribution of associations and particular taxa on a world-wide basis; and the mechanics of distribution with special emphasis on discontinuity patterns. Three lectures a week. Prerequisite: Bot. 105 or permission of the instructor. (O'CONNELL)

**†212 Advanced Mycology** 4 credits Second semester

An intensive study of selected fungal groups with emphasis on taxonomy, morphology, and genetics. Two lectures and two three-hour laboratory periods a week. Prerequisite: Botany 111 or consent of instructor. (TYLUTKI)

**\*214 Physiology of the Fungi** 3 credits Second semester

A study of growth, nutrition, metabolism and chemical syntheses of the fungi. One lecture and two three-hour laboratory periods a week. Prerequisites: Botany 111 and Chem. 72 or equivalent. (TYLUTKI)

**221-222 Botanical Seminar** 1 credit

Review of current literature; presentation of original work. (STAFF)

† Offered in alternate years; given in 1960-61.

\* Offered in alternate years; given in 1959-60.

**227 Mineral Nutrition (204) 3 credits First semester**

The physiology of mineral elements in higher plants including essentiality, metabolic function, deficiency symptoms and theories of ion uptake and translocation. Two lectures and one two-hour discussion period a week. Prerequisites: Bot. 101 or 102 and Chem. 71-72 or Ag. Chem. 80. (ROBERTS)

**228 Plant Growth Substances (204) 3 credits Second semester**

The physiology of various auxin-regulated growth phenomena including current theories of auxin action in higher plants. Two lectures and one two-hour discussion period a week. Prerequisites: Bot. 101 or 102 and Chem. 71-72 or Ag. Chem. 80. (ROBERTS)

**231-232 Research and Thesis Credits to be arranged Each semester**

Students with sufficient preparation may be assigned to research problems in physiology, ecology, morphology, mycology, or taxonomy. (STAFF)

**233-234 Independent Study 1 to 3 credits**

- |                  |                    |
|------------------|--------------------|
| (a) Anatomy      | (g) Mycology       |
| (b) Cytology     | (h) Paleobotany    |
| (c) Cytotaxonomy | (i) Physiology     |
| (d) Ecology      | (j) Phytogeography |
| (e) Genetics     | (k) Taxonomy       |
| (f) Morphology   |                    |

Advanced work is individually assigned and will require reading and/or research. The student may register for only one of the above sections per semester. Not over 6 credits may be earned. Prerequisites: the appropriate basic course in the chosen field, a minimum grade point average of 3.0 in the undergraduate major, and permission of the instructor. (STAFF)

**†241 Advanced Plant Morphology 3 credits Second semester**

Form and development of plants are surveyed with emphasis on the cryptogams. Functional implications of form are included. Laboratory work on all plant groups. Two lectures and one three-hour laboratory period a week. (McILVAINE)

**\*253 Plant Structure 3 credits Second semester**

A study of the internal structure of all plants emphasizing the tissue organization of vascular plants with interpretations of modifications for special function. Two lectures and one three-hour laboratory period a week. (McILVAINE)

**†276 Biosystematics of Flowering Plants 2 credits Second semester**

The application of standard procedures with the addition of genetic and ecologic data in the systematic treatment of selected families. (O'CONNELL)

† Offered in alternate years; given in 1960-61.

\* Offered in alternate years; given in 1959-60.

## Business Administration

Dean KENDRICK; Professors CHRYSLER, FARMER, GRAUE and WILDE;  
Associate Professors FLETCHER and KESSEL;  
Assistant Professors GROKE, HICKMAN, POSTWEILER, SEELYE  
and WAGNER;  
Instructors CLARK and McMINN;  
Professor DICK and Professor DOBLER

*For Advanced Undergraduates and Graduates*

- 1 Business Lectures**      1 credit      First semester  
Introduction to study of business administration and economics. Required of all freshmen and transfer students entering with fewer than 26 credits. (KENDRICK)
- 31-32 Principles of Accounting**      3 credits      Each semester  
Introduction to accounting for individual proprietorships, partnerships and corporations. Two lectures and one two-hour laboratory period per week. Prerequisite to all other accounting courses. (CLARK, McMINN)
- 83 Statistics**      3 credits      Each semester  
Elementary principles of statistics as applied in the scientific study and interpretation of economic phenomena. (POSTWEILER)
- 91-92 Intermediate Accounting**      3 credits      Each semester  
Principles underlying content and construction of financial statements; corporation accounting; interpretation of financial statements using comparative, analytical and other techniques, including funds statements. Prerequisite: Bus. 32. (CLARK, McMINN)

*For Advanced Undergraduates and Graduates*

- 107 Transportation**      3 credits      Second semester  
A study of the business and the economics of inland transportation; includes history and development of means of transportation, operating problems, rates and valuation, legislation, and current problems of American transportation systems. Prerequisite: Econ. 52 or 56. Offered in alternate years. (GROKE)
- 119 Real Estate**      3 credits      First semester  
Essentials of real estate practice; listing, selling, leasing, financing, and brokerage; fundamentals of valuation and of property management. (GROKE)
- X120 Real Estate Fundamentals**      0 credits      Extension only  
A practical basic study of the entire broad area of real estate activity, including the legal, social, economic, and financial operational phases of real estate in Idaho.
- X121 Real Estate Law**      0 credit  
A practical applied study of Idaho real estate law, which will help avoid legal difficulties arising from real estate transactions.
- 124 Business Finance**      3 credits      Either semester  
The structures and financial problems of business enterprises. The methods and instruments available for promoting, financing, recapitalizing, and reorganizing business enterprises. Prerequisite: Bus. 32 and Econ. 52 or 56.

- 126 Analysis of Financial Statements** 2 credits Second semester  
Balance sheet and income statement comparisons and ratio analysis for management purposes. Not open to accounting majors. (WAGNER)
- 129-130 Retail Merchandising** 3 credits  
Types of retail stores, store organization, policies and systems. Problems in layout; buying, selling, stock control, store services; personnel, operation and management. Field trip normally will be taken during the second semester. Prerequisite: Bus. 169. (CHRYSLER)
- 132 Sales Management** 3 credits Second semester  
Sales organization, including selection, training, compensation, and management of sales personnel. Sales planning, promotion, channels of distribution, and pricing. Prerequisite: Bus. 169. (CHRYSLER)
- 134 Industrial Management** 3 credits Second semester  
The individual business and its conditioning factors of location, buildings and equipment, organization, layout, materials, production control, cost control, and personnel policies. One one-day field trip. (FLETCHER)
- 136 Investments** 3 credits Second semester  
The general problem of investments and the merits of the various types of securities. One one-day field trip. Prerequisite: Bus. 124. (HICKMAN)
- 138 Personal Finance** 3 credits Second semester  
Study of the field of personal financial problems. Income analysis, personal credit, social security, tax relationships, trusts and personal estates. Offered in alternate years. (GROKE)
- 151 Personnel Management** 3 credits First semester  
Study of the organization, policies, and procedures of managing men. Consideration of the relations of the individual employee to the firm with respect to recruitment, selection, hiring, induction, training, transfer, and promotion. Prerequisites: Econ. 51 or 56. (SEELYE)
- 152 Industrial Relations** 3 credits Second semester  
Development, practices, and techniques of collective bargaining with respect to the relationship of the individual worker to his union, of the union to the employer, and of the union and the general public. Prerequisites: Econ. 51 or 56. (SEELYE)
- 162 Office Management** 2 credits Second semester  
This course covers the operations of the modern office, from the point of view of the office manager. It includes organization and scheduling of the duties of the various types of workers, problems of selection, training and promotion, and their classifications and rates of compensation. Special emphasis will be given to coordination of office with other departments, work simplification procedures and shortcut techniques. Other topics to be studied include stenographic function, filing methods, types of equipment and budgetary control. (KESSEL)
- 165-166 Business Law** 3 credits  
Legal aspects of common business transactions: the first semester will cover contracts, agency, trade regulations; the second semester will cover negotiable instruments, sales, bailments, chattel mortgages, conditional sales, suretyship and insurance. (DOBLER)
- 167 Business Law** 2 credits Second semester  
Legal aspects of common business transactions: partnerships, corporations and real property. Prerequisite: Bus. 165 or 166. (DOBLER)

- 168 Government Regulation of Business** 3 credits Second semester  
 Institutional development of the economic relations between government and business. Economic analysis of the various types of governmental control employed. Prerequisite: Econ. 52 or 56. (SEELYE)
- 169 Marketing** 3 credits Each semester  
 A description and analysis of the marketing processes, with an evaluation of marketing institutions and middlemen according to the functions they perform. Prerequisite: Econ. 51-52. (CHRYSLER, GROKE)
- 170 Marketing Problems** 3 credits Second semester  
 The development of the capacity of management through the analysis of marketing problems where the significant facts are presented in a business setting. The selection of channels of distribution, distribution policies, sales promotion, price determination, and price policies. Prerequisite: Bus. 169 (GROKE)
- 171 Marketing Research and Analysis** 3 credits First semester  
 Purposes, methods, and techniques of market research and analysis, both quantitative and qualitative, including analysis of potential markets, product analysis, and adaptation. Prerequisites: Bus. 83 and Bus. 169.
- 172 International Commercial Policy** 3 credits Second semester  
 Principles of international trade; tariff, foreign exchange market development, dumping, foreign policies, trade agreements, merchandising. Prerequisite: Econ. 51 or 56. (POSTWEILER)
- 175 Principles of Advertising** 3 credits First semester  
 The function of advertising, its social and economic aspects. Principles of effective sales motivation, layout, copy, type, and media. Elementary study of the mechanical processes of printing and photo-engraving. Prerequisite; junior standing. (CHRYSLER)
- 176 Retail Advertising** 2 credits Second semester  
 Advertising for the retail store. Special problems of planning, budgeting, copy layout, media. Publicity, sales promotion and display as related to advertising in the retail store. Prerequisite: Bus. 175. (CHRYSLER)
- 177 Insurance** 3 credits First semester  
 Survey of major branches of insurance, principles and practices. (HICKMAN)
- 178 Life Insurance** 3 credits Second semester  
 Types of life insurance companies; types of contracts; personal and business uses of life insurance; fundamentals of premium computation; economic aspects of life insurance. Prerequisite: Business 177. Offered in 1958-59 and alternate years. (HICKMAN)
- 180 Property and Casualty Insurance** 3 credits Second semester  
 Types of companies; reinsurance; fire insurance, marine insurance, liability insurance; government regulation of the insurance industry. Prerequisite: Business 177. Offered in 1959-60 and alternate years. (HICKMAN)
- 183 Federal Tax Accounting** 3 credits First semester  
 A study of the federal income tax laws as they apply to the individual, partnership, fiduciary and corporation. Also includes the Idaho Property Relief Act. (WILDE)
- 184 Federal Tax Accounting** 3 credits Second semester  
 A study of federal internal revenue laws and regulations including ex-

cess profits tax, excise taxes, gift and inheritance taxes, and social security taxes. (WILDE)

- 185 Managerial Cost-Analysis** 3 credits First semester  
Introduction to cost accounting; managerial applications including budgets, cost control, and differential cost analysis. Prerequisite: Bus. 32. (WAGNER)
- 186 Cost Accounting** 3 credits Second semester  
Theory and techniques of cost accounting including specific order process, and standard costs. Prerequisite: Bus. 185 (WAGNER)
- 187 Advanced Accounting** 3 credits First semester  
A study of partnership accounting (organization, operation and dissolution), special sales accounting (installments, consignments, agency and branch accounts), fiduciary accounting, (statement of affairs and deficiency account, receivership accounts and statements), accounting for trusts and insurance. (WILDE)
- 188 Advanced Accounting** 2 credits Second semester  
Consolidation, mergers and holding company accounting. Accounting for estates; actuarial principles for use in accounting. (WILDE)
- 190 CPA Problems** 3 credits Second semester  
A survey of the public accounting field, arranged and conducted primarily to prepare students for the CPA examinations. Questions and problems of recent CPA examinations are used as a basis for study. Students who do not wish to become public accountants are not encouraged to enroll. Prerequisites: Bus. 187 and consent of instructor. (WAGNER)
- 191 Auditing** 3 credits First semester  
The mechanics of auditing, reports, and auditor qualifications. Prerequisite: Bus. 91-92. (WAGNER)
- 192 Governmental and Institutional Accounting** 2 credits First semester  
A study of municipal and institutional accounting, budgeting, and "fund" accounting and government contracts. Special lectures by practicing accountants. (DICK)
- 193-194 Business Conditions** 3 credits  
A study of prices, price movements and tendencies; current theories of business cycles; guidance of economic activity. (GRAUE)
- 196 Managerial Accounting Controls** 3 credits Second semester  
A study of the special functions, responsibilities and areas of operation of internal auditors, and the application of management controls through budgets and other accounting procedures. Prerequisite: Bus. 187 or consent of instructor. (DICK)
- 198 Advanced Statistics** 3 credits Second semester  
A study of correlation analysis; time correlation and business forecasting, analysis of variance, and statistical analysis of business cycles. Prerequisite: Bus. 83. Offered in 1958-59 and alternate years. (POSTWEILER)

*Primarily for Graduates*

- 205 Seminar in Accounting** 2-4 credits First semester  
Deals with individual assignments of examination of the American Institute of Accounting.

- 206 Seminar in Accounting Theory** 2-4 credits Second semester  
This course pursues major areas of controversy in accounting; alternative solutions; diverse areas of theory; and development of concepts.
- 211 (b-k) Seminar** 2-3 credits Each semester
- |  |   |
|--|---|
| (b) Investments                            | (g) Industrial Management                               |
| (c) Insurance                              | (h) Industrial Relations                                |
| (d) Government Regulation<br>of Business   | (i) Real Estate   |
| * (f) Business Finance (2 credits<br>only) | (j) Public Utilities, Transportation,<br>Communications |
|  | (k) Marketing   |
- Course consists of lectures, supervised readings, and periodic conferences. None of the sub-headings may be repeated for credit. Topics marked (\*) may be taken for two credits only. (STAFF)
- 213-214 Research and Thesis** Credits to be arranged Each semester  
(STAFF)

## Business Education

(Business education is one of the subject matter fields within the College of Education.)

(See also Secretarial Administration)

Assistant Professor KESSEL, Head, Department of Secretarial Studies  
and Business Education

*Primarily for Undergraduates*

- 191 Methods in Business Education (I)** 3 credits First semester  
Current methods and materials for teaching secretarial and clerical subjects. Prerequisites: S.S. 3, S.S. 16 or equivalent. (KESSEL)
- 192 Methods in Business Education (II)** 3 credits Second semester  
Current methods and materials for teaching bookkeeping and basic business subjects. Prerequisites: Bus. 31-32, Econ. 51-52. (KESSEL)
- 193 Methods in Distributive Education** 3 credits Summer school  
The nature, scope and objectives of the distributive education program. Practical techniques for teaching and administering of distributive education programs. (KESSEL)
- 195 Briefhand Workshop** No credits 1959 Summer School  
An intensive one-week course in the newly developed abbreviated alphabetic note-taking system, Briefhand. The course will cover principles of writing Briefhand, plus methods and materials of instruction. Designed primarily for high school and college teachers interested in becoming acquainted with this new note-taking system. (SALSER)

*Primarily for Graduates*

- 207 Workshop in Business Education** 1 credit Summer school  
(A one-week course)
- 211-212 Seminar** 2-4 credits Each semester  
A study of topics from recent research, and group discussion on selected research problems. (KESSEL)



- 213-214 Research and Thesis** Credit arranged Each semester  
 Research in preparation for graduate thesis. (KESSEL)
- 215-216 Professional Problems** 1-3 credits Each semester  
 This course is for students wishing to study independently in areas not normally covered by formal course work. The student arranges the course with the instructor, and the course must be approved by the instructor prior to registration. A maximum of 6 credits may be taken in this course. (KESSEL)
- 220 Improvement of Instruction in Secretarial Subjects** 3 credits Either semester  
 Problems in the development of occupational competency in the secretarial subjects; methods and materials for instruction; standards of achievement; a critical review of literature and research. Prerequisites: graduate standing or consent of instructor. (KESSEL)
- 221 Improvement of Instruction in Bookkeeping and Basic Business** 3 credits Either semester  
 An analysis of teaching procedures and materials for instruction; techniques for measuring and evaluating achievement; a critical review of literature and research. Prerequisites: graduate standing or consent of instructor. (KESSEL)
- 222 Current Issues in Business Education** 3 credits Either semester  
 An analysis of philosophies, objectives, trends, and organization patterns of business education in the secondary schools. A critical review of literature and research. Prerequisites: graduate standing or consent of instructor. (KESSEL)
- 223 Administration and Supervision of Adult Distributive Education** 3 credits Either semester  
 Procedures and techniques for the establishment and development of adult programs in distributive education. Prerequisites: graduate standing or consent of instructor. (KESSEL)

## Chemical Engineering

Professor JACKSON (Head); Associate Professors HOFFMAN and JOBE;  
 Assistant Professor MARTIN; Instructor NEAL

*Primarily for Undergraduates*

- 21 Introduction to Chemical Engineering** 1 credit First semester  
 A study of the chemical engineering method and the field of chemical engineering. A one day field trip to visit some of the process industries in the region normally will be required. One class period per week. Prerequisite: sophomore standing. (JACKSON, STAFF)
- 22 Properties of Engineering Materials** 2 credits Second semester  
 The fundamental physical and chemical properties of materials employed in engineering design; included are considerations of the solid state and the deterioration of materials. Two class periods per week. Prerequisite: Chem. 2, Physics 51, Physics 52 or with Physics 52. (JACKSON, HOFFMAN)

*For Advanced Undergraduates and Graduates*

- 109 Chemical Engineering Laboratory I**    1 credit    Each semester  
 Industrial methods of analysis, including Orsat and fuel gas analyses, water analysis, chromatographic analyses, flame, spectrophotometric and other instrumental methods of analysis that may be used in endpoint control of chemical processes. One three-hour laboratory period per week. Prerequisite: junior standing. (JOBE)
- 110 Pro-Seminar**    1 or 2 credits    Either semester  
 A study of the professional aspects of the field; student papers on recent developments and topics of interest are prepared, read and discussed. Prerequisite: senior standing. (JACKSON)
- 124 Chemical Process Principles**    3 credits    Second semester  
 A study of material and energy balances, equilibria and chemical conversion. Three class periods per week. Prerequisite: E.S. 120 (chemistry majors by permission of the instructor). (MARTIN HOFFMAN)
- 130 Unit Operations**    3 credits    Second semester  
 A study of the unit operations including solids handling, sedimentation, filtration, fluidization, convective heat transfer and evaporation. A field trip to inspect some of these operations will normally be required. Three class periods per week. Prerequisites: E.S. 102, E.S. 120, Ch.E. 124 or with Ch.E. 124. (JOBE, JACKSON)
- 131 Mass Transfer I (Equilibrium)**    2 credits    First semester  
 A study of the operations of distillation, absorption, solvent extraction, and ion exchange using the equilibrium stage concept. Two class periods per week. Prerequisite: Ch.E. 124. (MARTIN STAFF)
- 132 Mass Transfer II (Rate)**    2 credits    Second semester  
 A study of mass transfer rate processes as applied to unit operations and chemical reactor design. Two class periods per week. Prerequisite: Ch.E. 124. (HOFFMAN, MARTIN)
- 134 Chemical Process Industries**    3 credits    First semester  
 A study of the application of chemical engineering principles to the chemical process industries with special emphasis on organic processes. Three recitations per week. Prerequisite: senior standing. (HOFFMAN)
- 136 Chemical Plant Design**    4 credits    Second semester  
 Consideration of the planning of plants and design of equipment to give technical and economical efficiency of operation. Three recitations and one laboratory period per week. Prerequisites: Ch.E. 130, Ch.E. 131, Ch.E. 132 or with Ch.E. 132, Ch.E. 134. (HOFFMAN, JACKSON)
- 137-138 Conferences and Field Trips**  
 Conferences, supervised inspections of chemical process industries, (one major trip 3 to 6 days in length and normally two minor one-day trips), and group study of special professional subjects including safety, fire prevention, and professional recognition. Approved written reports required. One credit given upon completion of both courses. Prerequisite: senior standing. (STAFF)
- 141 Chemical Engineering Laboratory II**    2 credits    First semester  
 Laboratory determination of chemical process equipment performance and control, and the design of equipment based on these data. Two laboratory periods per week. Prerequisites: Ch.E. 130, Ch.E. 131 or with Ch.E. 131. (MARTIN, STAFF)

- 142 Chemical Engineering Laboratory III** 2 credits Second semester  
Laboratory investigations emphasizing chemical process development and instrumentation for process control. Two three-hour laboratory periods per week. Prerequisites: Ch.E. 141, Ch.E. 132 or with Ch.E. 132. (JOBE, STAFF)
- 144 Automatic Process Control** 2 credits Second semester  
A study of the basic mathematical principles of automatic process control and the application of industrial instruments to complete processing systems. Two recitations per week. Prerequisite: senior standing. (JOBE)
- 151 Industrial Water Treatment** 2 or 3 credits Either semester  
The principles of water treating processes, including water chemistry, degasification, clarification, filtration, cold and hot processes of softening, zeolite softening, dealkalizing, demineralization, and treatment of industrial wastes. A study of the industrial applications of these processes and the equipment employed. Elective. Two recitations or two recitations and one laboratory period per week. Prerequisites: E.S. 102. (JOBE)
- 161 Introduction to Nuclear Engineering** 2 credits Each semester  
The application of science and engineering to processes involving use of nuclear energy. Emphasis is placed upon the application of basic principles to the design of atomic reactors, fuel preparation, heat removal, materials of construction, reactor and process control, separation of products, and health and safety precautions. Elective. Two recitations per week. Prerequisites: junior standing and consent of instructor. (STAFF)
- 171 Process Engineering** 2 or 3 credits Either semester  
Elective for non-chemical engineering majors. Application of chemical engineering principles to industrial processing. Emphasis on unit operations of interest to such industries as wood utilization, dairying, fermentation, etc. Two or three recitations per week. Prerequisite: junior standing. Chemical engineering majors may not take for credit. (STAFF)
- 176 Elements of Food Processing** 3 credits Either semester  
Engineering factors in food processing; materials handling; operations in the conversion of raw materials. Emphasis placed on industries of importance to Idaho. Three class periods per week. Prerequisites: junior standing and consent of instructor.. (JACKSON, HOFFMAN)
- 193-194 Chemical Engineering Projects** 1 to 3 credits Each semester  
Assigned problems of a research or exploratory nature. Open to advanced undergraduate students only with departmental approval. (STAFF)
- Primarily for Graduates*
- 205-206 Seminar** 1 credit Either semester  
Conferences and reports on research and current developments. Required of graduate students majoring in chemical engineering. (STAFF)
- 225 Advanced Heat Transmission** 2 or 3 credits Either semester  
Application of the fundamentals of heat conduction, radiation and convection; emphasis on the relationships to fluid dynamics and mass transfer; economics and design application. Two or three class periods per week. Prerequisite: consent of the instructor. (STAFF)
- 227 Chemical Engineering Thermodynamics** 3 credits First semester  
An advanced study of equilibrium in physical and chemical systems. Emphasis is placed on the theoretical and generalized prediction of thermodynamic properties of pure materials and solutions including deviations from ideality. Three class periods per week. Prerequisite: consent of the instructor. (HOFFMAN, JACKSON)

- 229 Chemical Engineering Kinetics**      3 credits      Second semester  
An analysis of problems involved in industrial chemical reactions; theories of reaction rates and catalysis; emphasis on catalytic reactor design. Three class periods per week. Prerequisite: consent of the instructor. (JACKSON, MARTIN)
- 234-235 Chemical Engineering Processes**      2 credits      Either semester  
An intensive study of selected processes such as industrial electrochemistry and high pressure technology, or selected industries as petroleum refinery engineering and pulp and paper technology. Two class periods per week. Prerequisite: consent of the instructor. (STAFF)
- 236 Plant Design**      2 or 3 credits      Either semester  
The design of processing plants for optimum cost and economic return; the scale-up of pilot plants. A comprehensive problem in chemical engineering design will usually be assigned. Two or three class periods per week. Prerequisite: consent of the instructor. (STAFF)
- 237 Advanced Fluid Mechanics**      2 or 3 credits      Either semester  
Analysis of fluid systems encountered in industry; non-Newtonian behavior of particle and plastic systems; two-phase situations including fluidization; film flow. Two or three class periods per week. Prerequisite: consent of the instructor. (STAFF)
- 241 Chemical Engineering Analysis**      3 credits      Either semester  
A mathematical analysis of chemical engineering operations and processes. Prerequisite: consent of the instructor. (HOFFMAN)
- 244 Advanced Process Control**      2 or 3 credits      Either semester  
An advanced study of the theory of process dynamics and process control system design, including materials handling, fluid, thermal, mass transfer, chemical and nuclear reactor systems. Two class periods, or two class periods and one laboratory period per week. Prerequisite: Ch.E. 144 or consent of the instructor. (JOBE)
- 245-246 Diffusional Operations I-II**      2 or 3 credits      Either semester  
An advanced treatment of diffusion and mass transfer in the operations of absorption, extraction, distillation, and drying including design calculations. Two or three class periods per week. Prerequisite: consent of the instructor. (STAFF)
- 261 Advanced Nuclear Engineering**      2 or 3 credits      Either semester  
An advanced study of engineering fundamentals in nuclear reactor systems. Included are considerations of fuel preparation and configuration, materials of construction, fluid flow, heat removal, product separation, reactor theory, control, waste treatment, safety and economics. Two class periods, or two class periods and one laboratory period per week. Prerequisite: consent of the instructor. (JOBE)
- 293-294 Research and Thesis**      credits to be arranged      Each semester  
The laboratory and instructional facilities of the department are placed at the disposal of properly qualified graduate students. (STAFF)

# Chemistry\*

(Chemistry is one of the subject matter fields within the Department of Physical Sciences.)

Professors CONE, JOLLEY, RENFREW, THIELKE;  
Associate Professors GRAHN, GUSTAFSON, RAUNIO;  
Assistant Professors COOLEY, GARRARD, GRIEB;  
Instructors BARRUS, COWIN; Acting Instructors HOLDER, KAWULA

*Primarily for Undergraduates*

†1 **General Chemistry** 4 credits Each semester

A systematic treatment of chemical principles and their application. High school chemistry is not required as a prerequisite for this course. Three lectures, one quiz, and two two-hour laboratory periods a week. (JOLLEY, GARRARD, GRAHN, GRIEB, RENFREW, BARRUS, COWIN, HOLDER, KAWULA)

†2 **General Chemistry** 4 credits Each semester

Continuation of Chem. 1. The laboratory work consists of an introduction to qualitative analysis, using semimicro methods as a means of studying the chemistry of cations. Prerequisite: Chem. 1 or 7. (JOLLEY, GARRARD, GRAHN, GRIEB, RENFREW, BARRUS, COWIN, HOLDER, KAWULA)

†7-8 **Elements of Chemistry** 4 credits

Designed for home economics students in general curriculum. A terminal course which includes the fundamentals of inorganic and an introduction to organic and biochemistry. Not a prerequisite to other chemistry courses. Credit not allowed for both Chem. 1 and 2 and Chem. 7 and 8. Three lectures, one quiz, and two two-hour laboratory periods a week. (GRAHN, CONE, COWIN)

†51 **Qualitative and Gravimetric Analysis** 3 or 4 credits First semester

Elementary theoretical chemistry and its application to analytical practice. The laboratory work consists of the qualitative separation of cations and anions by semimicro methods and the gravimetric determination of a number of cations and anions. Two lectures and two laboratory periods a week. Chemical Engineers, Mining Engineers, and Metallurgical Engineers take this course for 3 credits. Prerequisite: Chem. 2. (GUSTAFSON)

†52 **Quantitative Analysis (Volumetric)** 3 or 4 credits Second semester

Continuation of Chem. 51. The laboratory work consists of volumetric analysis, including calculations. Periods per week the same as for Chem. 51. Chemical Engineers, Mining Engineers, and Metallurgical Engineers take this course for 3 credits. Prerequisite: Chem. 51. (GUSTAFSON, GARRARD)

†56 **Elements of Analytical Chemistry (73)** 4 credits Second semester

A condensed course of lectures and quizzes covering the fundamentals of analytical chemistry. The laboratory work includes both gravimetric and volumetric analysis. Intended primarily for students in agriculture. Two lectures and two laboratory periods a week. Prerequisite: Chem. 2. (GARRARD)

\* For Chemical Engineering Curriculum, see the College of Engineering section of Part III. For courses in Agricultural Chemistry and Soil Chemistry, see Agricultural Chemistry. Chemistry courses are designated Chem.

† Students may not take both Chemistry 1 and 7 or Chemistry 2 and 8, for credit.

‡ Not more than 8 credits may be earned in Chemistry 51 52 and 56.

**§71-72 Elementary Organic Chemistry 3 credits**

Two lectures a week on the fundamental principles of organic chemistry. One laboratory period each week illustrates the techniques and typical methods for the preparation and study of simple organic compounds. Prerequisite: Chem. 2. (RAUNIO, COOLEY)

**§75 Carbon Compounds 3 credits Each semester**

An introduction to organic chemistry, designed for students in Agriculture, Bacteriology (Medical Technology Option), Home Economics, and Forestry. Prerequisite: Chem. 2. (COOLEY)

**105-106 Physical Chemistry 3 or 4 credits**

An introduction to physical chemistry from the standpoint of kinetic theory, thermodynamics, and the constitution of matter. Three recitations and one laboratory period a week. Prerequisites: Chem. 52; first-year college physics; and Math. 52. (CONE, GRIEB)

**109 Pro-Seminar 1 credit First semester**

A study of current publications in the fields of chemistry and chemical engineering with reports on typical scientific papers. Prerequisites: Chem. 172 and senior standing. (CONE)

**154 Instrumental Analysis 3 credits Second semester**

For students in chemistry and allied fields. The work includes techniques in operating new and specialized instruments for qualitative and quantitative analysis and analytical methods of an advanced nature. One class and two laboratory periods each week. Prerequisite: Chem. 52. (GUSTAFSON)

**161-162 Inorganic Chemistry 3 or 4 credits**

The principles of inorganic chemistry. A study of atomic nuclei and atomic structures and their relation to the properties of elements and compounds, periodic relationships, types of bonding, coordination compounds, non-aqueous solvents, chemistry of the familiar elements. Three lectures and one laboratory period a week. Prerequisite: Chem. 52. (GRAHN)

**†171 Organic Chemistry 4 credits First semester**

Three lectures a week on the general principles and theories of organic chemistry. One laboratory period a week devoted to the discussion of the fundamental operations employed in organic laboratory practice, the preparation of from five to six types of organic compounds, and written quizzes. Prerequisite: Chem. 51. (THIELKE, COOLEY)

**†172 Organic Chemistry 3 or 4 credits Second semester**

Continuation of Chem. 171. Two lectures a week, with two periods of laboratory work including the preparation of 10 to 12 aliphatic and aromatic compounds. Prerequisite: Chem. 52 and 171. (THIELKE, COOLEY)

**175 Qualitative Organic Analysis 3 credits First semester**

A study of homologous reactions and the separation and identification of various types of organic compounds. One class and two laboratory periods a week. Prerequisites: Chem. 52 and 172. (THIELKE)

**180 Physiological Chemistry 4 credits First semester**

The chemistry and metabolism of foods, and the physiological role of enzymes, vitamins, and hormones. Designed for students majoring in nutrition and in allied fields. Three lectures and one laboratory period a week. Prerequisite: Chem. 72. (RAUNIO)

§ Not more than 6 credits may be earned in any combination of Chemistry 71-72 and 75.

† Not more than 8 credits may be earned in any combination of Chemistry 71, 72, 75, 171 and 172.

**181 Biochemistry** 3 or 4 credits First semester

The chemistry and metabolism of carbohydrates, lipids, and proteins, together with a consideration of enzymes, vitamins, hormones, and other biocatalysts. Intended for chemists, bacteriologists, pre-medics, and agricultural chemists. Three lectures and one laboratory period a week. Prerequisites: Chem. 52 and 172. (RAUNIO)

**182 Biochemistry** 3 or 4 credits Second semester

The chemistry and physiology of living tissues, blood, and urine. The laboratory work offers optional experiments in plant biochemistry. Three lectures and one laboratory period a week. Prerequisite: Chem. 181. (RAUNIO)

**191-192 Thesis** 1 to 3 credits

Prerequisite: Chem. 172. (STAFF)

*Primarily for Graduates***205-206 Seminar** 1 credit

Required of graduate students majoring in chemistry. Prerequisites: Course approved by the department. (COOLEY)

**207 Topics in Physical Chemistry** 2 credits Either semester

Lectures on subjects such as colloidal chemistry, molecular spectra and polarography which are not covered extensively in regularly scheduled courses in Physical Chemistry. A total of no more than six credits may be earned in this course. Prerequisite: Chem. 106. (STAFF)

**211-212 Chemical Thermodynamics** 3 credits

The laws of thermodynamics and calculations of thermodynamic quantities applied to ideal gas systems, introduction to statistical mechanics, non-ideal systems, solutions. Prerequisite: Chem. 106. (GRIEB)

**213 Radiochemistry** 2 credits Either semester

An introduction to the study of artificial and natural radio-activity, tracer methods and techniques, and atomic energy. Prerequisite: Chem. 106 or Physics 181. (CONE)

**214 Electrochemistry** 3 credits Either semester

Conductance of electrolytic solutions, voltaic cells, polarization and over-voltage, electrodeposition, corrosion, preparative electrochemistry. Prerequisite: Chem. 106. (CONE)

**215 Chemical Kinetics** 3 credits Either semester

Reaction velocity and mechanism of reactions in gases and in solution. Collision theory, absolute reaction rate theory, catalysis. Prerequisite: Chem 106. (GARRARD)

**217-218 Physical Chemistry of High Polymers** 2 credits

The relationship of structure and properties of polymeric materials, the application of thermodynamic principles to polymers and their solutions, and the kinetics of polymerization reactions. Prerequisite: Chem. 106. (RENFREW)

**241 Chemical Literature** 2 credits Either semester

A survey of the important chemical reference works and periodicals with experience in the use of these sources. Prerequisite: Chem. 106 and Chem. 172. (COOLEY)

**253 Modern Analytical Methods** 3 credits Either semester

Principles and applications of analytical methods based on electro-

- metric measurements, spectrometric measurements, distribution between phases, etc. Prerequisite: Chem. 106.
- 255 Advanced Analytical Chemistry** 3 credits Either semester  
Homogeneous and heterogeneous equilibria, complex ions, analytical separations, and related topics. Prerequisite: Chem. 106.
- 261-262 Advanced Inorganic Chemistry** 3 credits  
A study of the less familiar elements and their relationship to the periodic system. Prerequisite: Chem. 162. (GRAHN)
- 263 Advanced Inorganic Chemistry Laboratory** 2 credits Either semester  
Inorganic preparations involving the less familiar elements. A student may enroll twice for credit. Prerequisite: Chem. 261 (or concurrent enrollment in Chem. 261).
- 265 Topics in Inorganic Chemistry** 3 credits Either semester  
Lectures, reports, assigned readings in topics such as the chemistry of coordination compounds, unusual oxidation states, non-aqueous solvents, nitrogen chemistry, etc. A total of no more than six credits may be earned in this course. Prerequisites: Permission of instructor. Chem. 106. (STAFF)
- 271 Topics in Organic Chemistry** 3 credits Either semester  
Lectures on topics such as heterocyclic compounds, dyes and intermediates, industrial organic chemistry, and resins and plastics. The topics discussed will be given according to the needs of the students. A total of no more than six credits may be earned in this course. Prerequisite: Chem. 172. (STAFF)
- 273 Organic Type Reactions** 3 credits Either semester  
A thorough study of 30 to 40 type reactions with special emphasis on the use and value of each reaction, limitations, by-products obtained, yields, and reaction mechanism involved. Prerequisite: Chem. 172. (THIELKE)
- 274 Organic Preparations** 2 to 4 credits Either semester  
Discussion and laboratory work which illustrate the methods used in conducting laboratory research and illustrating laboratory research in organic chemistry. A variety of standard preparations and separations using advanced techniques will be carried out and the purity of products prepared will be established by physical means. Prerequisite: Chem. 172. (THIELKE)
- 275-276 Physical Organic Chemistry** 3 credits  
Lectures on valency and molecular structure, stereochemistry, acids and bases, nucleophilic substitutions, elimination reactions, addition reactions, rearrangements, electrophilic aromatic substitution, nucleophilic aromatic substitution and free radical reactions. Prerequisites: Chem. 106 and Chem. 172. (COOLEY, RENFREW)
- 281 Carbohydrate and Lipid Chemistry** 3 credits  
A study of the chemistry of the carbohydrates and lipids. Prerequisite: Chem. 182. (RAUNIO)
- 282 Amino Acid and Protein Chemistry** 3 credits  
A study of the chemistry of amino acids, proteins and nucleoproteins. Prerequisite: Chem. 182. (RAUNIO)
- 293-294 Research and Thesis** Credits to be arranged  
The laboratory and instructional facilities of the department are placed at the disposal of properly qualified graduate students. Prerequisites: Chem. 106 and Chem. 172. (STAFF)



## Civil Engineering

Professors MOORE (Head), WARNICK, JANSSEN; Associate Professors HALL, JUNK; Assistant Professors CONITZ, RUSSELL, SUN, TAYLOR; Instructors BLACKKETTER, FURGASON, HENDRICKS, MAXWELL, TUTTY

*Primarily for Undergraduates*

- 51 Engineering Measurements (Surveying)** 2 credits Second semester  
Precision of measurements; errors; horizontal, vertical, angular and indirect measurements; relation of angular and linear measurements; electronic distance measurements; optical tooling. One recitation and one three-hour laboratory per week. Prerequisites: Math 11 or Math 1 and Engr. 1 or Arch. 11. (CONITZ, STAFF)
- 53 Elementary Surveying** 3 credits Each semester  
Theory and manipulation of surveying instruments as applied to plane surveying, topographic surveying, mapping and public land surveys. Primarily for engineering, forestry and mining students who intend to take advanced surveying. One recitation and six hours of field and drafting room work per week. Prerequisites: Math. 11 or Math. 1 and Engr. 1 or Arch. 11. (CONITZ, STAFF)
- 54 Advanced Surveying** 3 or 4 credits Second semester  
Topographic surveying and mapping, photogrammetry, elementary geodesy, engineering astronomy, hydrographic surveying, and earthwork. Civil and agricultural engineering students are required to take the four-credit course, the extra credit to consist of route surveying. One or two recitations and six hours of field or drafting room work per week. Prerequisite: C.E. 53. (CONITZ, JUNK)
- S55 Field Practice in Surveying** 2 or 5 credits Summer camp  
Field practice in the use of surveying instruments and in field procedure planned to meet the needs of forestry students. Prerequisite: C.E. 53. (CONITZ)

*For Advanced Undergraduates and Graduates*

- 105 Advanced Mechanics of Materials** 2 credits Either semester  
Further application of fundamental concepts, stress analysis of special types of members, introduction to statically indeterminate stress analysis. Elective. Prerequisite: E.S. 103. (HALL)
- 108 Materials of Construction** 2 credits First semester  
Study of the physical and mechanical properties of various construction materials. Design of asphalt paving mixes and portland cement concrete mixes. One recitation and one three-hour laboratory per week. Prerequisite: E.S. 103 (TAYLOR)
- 110 Soil Mechanics** 3 credits Second semester  
A study of the physical and mechanical properties of soils and the principles which govern their behavior under load. The application of these principles to problems of foundations and of earthwork engineering. Two recitations and one three-hour laboratory per week. Prerequisite: E.S. 103. (TAYLOR)
- 111 Transportation Engineering** 3 credits Second semester  
A study of the problems of planning, administration, economics, operation, maintenance, and design, in the fields of transportation, including highways, airways, waterways, and pipelines. Three recitations per week. Prerequisite: C.E. 108. (RUSSELL)

- 112 Traffic Engineering** 2 or 3 credits Second semester  
 An introduction to the analysis and control of moving and stationary traffic and the design of structures and devices to facilitate traffic. Elective. Prerequisite: C.E. 111 or with C.E. 111. (RUSSELL)
- 113 Field Engineering** 2 credits First semester  
 Location and preliminary design of transportation, hydraulic, or municipal engineering project. Part of semester devoted to gathering of field data and remainder on design, drafting, and preparation of a preliminary engineering report. A one-day field trip normally will be required. Two three-hour laboratory periods of field or drafting room work per week. Elective. Prerequisite: C.E. 54. (JUNK)
- 118 Elementary Photogrammetry (Surveying)** 2 credits Either semester  
 Principles of photogrammetry and aerial photography, including stereoscopy; displacement in single photographs and photographic pairs; construction of maps from aerial photographs; photo interpretation. First semester primarily for forestry and non-engineering students, second semester for engineering students. One recitation and one three-hour laboratory period per week. Prerequisites: C.E. S55 or C.E. 54; Math. 12 or Math. 2. (CONITZ, STAFF)
- 120 Theory of Structures** 5 credits Second semester  
 The calculation of stresses in statically determinate frame structures by algebraic and graphic methods; the study of effects of moving loads. Introduction to statically indeterminate structures; slope and deflection of beams, trusses and rigid frames. Three recitations and two three-hour problem laboratories per week. Prerequisite: E.S. 103. (HALL)
- 121 Structural Design — Reinforced Concrete** 4 credits First semester  
 The theory of reinforced concrete and the design of buildings, bridges, retaining walls, and footings. Introduction to prestressed concrete and ultimate-strength design. Three recitations and one three-hour laboratory per week. Prerequisite: C.E. 120. (HALL)
- 122 Structural Design — Steel and Timber** 4 credits Second semester  
 The design of members and joints in steel structures; plate girder design. Design of members and joints in timber structures; roof truss design. Three recitations and one three-hour design laboratory per week. Prerequisite: C.E. 120. (HALL)
- 124 Structural Engineering** 8 credits max. Either semester
- Structural Analysis. Prerequisite: C.E. 120.
  - Theory and Design of Arches. Prerequisite: C.E. 121 or with C.E. 121.
  - Design of Concrete Structures. Prerequisite: C.E. 121.
  - Design of Steel and Timber Structures. Prerequisite: C.E. 122 or with C.E. 122.
- Advanced study may be pursued in four subdivisions at 2 credits for each. Only one of the four subdivisions will be offered in any one semester. Elective. (HALL)
- 129 Elements of Structural Design** 4 credits First semester  
 An abridged stress analysis and design course for non-civil engineering students including stress analysis of beams, trusses, and rigid frames; design of steel members and connections; design of timber members and connections; theory and design of reinforced concrete beams, slabs, columns, walls, and footings. Four recitation periods per week. Prerequisite: E.S. 103. (HALL)

- 131 Sanitary and Municipal Engineering** 3 credits First semester  
 Water supply and purification including laboratory analysis of water and the design, construction, and operational aspects of water works in general; municipal and rural sanitation; public health engineering. A one-day field trip normally will be required. Two recitations and one three-hour laboratory period per week. Prerequisites: senior standing. (Bact. 51 is also recommended.) (JUNK)
- 132 Sanitary and Municipal Engineering** 2 or 3 credits Second semester  
 Design, construction, operation and maintenance of sewer systems and sewage treatment processes. Two recitations or two recitations and one laboratory period per week. Prerequisite: C.E. 131. (Bact. 51 is also recommended.) (JUNK)
- 134 Sanitary and Municipal Engineering** 2 or 3 credits Second semester  
 Advanced undergraduate work in stream pollution, limnology, microscopy, or sanitary engineering design. Two recitations and one three-hour laboratory period per week. Elective. Prerequisite: C.E. 131. (JUNK)
- 140 Hydrology** 2 credits Second semester  
 Study of weather influence on the hydrologic cycle; precipitation, evaporation and transpiration, infiltration and runoff phenomena; runoff and flood relationships; theory of groundwater flow. Two recitations per week. Prerequisite: E.S. 102. (WARNICK, STAFF)
- 141 Hydraulic Engineering** 3 credits Second semester  
 Study of hydraulic measurements and hydraulic problems involved in dams, conveyance of water, hydraulic turbines and pumps. A one-day field trip to a nearby hydroelectric development may be required. Two recitations and one three-hour laboratory per week. Prerequisite: C.E. 140. (WARNICK, STAFF)
- 142 Hydraulic Engineering** 3 credits Either semester  
 Primarily a theory course for undergraduate students considering dimensional analysis, mechanics of fluid friction, flow nets, and open-channel flow. Dynamic machines. Three recitation periods per week. Elective. Prerequisite: E.S. 102. (WARNICK, HENDRICKS)
- 144 Hydraulic Engineering** 2 credits Either semester  
 A study of problems in planning and design of gravity flow systems and pressure systems used in engineering. One recitation and one three-hour problem laboratory per week. Elective. Prerequisites: C.E. 141 or C.E. 142. (WARNICK)
- 152 Pro-Seminar** 1 or 2 credits First semester  
 Preparation and presentation of professional papers. Techniques of research, parliamentary procedure, and conference leadership. Technical periodicals and professional relationships. Prerequisite: senior standing. (MOORE)
- 153 Engineering Economy** 2 credits First semester  
 The economic analysis and comparison of engineering alternatives. Annual cost, present worth, capitalized cost and prospective rate of return of engineering works. Prerequisite: senior standing. (MOORE, STAFF)
- 154 Contracts and Specifications** 2 credits Second semester  
 Brief consideration of law of contracts and emphasis on general and technical clauses in engineering specifications. Prerequisite: senior standing. (MOORE)

**157-158 Conferences and Field Trips**

Conferences, supervised inspection of engineering works (one major trip 3 to 6 days in length and normally two minor one-day trips), and group study of special professional subjects including safety, fire prevention and professional recognition. Approved written reports required. One credit given upon completion of both courses. Prerequisite: senior standing. (STAFF)

**160 Thesis** 2 or 3 credits Either semester  
A problem in design or investigation. Open only to senior students by permission. Elective. (STAFF)

**162 Engineering Administration** 2 credits Second semester  
Principles of engineering planning, organization, management, and administration; personnel relations. Elective. Prerequisite: senior standing. (MOORE)

**163 Construction Methods** 2 credits First semester  
A study of construction planning and methods and the relation thereto of such elements as time, equipment, cost, and organization. Elective. Prerequisite: senior standing. (MOORE)

*Primarily for Graduates*

**201-202 Mechanics of Materials** 2 or 3 credits Either semester  
Prerequisite: C.E. 104. (HALL)

**203-204 Soil Mechanics** 2 or 3 credits Either semester  
Prerequisite: C.E. 110 (JANSSEN)

**211-212 Transportation Engineering** 2 or 3 credits Either semester  
Prerequisite: C.E. 111. (MOORE)

**221-222 Structural Engineering** 2 or 3 credits Either semester  
Prerequisite: C.E. 122. (HALL)

**231-232 Sanitary and Municipal Engineering** 2 or 3 credits Either semester  
Prerequisite: C.E. 132. (JUNK)

**241-242 Hydraulic Engineering** 2 or 3 credits Either semester  
Prerequisite: C.E. 141. (WARNICK)

**251-252 Engineering Reports** 1 to 3 credits Either semester  
(STAFF)

**261-262 Research and Thesis** Credits to be arranged Either semester  
(STAFF)

## Communications

Professor SNYDER (Head)

The Department of Communications includes four subject matter fields: Communication, Journalism, Radio-Television, and Audio-Visual. Also the services of the Audio-Visual Center and of the Radio-Television Center are administered by this department. A student may major in Journalism or Radio-Television.

For course offerings, see under:

Communication (Below)

Journalism

Radio-Television

The Department of Communications also offers the following general course:

**199 Bases of Communication**      2 credits      Each semester

A study of the linguistic, psychological, and sociological factors in interpersonal communication, related to the mass media of radio, television, and journalism. (SNYDER)

## Dairy Science

Professors FOUNT (Head), ROSS and JOHNSON;

Associate Professor BARNHART;

Assistant Professor HIBBS;

Instructor WILLEMSSEN

These courses are so arranged that the student may enroll in General Agriculture, Agricultural Management, or Agricultural Science, with a major in either dairy production or dairy manufacturing.

### *Primarily for Undergraduates*

**1 Elements of Dairying**      3 credits      First semester

A general survey of the industry; dairy cattle breeding, feeding, management, milk secretion, composition of milk, its food value, the manufacture of various products of milk, and their importance to the industry. Judging dairy cattle and the study of the Babcock test. Two lectures and one two-hour laboratory period per week. (ROSS, BARNHART)

**59 Dairy Products Analysis**      3 credits      First semester

A study of the composition of milk and analyses common to the dairy industry. Required of majors in Dairy Science. One lecture and two two-hour laboratory periods per week. ((HIBBS)

**66 Judging Dairy Cattle (106)**      2 credits      Second semester

A study of types of the various breeds of dairy cattle, with comparative judging. Two two-hour laboratory periods per week. One six-day field trip to southwestern Idaho. (FOURT)

**63 Judging Dairy Products (110)**      2 credits      Second semester

A study of quality and market standards in dairy products including practice in scoring butter, cheese, ice cream, milk and cream. Two two-hour laboratory periods per week. (HIBBS)

### *For Advanced Undergraduates and Graduates*

**107 Advanced Judging Dairy Cattle**      1 credit      First semester

One six-day field trip to southwestern Idaho, and two one-day field trips. May be repeated for credit with approval of instructor. (JOHNSON)

- \*108 Dairy Cattle Breeds and Selection** 3 credits Second semester  
A study of the history and development of the major breeds of dairy cattle. Application of genetics to dairy cattle selection, including interpreting and evaluating pedigrees. Formulating breeding policies for a herd. Three lectures per week. (FOURT)
- 111 Advanced Judging Dairy Products** 1 credit First semester  
Continuation of D.S. 68. Two half-day field trips. May be repeated for credit with approval of instructor. (HIBBS)
- \*113 Food Plant Sanitation and Inspection** 3 credits First semester  
The principles and procedures of sanitation and inspection as applied to food handling and processing areas. Emphasis on dairy farm and dairy products plant inspection and scoring. Review of federal, state and city ordinances affecting milk, dairy products, frozen foods, etc. Two lectures and one two-hour laboratory period per week. Prerequisite: D.S. 59. (ROSS, BARNHART)
- †**114 The Market Milk Industry** 3 credits Second semester  
An analysis of the procedures and methods utilized in producing, transporting, processing and distributing milk to be consumed as fresh fluid milk. Two lectures and one two-hour laboratory period per week. One one-day field trip. Prerequisites: D.S. 59 or consent of instructor. (HIBBS)
- †**115 Dairy Plant Management** 2 credits Second semester  
A study of the organization, operation, and management of milk processing plants, including local, state, and federal regulations pertaining to the production and sale of dairy products. Two lectures per week. One one-day field trip. (BARNHART)
- †**120 Dairy Cattle Feeding** 2 credits Second semester  
The application of the principles of nutrition to dairy cattle feeding and formulating rations for various conditions. One lecture and one two-hour laboratory period per week. Prerequisite: A.H. 105 or consent of instructor. (ROSS)
- 122 Physiology of Reproduction of Farm Animals** 3 credits Second semester  
A study of the physiology of reproduction of farm animals including artificial insemination. Two lectures and one two-hour laboratory period per week. Two one-day field trips. Prerequisite: Zool. 1 or equivalent. (JOHNSON)
- †**123 Dairy Cattle Management** 2 credits First semester  
A study of the care and management of dairy cattle, the planning and arrangement of dairy buildings, management of purebred herds, sales and advertising, cattle photography. Required of majors in Dairy Science. One lecture and one two-hour laboratory period per week. Prerequisite: D.S. 1 or consent of instructor. (FOURT)
- 129-130 Pro-Seminar** 1 credit Each semester  
Study of dairy problems and review of literature. Required of majors in Dairy Science. (STAFF)
- 135-136 Special Problems** 1-2 credits Each semester  
(STAFF)

\* Offered in alternate years; given in 1959-60.

† Offered in alternate years; given in 1960-61.

**\*140 Dairy Products Processing I** 4 credits First semester  
 The theory and practice of receiving, and processing milk for milk beverages, cultured milk and cream, cottage cheese, ice cream mix and ice cream. Two lectures and one four-hour laboratory period per week. One one-day field trip. Prerequisite: D.S. 59 or consent of instructor. (BARNHART)

**\*141 Dairy Products Processing II** 4 credits Second semester  
 Theory and practice of processing dairy products such as butter, cheese, dried milk products, condensed milk and other milk products. Two lectures and one four-hour laboratory period per week. Prerequisite: D.S. 59 or consent of instructor. (HIBBS)

**\*176 Advanced Dairy Product Analysis** 1 credit Second semester  
 A study of advanced laboratory techniques used in the technical control of dairy products manufacturing and in research studies. One three-hour laboratory period per week. Prerequisite: D.S. 59 or consent of instructor. (HIBBS)

**Dairy Bacteriology** 3 credits First semester  
 See Bacteriology 106 page 188.

**Dairy Engineering** 3 credits First semester  
 See Agricultural Engineering 141 page 172.

*Primarily for Graduates in Dairy Manufacturing*

**201-202 Advanced Dairy Technology** 2 credits Each semester  
 Application of microbiological, physical and physio-chemical principles to the processing of dairy products. Designed to study problems of bacterial destruction and growth; viscosity, foam formation, freezing, crystallization, and protein and butterfat stability. Prerequisites: 15 hours Chemistry, 7 hours Bacteriology, and consent of instructor. (HIBBS)

**229-230 Seminar** 1 to 3 credits Each semester  
 (STAFF)

**231-232 Research and Thesis** Credits to be arranged Each semester  
 (STAFF)

*Primarily for Graduates in Dairy Production*

Graduate courses offered jointly by the Departments of Animal Husbandry, Dairy Science and Poultry Husbandry are listed under an Animal Science course section, see page ???

Graduate students receive the degree of Master of Science in Agriculture with a major in Dairy Science.

\* Offered in alternate years; given in 1959-60.

## Dramatics

(Dramatics is one of the subject matter fields within the Department of Humanities.)

Professor COLLETTE (Chairman); Assistant Professor CHAVEZ

*Primarily for Undergraduates*

**1 Introduction to the Theatre**      1 credit      Either semester

A condensed survey of all phases of the theatre—theatre history, production, and technical work. The course is designed to show the student what is involved in more concentrated work in dramatics and for those whose interest in theatre is cultural (STAFF)

**5-6 Interpretation**      2 credits

Analysis, reading, and presentation of poetry, prose, and drama. Emphasis on diction and platform presentation. Second semester stress is placed on the reading of advanced prose, poetry, and dramatic literature. Drama 5 offered each semester. Drama 6 offered second semester only. Drama 5 is prerequisite to Drama 6. (CHAVEZ)

**25 Summer Theatre I**      2-4 credits      Summer school

A lower-division course in theatre production, including public presentation of several plays. Consult with the Chairman of Dramatics before registering. Students who elect Drama 25 and expect to take Drama 125 in subsequent summers should note that a maximum of 10 credits is allowed in the two courses. (STAFF)

**63-64 Stagecraft**      3 credits

First semester includes a study of the technical elements of construction, production, and lighting. Second semester emphasizes methods and techniques of scene design. Students registered in this course must meet eligibility requirements to participate in extracurricular activities. (CHAVEZ)

**71-72 Play Production**      3 credits

An introduction to the nature and structure of drama, make-up, the stage, and dramatic production. Second semester emphasis is placed on the principles and techniques of acting. Students registered in this course must meet eligibility requirements to participate in extracurricular activities. (COLLETTE)

*For Advanced Undergraduates and Graduates*

**105-106 Advanced Interpretation**      2 credits

First semester stresses individual interpretation of classic and modern characters in drama, with emphasis on analysis, style, diction, and dialect. Second semester stresses analysis and acting of dramatic scenes. Prerequisite: Drama 5-6 or permission of the instructor. With the recommendation of the instructor, Drama 105-106 may be repeated for a total of eight credits. Students registered in this course must meet eligibility requirements to participate in extracurricular activities. (COLLETTE)

**125 Summer Theatre II**      2-8 credits      Summer school

A comprehensive course in theatre production, including public presentation of several plays. For upper-division students, and others by permission. Consult with the Chairman of Dramatics before registering. Stu-



dents who have taken Drama 25 are reminded that a maximum of 10 credits is allowed in the two courses, Drama 25 and 125. (STAFF)

**126 Workshop in High School Directing (three weeks)**

1-3 credits

Summer school

Members of this workshop will receive instruction in organizing and directing plays by observing rehearsals and technical work in connection with the Summer Theatre program. (STAFF)

**167-168 The Theatre 3 credits**

A survey of European and American theatres, dramatic periods, dramatists, and actors. (COLLETTE)

**171-172 Advanced Play Production 3 credits**

A continuation of the staging and acting of plays, with special emphasis on directing techniques. Open to properly qualified students from Drama 71-72 or by permission of the instructor. Drama 172, without prerequisites, is open to English majors who are applying for the teacher's certificate. With the permission of the instructor, Drama 171-172 may be repeated for a total of twelve credits. Students registered in this course must meet eligibility requirements to participate in extracurricular activities. (COLLETTE)

## Economics

Dean KENDRICK; Professors FARMER and GRAUE;  
Associate Professor FLETCHER; Assistant Professors GROCKE, HICKMAN, MABRY,  
POSTWEILER and SEELYE

*Primarily for Undergraduates*

**\*51-52 Principles of Economics 3 credits** Each semester

A study of contemporary economic institutions—their foundations, organization, and principles of working order as displayed by scientific inquiry. Econ. 51 prerequisite to Econ. 52. Two lectures, one discussion section per week. (STAFF)

**\*56 Basic Economics 3 credits** Each semester

A brief course in the principles of economics for students unable to take Econ. 51-52. Two lectures, one discussion section per week. (STAFF)

*For Advanced Undergraduates and Graduates*

**103 Money and Banking 3 credits** Each semester

The theory of money and banking with some emphasis on banking practices. Prerequisite: Econ. 52 or 56. (FARMER)

**104 Money and Credit 3 credits** Second semester

An analytical study of the domestic and international aspects of monetary and banking policies. Prerequisite: Econ. 103. (FARMER)

**109 Public Finance 3 credits** First semester

Public expenditures and revenues. Federal, state, and local financial problems. Prerequisite: Econ. 52 or 56. (FARMER)

\* Students will not receive credit for Econ. 51 or 52 after completing Econ. 56.

- 141 Labor Economics** 3 credits First semester  
An analytical survey of unemployment, wage theories, trade unionism and various types of labor legislation. Prerequisite: Econ. 52 or 56. (SEELYE)
- 152 Intermediate Economic Theory** 3 credits Each semester  
A study of the analysis of economic organization by Alfred Marshall. Prerequisite: senior standing in Business Administration or Economics. (GRAUE)
- 153 Income and Employment** 3 credits Each semester  
The analysis of contemporary economic thought with special emphasis on income determination and employment theories. An overall study of the economy and national income statistics as a basic tool of analysis. Prerequisites: Econ. 52 or 56. (FLETCHER)
- 174 International Economics** 3 credits First semester  
History and theory of international trade and finance, commercial policies of nations, and an analysis of current world economic problems. Prerequisite: Econ. 51 or 56. (POSTWEILER)

*Primarily for Graduates*

- 201 Advanced Economic Theory** 3 credits First semester  
Theories of economic development, monopolistic competition, and profit. (GRAUE)
- 202 History of Economic Thought** 3 credits Second semester  
A historical analytical survey of economic doctrines with special emphasis upon value and distribution and 19th century dissenters. (GRAUE)
- 205 Advanced Monetary Theory** 3 credits First semester  
An intensive study of monetary theory, with special emphasis on the value of money. (FARMER)
- 213 (a-o) Seminar** 2-3 credits Each semester
- |                                     |                                    |
|-------------------------------------|------------------------------------|
| * (a) Price Theory                  | * (h) Monetary Theory and Policy   |
| (b) Income and Employment Theory    | (i) Welfare Economics              |
| (c) Public Finance                  | (j) Contemporary Economic Problems |
| (d) Labor Economics                 | (k) Comparative Economic Systems   |
| (e) International Trade and Policy  | (l) Business Cycles                |
| (f) Economics of Consumption        | (m) Extractive Industries          |
| (g) Economic Growth and Development | * (n) Statistics                   |
|                                     | (o) Distribution Theory            |

Course consists of lectures, supervised readings, and periodic conferences. None of the sub-headings may be repeated for credit. \*If the student has taken Economics 201, Economics 205, or Business 198, he must have the instructor's approval to take topics (a), (h), and (n) respectively. (STAFF)

- 217-218 Research and Thesis** Credits to be arranged

## Education

Professors BERRY (Head), L. GREEN, LOCKE, H. SNIDER, J. SNIDER, WELTZIN;  
Associate Professors MAIB, FARLEY;  
Assistant Professors J. GREEN, KIRKLAND, SCHWARTZ, WESTERLUND, BETTS;  
Instructors KAUS, WEISKOPF; Visiting Lecturer MALIK

*Primarily for Undergraduates\**

- 1 Education Lectures** 1 credit Each semester  
A survey and orientation in the field of educational service. (KAUS)
- 51 General Elementary Methods** 3 credits Each semester  
A general elementary methods course provided for those students who expect to qualify for the Provisional Elementary Certificate. In addition to the hours shown in the time schedule, the student will be expected to arrange for regular observation periods in the public elementary schools. (J. SNIDER)
- 71 Music Methods for Elementary Teachers** 2 credits Each semester  
The teaching of music in the self-centered classroom with emphasis on materials and methods in teaching the listening, singing, creative, rhythmic and instrumental experiences. Idaho State Music Study Guide used as a basic syllabus. Prerequisite: Consent of instructor. (SCHWARTZ)
- 75 Methods in Elementary School Art** 2 credits Each semester  
A course designed to prepare elementary school teachers to meet art requirements in the self-contained elementary classroom. Study of materials and techniques. Correlation of the teaching of art with the other elementary school subjects and activities. Class limited to twenty-five students. (WESTERLUND)
- 85-86 Foundation of Education** 3 credits Each semester  
An introduction to the history of education, the place of the school in the social milieu, the basic principles under which our schools are operated, and a consideration of contemporary educational philosophy. (J. GREEN and MALIK)
- C102 The Child and Society** 3 credits Correspondence only  
A study of the child in the social milieu, including the family, the social group, the community and the school. Attention is given, especially to the effects of social pressures and conditioning upon the child and upon the educative process.
- C107 History of Education** 3 credits Correspondence only  
A survey of the development of educational ideals and practices from the age of primitive man to the present. The purpose is to consider what has been thought and tried in the past and use the information thus gained in evaluating the theories and practices of today.
- C108 Educational Sociology** 3 credits Correspondence only  
A study of relation of education to society. Consideration is given to the effect of social impact upon the individual and reciprocal influences of education and other social institutions. Attention is directed to the coordination of school and community, and responsibilities of school with respect to the daily life and work of people.

\* Many undergraduate courses are offered by both Correspondence and Extension. Consult the catalogue of Non-Residence Instruction courses. Courses marked "C" are offered only by Correspondence and courses marked "X" only by Extension.

- C111 The Junior High School** 3 credits Correspondence only  
 A study of the fundamental principles of present day reorganization of high school education, with special emphasis upon junior high school organization, administration, and methods of instruction.
- C112 Principles of Elementary Education** 3 credits Correspondence only  
 A study of elementary school education from three points of view: (a) the elementary school pupil and his characteristics, (b) the elementary school as an institution and its relation to society and to other educational institutions and (c) the elementary school course of study especially as to its aims and values. Two field trips to visit elementary schools in this region. Prerequisite: 6 credits in education and Educational Psychology or Human Growth and Development.
- C113 Principles of Secondary Education** 3 credits Correspondence only  
 A study of high school education from three points of view: (a) the high school pupil and his characteristics; (b) the high school as an institution and its relation to society and to other educational institutions; and (c) the high school course of study, especially as regards the aims and values of the different subjects.
- 114 High School Methods** 2 or 4 credits Each semester  
 One part of this course is devoted to a consideration of problems and methods of teaching common to all subjects at the secondary school level; the other part to the special problems, methods and materials pertinent to each of the major fields. Prerequisite: 6 credits in Education. (BERRY, J.GREEN)
- 120 Primary Language Arts Methods** 3 credits First semester  
 Especial attention to reading readiness, methods of introducing the child to reading, extension of reading skills, and the relatedness of the following areas of Language Arts; including spelling, handwriting, oral and written communication. Credit will not be given for both Ed. 120 and 122. Prerequisites: 6 credits of Education or consent of instructor. (MAIB)
- 121 Methods and Materials in Science and Social Studies** 3 credits Each semester  
 A study of the methods of teaching the social studies and sciences in the elementary school with emphasis upon these curricula, and the availability and use of instructional materials and devices. Prerequisites: 6 credits of Education or consent of instructor. (MAIB)
- 122 Intermediate Language Arts Methods** 3 credits Second semester  
 A brief review of primary Language Arts, a study of reading skills required in the intermediate grades, vocabulary development and refinement of study habits. Emphasis is given to the relatedness of the following areas: including spelling, handwriting, oral and written communication. Credit will not be given for both Ed. 120 and Ed. 122. Prerequisites: 6 credits of Education or consent of instructor. (MAIB)
- 123 Methods and Materials in Health Education** 3 credits First semester  
 A study of the special methods and materials appropriate to health education; the criteria for the selection of content for such courses at the the elementary, junior high school and senior high school level. (STAFF)
- X124 Music Methods Workshop** 3 credits Extension only  
 A course organized to suggest to classroom teachers materials and methods in teaching general classroom music. Activities will include demonstrations, examination and use of materials available to teachers, and workshop and seminar discussion.

- 125 Art Methods Workshop** 3 credits Summer school  
A course designed to give teachers opportunity to work out problems of teaching art through different media and techniques. Development of school art program, including problems in selecting, organizing, teaching, guiding, evaluating individual and group art activities. Creative art problems and procedures of art teaching. Either elementary or secondary level. (WESTERLUND)
- 126 Methods and Materials in Mathematics** 3 credits Each semester  
A study of the methods of teaching arithmetic in the elementary school with emphasis upon the arithmetic curriculum, and the availability and use of instructional materials and devices. Prerequisites: 6 credits of Education or consent of instructor. (J. SNIDER)
- 127 Methods and Materials in Physical Education (Women)** 2 credits First semester  
A study of the methods of teaching health and physical education in secondary schools with emphasis being placed on functional health problems and physical education program planning. (LOCKE)
- 128 Audio-Visual Aids in Education** 3 credits First semester  
A study of principles and methods of audio-visual education, including projected still and motion pictures, and other sensory materials. The uses and limitations of various types of aid, their evaluation, operation, and care, the administration of the audio-visual program in school. Registration limited to twenty-five students. Prerequisite: 8 credits in Education (KAUS)
- 129 The Elementary School Curriculum** 3 credits First semester  
An overview of the curriculum considering the goals of education, types of curricula and the techniques of their development, the place of skills and abilities, the content areas, appreciative and creative programs in the elementary schools. Prerequisites: 6 credits of Education or consent of instructor. (J. SNIDER)
- 130 Student Teaching in Elementary Schools** 3-9 credits Each semester  
Directed student teaching conducted under supervision in elementary schools. Students must confer with the Director of Student Teaching in advance of registration and submit an application for admission to student teaching on form provided. Prerequisite: A grade average of at least 2.00 and a minimum of 10 hours of acceptable work in the field of Education and Psychology, including Psych. 55 or 56, Ed. 85 and 86, or their equivalent, Ed. 120 or Ed. 122, and Ed. 126. (Note: Normally student teaching will be scheduled on a full time basis for one-half semester for 9 credits. Registration for less time or credit must be arranged in advance with the Director of Student Teaching.) (H. SNIDER and J. SNIDER)
- 131 Student Teaching in Secondary Schools** 3-9 credits Each semester  
Directed student teaching conducted under supervision in high school. Students must confer with the Director of Student Teaching in advance of registration and submit an application for admission to student teaching on form provided. Prerequisite: A grade average of at least 2.00 and at least 10 credits of acceptable work in the field of Psychology and Education, including Psych. 56 or 151, and Ed. 85 and 86, and Ed. 114 or their equivalents. (Note: Normally student teaching will be scheduled on a full time basis for one-half semester for 9 credits. Registration for less time or credit must be arranged in advance with the Director of Student Teaching.) (H. SNIDER)

- 133 Methods and Materials in Physical Education (Men)** 2 credits First semester  
 A study of the methods of teaching health and physical education in secondary schools with emphasis being placed on functional health problems and physical education program planning. (KIRKLAND)
- 134 Children's Literature and Storytelling** 3 credits Each semester  
 Children's stories for each grade level of the elementary school, story plays, dramatizations, effective reading and telling of children's stories and their place in the educational pattern of the school. (MAIB)
- 135 Testing in the Elementary School** 3 credits Either semester  
 A study of achievement, classification, readiness, mental maturity, and other tests pertinent to measurement and evaluation in the elementary school—their classification, use and interpretation. Prerequisite: 6 semester credits in elementary school methods. Two field trips required. (MAIB)
- 136 Elementary Reading Workshop** 3 to 6 credits Summer school  
 Problems of teaching reading at the primary and intermediate grade levels, examination and evaluation of available reading materials and the adaptation of those materials to the growth and developmental needs of children. Five lectures for 3 credits or five lectures and 10 laboratory hours per week for 6 credits. Enrollment limited to 25 students. Credit will not be given for both this course and Ed. X228.
- C137 Secondary Social Studies Methods** 3 credits Correspondence only  
 A study of the methods of teaching the social studies in the secondary schools with emphasis on the curricula of history, geography, American problems, sociology and economics, and the availability and use of instructional materials and devices.
- C138 and X138 Methods and Materials in Language Arts** 3 credits  
 Extension and Correspondence only  
 This course consists of the study of all areas of the Language Arts program including reading, spelling, communication, handwriting and the inter-relatedness of these areas. Consideration is given to such reading problems as readiness, retardation, enrichment and selection of instructional materials. Credit will not be given if the student has taken either Ed. 120 or Ed. 122.
- 139 Comparative Education** 3 credits Either semester  
 A comparative analysis of educational systems in relationship to the cultural backgrounds which gave rise to them. (MALIK)
- 140 Driver Education** 2 credits Second semester  
 Designed to aid teachers in the instruction of beginning drivers, and the use of dual controlled automobiles. Includes functioning of the vehicle, its proper operation, traffic control and safety. Presented in cooperation with the American Automobile Association and successful completion of the A.A.A. requirements is required for credit in the course. Class limited to 20 students. Prerequisite: The possession of a valid driver's license.
- C155 Idaho School Problems, Law and History** 2 credits Correspondence only  
 This course deals with Idaho school problems, school law and the history of Idaho.
- C165 Curriculum Construction** 3 credits Correspondence only  
 An introductory course in the basic principles of curriculum construction designed to serve the needs of the off-campus student. It em-

phasizes that a functional curriculum needs constant study and revision: the ways and methods by which the curriculum can and should be revised; the place of the teacher in such a program; and the practical ways of translating curriculum theory into practice.

- 167 Developing Reading Efficiency** 3 credits Summer school  
A class and clinical course designed to aid teachers in the detection and correction of factors which interfere with the development of efficient reading. Two lectures, one quiz and five one-hour clinical periods per week.

- 168 The Teacher and Educational Administration** 3 credits Each semester  
A survey of the organization, management and financing of American public education, and the teacher's relation to this system, especially with reference to employment, tenure, salaries, and welfare provision. The teacher's relation to the profession and the community. Restricted to College of Education seniors. (FARLEY)

- X172 Educational Tests and Measures** 3 credits Extension only  
The selection, administration, scoring and interpretation of the tests and measuring devices used in the elementary and secondary schools. Prerequisites: General and/or Educational Psychology.

- 177 Teaching the Retarded Child** 3 credits Summer school  
A class and clinical course designed to aid teachers in working with retarded and mentally handicapped children. Two lectures, one quiz, and five one-hour laboratory periods per week.

- 184 Elementary School Principals Conference** 2 credits Summer school  
A registration for credit for participation in the five-state conference of elementary school principals.

- 187 Methods of Speech Correction** 3 credits Summer school  
An examination and analysis of functional and organic speech disorders in school children. Emphasis on the functions and activities of classroom teachers in aiding children with speech handicaps.

- X188 Speech Correction Clinic** 3 credits Extension only  
Case studies of children with selected speech difficulties. Classification and identification of speech needs, application of therapeutic technique in treatment of speech handicaps. Credit will not be given for both this course and Ed. 224b.

- 190 Directed Study** 1-3 credits Either semester
- |  |                         |
|--|-------------------------|
| a. Principles of curriculum construction | g. Business education   |
| b. Curriculum construction               | h. Music education      |
| c. School administration                 | i. Physical education   |
| d. School finance                        | j. Elementary education |
| e. State curriculum project              | k. Secondary education  |
| f. Supervision                           | l. Guidance             |
|  | m. Special education    |

A general registration designed to afford qualified students with an opportunity to study independently under the direction of a staff member. The student arranges for the work with, and must have the approval of the instructor who is to direct the study. If the study is done in extension the registration must employ the number Ed. X190. None of the above sub-divisions may be repeated for credit. A maximum of 6 credits is allowed in the course. (STAFF)

*Primarily for Graduates*

- 204 School Administration (180)** 3 credits First semester  
A presentation of the fundamental principles and problems of organization and administration of city, county, and state school systems. Two field trips to inspect new school buildings. (BERRY)
- 205 School Finance** 3 credits Second semester  
This course deals with major problems of financing schools at the present time. Applications are made to the problems of Idaho. Prerequisite: Ed. 204. (BERRY)
- 206 The Organization and Administration of Elementary Schools**  
3 credits Either school  
An intensive study of the elementary school program on a graduate level for teachers, principals, supervisors, superintendents or specialists in elementary education. Course covers history of origins, objectives, curriculum, general method and recent developments in primary and elementary schools. (J. SNIDER)
- 207 Supervision of Instruction** 3 credits Second semester  
In small cities a large and important part of the superintendent's work consists of the supervision of instruction. This course is intended to help those preparing for superintendencies to be able to improve their teachers while in service. (J. GREEN)
- 208 Secondary School Administration** 3 credits Summer school  
This course is designed primarily for secondary school principals and superintendents. It will deal with the major problems of organization, administration, and supervision of the secondary school. Special attention will be given to the problems of small high schools.
- 210 Philosophy of Education** 3 credits First semester  
The aim of this course is to bring together and unify the facts and principles elaborated in various fields of education, to think beyond the technique of school practices, to define some educational objectives, and to discover the meaning and place of education in the social structure of which we are a part. (MALIK)
- 211 Principles of Curriculum Construction** 3 credits First semester  
A study of basic principles underlying curriculum construction in the elementary and secondary schools. Major emphasis is upon the selection, organization and sequential arrangement of materials to meet the needs of children and youth. Students will be expected to be familiar with recent developments in the fields of educational psychology and philosophy. (FARLEY)
- 212 Curriculum Construction** 3 credits Second semester  
This course is designed to give mature students an opportunity to organize curriculum materials into teachable form and to prepare course of study outlines in the major subject matter areas. Open only upon consultation with the instructor, to those students who have had Ed. 211 or Ed. 283 or their equivalent. (FARLEY)
- 221 Survey of Elementary Education Methods** 3 credits Either semester  
A critical analysis of the methods and techniques used in the modern elementary classroom, together with a review of pertinent research studies in this area. (J. SNIDER)



- 222 Diagnostic and Remedial Instruction (166)**      3 credits      Second semester  
 Methods and materials for diagnosing difficulties in learning together with a study of remedial and other measures designed to promote maximal child growth and development. Consideration will be given to problems of acceleration as well as retardation. Prerequisite: Education 130 or teaching experience.
- 224 Child Guidance Clinic**      3 credits      Summer school  
 Analysis and case history of the individual child; diagnosis of his adjustment difficulties; therapeutic techniques for use by parent and teacher.
- a. Remedial reading                      3 credits  
     b. \*Remedial speech                    3 credits  
     c. Mentally retarded                  3 credits  
     d. The Gifted Child                    3 credits
- 226 Organization and Administration of Guidance Services**      3 credits      Summer school  
 A study of the administration and organization of guidance services at local, state and federal levels. This course is designed for those who will be responsible for the guidance services in public school systems. (GILES)
- X228 Reading Instruction and Improvement**      3 credits      Extension only  
 The techniques of teaching reading in the lower and intermediate grades and the problems of remedial reading through the twelfth grade. Analysis of text materials, procedures, testing and curriculum. Credit will not be given for both this course and Ed. 136.
- 230 Educational Law**      3 credits      Second semester  
 A general course in educational law employing statutory and case materials, and based on principles applicable in all states. (WELTZIN)
- 260 Research and Writing in Education**      3 credits      First semester  
 A study of the techniques of research in the field of education including the assembly and analysis of data, and the presentation of the results of educational research in written form. (H. SNIDER)
- 261-262 Research and Thesis**      Credits to be arranged      Each semester  
 This is for students working for the master's degree. It is done under the direction of the professor in whose subject the greater part of the work is offered.
- 265 Seminar in School Administration**      3 credits      Either semester  
 A study of the problems of organizing, administering, financing, housing, equipping and staffing public educational systems. Prerequisites: Ed. 204, or equivalent.
- a. School Administration                      e. Personnel  
     b. School Finance                            f. Public Relations  
     c. School Supervision                      g. School Buildings  
     d. School Law                                h. School Surveys
- Not to exceed three credits may be counted toward a Master's degree and not to exceed nine credits may be included in a doctoral program. (BERRY)

\* Credit will not be given for both this course and Ed. X188.

- 266 Seminar in Secondary Education** 3 credits Either semester  
A problems course dealing with the organization, administration, supervision, curriculum, activity program, and student and staff personnel matters relating to secondary schools. Prerequisites: Ten hours of undergraduate work in the field of secondary education. (H. SNIDER)
- 267 Seminar in Elementary Education** 3 credits Either semester  
The purpose of the course is to cover the field of elementary education on a graduate level. The field, function, curriculum and organization of the elementary school will be considered. Each student will be expected to present to and defend before the class a problem of his choice, together with the proposed solution of the same. Prerequisite: 10 credits of undergraduate work in Elementary Education. (J. SNIDER)
- 272 Educational Measurement and Evaluation** 3 credits Second semester  
The improvement of testing, examination and evaluation in schools; practice in making, giving, scoring, and interpreting educational tests; uses of test results in education counseling. Prerequisite: Psych. 115. (J. GREEN)
- 281-282 Professional Problems** Credits to be arranged Each semester  
This is for students working for the master's degree. It is done under the direction of the professor in whose subject the greater part of the work is offered. (STAFF)
- 283 Curriculum Workshop** 3 to 4 credits Summer school  
An informal program of work for teachers and school administrators consisting of lectures and study of the principles of curriculum development; and cooperative and individual activity in the writing of state-wide courses of study, local school-system curricular programs, and individual course materials.
- 284 Education Workshop in Idaho Resources** 8 credits Summer school  
A special course conducted in cooperation with Idaho State Department of Education to develop units of work in conservation of natural resources, air-age education, and atomic energy education for state curriculum guides. One-week field trip is integral part of course. Registration limited.
- 291 Administration of Personnel** 3 credits Either semester  
Problems of selection, placement and evaluation of teachers; salaries and salary schedules; tenure; leaves of absence; teacher organizations; and related matters.
- 292 Administration of Public Relations** 3 credits Either semester  
Interpreting the schools to the public with emphasis upon the two-way flow of ideas between the school and the community.
- 293 School Building Planning and Maintenance** 3 credits Either semester  
Problems involved in planning new school buildings and in maintaining them afterwards. Included are legal provisions involving financing, preliminary surveys of need, relationships with architects, contractors, etc.

## Electrical Engineering

Professor HATTRUP (Head); Associate Professors BEATTIE, BOWMAN, MANN, PARRISH; Assistant Professor HESPELT; Instructor MCKEAN

### *Primarily for Undergraduates*

- 19 Elements of Radio I**    2 credits    Either semester  
 An elementary course dealing with the fundamentals of direct and alternating current as applied to radio and T.V. broadcasting. For non-engineering students interested in radio and television broadcasting. Elective. (STAFF)
- 20 Elements of Radio II**    2 credits    Second semester  
 A continuation of E.E. 19 dealing with the technical problems of a broadcasting station. Elective. Prerequisite: E.E. 19. (STAFF)
- 22 Electric and Magnetic Circuits**    3 credits    Each semester  
 An introductory study of the fundamental properties of electric, dielectric, and magnetic circuits together with a study of materials for electrical construction. Three recitations per week. Prerequisite: with Math. 51. (MAXWELL, STAFF)
- 23-24 Electrical Engineering Projects**    1 or 2 credits    Either semester  
 Construction of simple electrical projects such as motors, generators, transformers, and radios. Prerequisite: sophomore standing in electrical engineering. Elective. (STAFF)
- 32 Direct Current Machinery**    3 credits    Each semester  
 A course applying the fundamental principles of electric and magnetic circuits to the study of standard and special types of d-c machinery. Graphical methods are used to determine characteristic curves of machine performance. Prerequisite: E.E. 22 or permission of instructor. (BOWMAN, STAFF)

### *For Advanced Undergraduates and Graduates*

- 101 Electrical Machinery I**    3 credits    First semester  
 A basic course in electrical engineering dealing with d-c circuits and machinery. For non-electrical engineers. Three recitations per week. Prerequisite: Phys. 52 and Math. 51. (STAFF)
- 102 Electrical Machinery II**    3 credits    Second semester  
 A continuation of E.E. 101 dealing with A.C. circuits and machinery. For non-electrical engineers. Three recitations per week. Prerequisite: E.E. 101. (STAFF)
- 103 Computers and Computational Methods**    2 credits    Either semester  
 An introductory course which includes analog computer operation and techniques. Elective. One lecture and one three-hour laboratory per week. Prerequisites: E.E. 102 or E.E. 132 or E.E. 134 and with Math. 101, or by consent of the instructor. (MAXWELL, STAFF)
- 106 Electrical Transients**    3 credits    Each semester  
 A thorough study of the Laplace transform, its properties, and its application to the solution of linear differential equations. Particular emphasis is placed on the solution of transients problems peculiar to elec-

trical engineering. Three recitations per week. Prerequisites: E.E. 122 or with E.E. 122. (BEATTIE, STAFF)

**122 Electronics** 3 credits

Each semester

A fundamental course dealing with electron ballistics, vacuum and gaseous tubes, amplifiers and oscillators. A field trip to inspect commercial installations will normally be required. Three recitations or two recitations and one three-hour laboratory per week. Prerequisite: E.E. 134 or with E.E. 134. Non-electricals by permission of the instructor. (PARISH)

**C130 D.C. and A.C. Machinery-Theory** 4 credits

Offered by Correspondence only

A study of theory, construction, and operation of direct and alternating current circuits and machinery. A general introductory course for civil, chemical, and mining engineering students. Prerequisite: Phys. 51-52.

**131 Direct Current Machinery and Distribution** 2 credits First semester

A study of theory, construction, and operation of direct current generators and motors, and the calculation of distribution systems for light and power. A general introductory course for non-electrical engineering students. Prerequisite: Phys. 51-52. (STAFF)

**132 Alternating Current Machinery and Laboratory**

2 or 3 credits

Second semester

A general course in continuation of E.E. 131, treating of alternating current machinery and circuits. Two recitations or two recitations and one three-hour laboratory period per week. Prerequisite: E.E. 131. (STAFF)

**134 Alternating Current Circuits** 3 credits

Each semester

A course involving vector algebra, non-sinusoidal waves, harmonic analysis, coupled circuits, polyphase circuits and symmetrical components. Three recitations per week. Prerequisites: E.E. 22 and with Math. 52. (HATTRUP, MANN)

**135 Electrical Engineering Laboratory** 2 credits

Each semester

The use of instruments, the testing and operation of direct current machinery and apparatus. Prerequisite: E.E. 32. (STAFF)

**137 Electrical Engineering Laboratory** 1 credit

First semester

Experiments designed to teach the proper use and care of common electrical instruments and to demonstrate the operating characteristics of direct current generators, motors and their control equipment. Designed for non-electrical engineers. One three-hour laboratory per week. Prerequisites: With E.E. 101. (STAFF)

**138 Electrical Engineering Laboratory** 1 credit

Second semester

Experiments to demonstrate the characteristics of alternating current apparatus such as motors, alternators and transformers. Designed for non-electrical engineers. One three-hour laboratory per week. Prerequisite: with E.E. 102. (STAFF)

**140 Electrical Instrumentation** 3 credits

Second semester

Theoretical and laboratory study of measurement circuits and device and a statistical study of the importance and effect of errors in instrumentation systems. Two recitations and one three-hour laboratory per week. Prerequisites: E.E. 22 or with E.E. 22. (BEATTIE, MAXWELL)

- 141 Alternating Current Machinery I** 3 credits First semester  
A course covering the construction, theory, and operation of the usual types of alternating current machinery. Unusual conditions such as unbalanced loads, transients, and harmonics are considered. Five recitations per week. For seniors in electrical engineering. Prerequisite: E.E. 134 and E.E. 135. (HATTRUP, MANN)
- 142 Alternating Current Machinery II** 2 credits Second semester  
A continuation of E.E. 141. Prerequisite E.E. 141. (MANN, HATTRUP)
- 143 Electrical Engineering Laboratory** 2 credits Each semester  
Work in the laboratory on alternators, synchronous and induction motors, transformers, meters, and polyphase systems. Prerequisite: E.E. 141. (MANN, STAFF)
- 144 Electrical Engineering Laboratory** 1 credit Second semester  
Intensive tests upon the equipment studied in E.E. 141 and 142. (STAFF)
- 145-146 Pro-Seminar** 1 or 2 credits  
Discussion of typical power and industrial applications with problems and reviews of current articles in the technical press. The preparation and presentation of papers on assigned subjects. Required of seniors in electrical engineering. (HATTRUP)
- 148 Electrical Design Problems** 3 credits Second semester  
The syntheses of electrical machines through the application of fundamental principles. Three recitations per week. Prerequisite: E.E. 141. (BOWMAN, MANN)
- 149 Electric and Magnetic Fields** 3 credits First semester  
A basic study including methods of mapping fields and the use of LaPlace and Poisson equations. The effect of iron, interaction between fields, wave propagation and radiation are also considered. Three recitations per week. Prerequisites: E.E. 134 and Math. 101. (BEATTIE)
- 150 Electrical Circuits** 3 credits Either semester  
A study of transient and steady state conditions in various electrical circuits. Elective. Prerequisite: senior standing in engineering. (MANN)
- 151 Illumination** 3 credits Either semester  
A general course treating of the principles of illumination and photometry; the comparison of illuminants; a study of the proper lighting of homes, public buildings and factories. Elective. Prerequisite: junior standing. (HATTRUP)
- 153 Electric Power Systems I** 2 credits First semester  
Electric utility organizations and their functions; technical bases of rate schedules; general features of hydro and thermal power plants; coordination of components in distribution systems and determination of optimum sizes. Elective. Prerequisites: Econ 56 and E.E. 134. (MANN)
- 154 Electric Power Systems II** 2 credits Second semester  
The fundamentals of power system stability; power systems fault calculation and control; and the application of probability to the planning of system units and circuits. Elective. Prerequisite: E.E. 141. (MANN)
- 158 Transmission Lines and Networks** 3 credits Second semester  
A study of the electrical properties of transmission lines, networks, constant k- and m-derived filters. Prerequisite: E.E. 134. (BEATTIE, STAFF)

- 160 Industrial Electronics** 2 credits First semester  
Theory and practice of electronic tubes, and allied equipment as applied to industrial processes. Prerequisite: E.E. 122 and E.E. 134. (HESPELT)
- 162 Industrial Electronics Laboratory** 1 credit First semester  
Testing of industrial circuits covering various applications of electronics. To accompany E.E. 160. (HESPELT)
- 163-164 Conferences and Field Trips**  
Conferences, supervised inspection of engineering works (one major trip 3 to 6 days in length and normally two minor one-day trips), and group study of special professional subjects including safety, fire prevention and professional recognition. Approved written reports required. One credit given upon completion of both courses. Prerequisite: senior standing. (STAFF)
- 165 Radio Engineering** 3 credits First semester  
A theoretical course involving the study of vacuum tube circuits, transistor circuits, and basic elements of receivers and transmitters. Treated from a mathematical viewpoint. Prerequisite: E.E. 122. (PARISH)
- 166 Radio Engineering** 2 credits Second semester  
Continuing E.E. 165 and including the study of sound equipment, frequency modulation, television, radar, and sonar. Prerequisite: E.E. 165. (PARISH)
- 167 Radio Engineering Laboratory** 2 credits First semester  
Study and testing of vacuum tube characteristics and circuits. To accompany E.E. 165. (PARISH)
- 168 Radio Engineering Laboratory** 1 credit Second semester  
Advanced radio laboratory experiments to accompany E.E. 166. Prerequisite: E.E. 167. (PARISH)
- 169 Automatic Control Theory I** 2 credits Each semester  
Analysis of dynamic control systems involving steady-state and transient performance of electro-mechanical systems. Two recitations per week. Prerequisites: E.E. 32, E.E. 122, Math. 101, E.E. 106 or with E.E. 106 (HESPELT)
- 170 Automatic Control Theory II** 3 credits Second semester  
A continuation of E.E. 169. Two recitations and one three-hour laboratory per week. Prerequisite: E.E. 169. (HESPELT)
- 171-172 Thesis** 2 or 3 credits Either semester  
An original investigation or dissertation upon some subject in electrical engineering. Open only to senior students. (STAFF)

*Primarily for Graduates*

- 201 Advanced Electrical Engineering** 2 or 3 credits Either semester  
Problems in transient, high-frequency, and high-voltage phenomena. (STAFF)
- 202 Direct Current Fields** 2 or 3 credits Either semester  
A review of Maxwell's equations and selected d-c field topics. Prerequisite: Math. 101. (BEATTIE, STAFF)

- 203 Alternating Current Fields** 2 or 3 credits Either semester  
Selected topics involving a-c fields. Propagation, reflection, refraction, relativity and quantum mechanics are discussed. Prerequisite: E.E. 149 or E.E. 202. (BEATTIE, STAFF)
- 204 Theory of Electrical Machinery** 2 or 3 credits Either semester  
Advanced investigation into theory underlying design and operation of electrical machinery. (MANN, STAFF)
- 205 Power Plant Design** 2 or 3 credits Either semester  
Study of the engineering and economic factors controlling the design and operation of electric utility systems. (MANN, STAFF)
- 207 Advanced Illuminating Engineering** 1 to 3 credits Either semester  
Study of advanced theory and current practice in illuminating engineering. (STAFF)
- 209 Network Synthesis I** 3 credits Either semester  
Synthesis of two terminal networks. Prerequisite: Math. 221. (BEATTIE, STAFF)
- 210 Network Synthesis II** 2 or 3 credits Either semester  
Synthesis of two-terminal pair networks. Prerequisite: E.E. 209. (BEATTIE, STAFF)
- 211-212 Seminar** 1 or 2 credits Either semester  
Topics for investigation and discussion selected from the field of interest. (STAFF)
- 213 Microwave Tubes** 2 or 3 credits Either semester  
The theory of operation of such devices as klystrons, magnetrons, and traveling wave tubes is developed. (BEATTIE, STAFF)
- 214 Microwave Circuits** 2 or 3 credits Either semester  
A study of the propagation of fields in microwave structures such as waveguides and resonant cavities. Prerequisites: E.E. 149 or E.E. 203. (BEATTIE, STAFF)
- 217 Transmission Systems I** 2 or 3 credits Either semester  
The study of transmission systems at power frequencies. Principally the application of symmetrical components to unbalanced system conditions. (MANN, STAFF)
- 218 Transmission Systems II** 2 or 3 credits Either semester  
The study of transmission systems at power frequencies. Principally considerations of system stability problems, high voltage insulation, and lightning phenomena. (MANN, STAFF)
- 225 Analysis of Non-Linear Systems** 2 or 3 credits First semester  
Analysis of non-linear systems; a study of methods allowing approximate solution of non-linear differential equations. Emphasis is on application to electrical problems such as non-linear oscillations. Prerequisite: Math. 101. (BEATTIE, STAFF)
- 226 Electrical Vibrating Systems** 1 to 3 credits Either semester  
Theory of sound transmission, production, control, reverberation, acoustic impedance. Study of electrical production of sound at sonic and supersonic frequencies. (STAFF)
- 227 Antenna Systems** 2 or 3 credits Either semester  
A study of the radiation properties of antennas and a study of the propagation of radio waves. (STAFF)

- \*231 Advanced Servomechanisms** 2 or 3 credits Either semester  
The dynamics of control systems as analyzed by the Laplace transform method; the sinusoidal response of closed-loop systems; applications of these methods to actual servomechanism systems. (STAFF)
- 241-242 Research and Thesis** Credits to be arranged Either semester  
(STAFF)
- \*271 Solid State Electrical Devices** 2 or 3 credits Either semester  
The solid state properties of semi-conductors, ferrites, and ferro-electrics are investigated. (STAFF)
- \*273 Advanced Electronic Circuits I** 2 or 3 credits Either semester  
Advanced study of industrial, communication and control circuits. (STAFF)
- \*274 Advanced Electronic Circuits II** 2 or 3 credits Either semester  
A continuation of E.E. 273. (STAFF)
- \*275 Pulse and Digital Circuits** 2 or 3 credits Either semester  
Analyses are made of the response of linear networks, both active and passive, to the type of waveforms commonly encountered in pulse circuits. Basic non-linearities of tubes and semiconductor devices are described and the effect of these non-linearities on waveform transmission are studied. Waveform generating circuits are analyzed and basic circuits are assembled into pulse and digital systems. (STAFF)

## Engineering (Freshman)

(Freshman Engineering is one of the subject-matter fields within the College of Engineering)

Associate Professor BYERS (Chairman); Professor JANSSEN

Instructors: ALDRICH, ANDERSON, HOLZ, TURNER

- 1 Engineering Graphics** 3 credits Each semester  
Freehand lettering; use of instruments; freehand sketching; geometric construction; orthographic projection; sectioning; dimensioning; pictorial representation; assembly and detail drawings of creative problems. Three two-hour combined laboratory and recitation periods. (HOLZ, ALDRICH, STAFF)
- 2 Engineering Graphics** 3 credits Each semester  
Descriptive geometry; the technique of solving problems involving points, lines, planes and surfaces in space. Application to graphical problems in engineering and other fields. Three one-hour recitation periods per week. Prerequisite: Engr. 1. (BYERS, STAFF)
- 5 Engineering Lectures** 1 credit First semester  
A survey and orientation course. (JANSSEN)
- 10 Engineering Problems** 1 credit Each semester  
A study and application of a problem solving technique to engineering problems. Principles and use of the slide rule. One recitation period per week. Prerequisite: Math 11 or with Math. 11. (TURNER, STAFF)

\* These courses are offered in the education program of the National Reactor Testing Station (N.R.T.S.) at Idaho Falls, Idaho.



- 114 Advanced Engineering Graphics** 2 credits Either semester  
Introduction to industrial drafting practices. Creative problems; free-hand sketching; production illustrations; graphical integration and differentiation. Two two-hour combined laboratory and recitation periods per week. Elective. Prerequisite: Engr. 2. (BYERS, ANDERSON)

## Engineering Sciences

(Engineering Sciences is one of the subject matter fields within the College of Engineering. It is supervised by a special committee appointed by the Dean consisting of one faculty member from each of the five degree-granting departments in the College. Instructors are supplied by these departments.)

### Supervisory Committee

Associate Professor HOFFMAN (Chairman); Professor WARNICK;  
Associate Professors BARNES, MANN;  
Assistant Professor DIXON

- 66 Mechanics (Statics)** 2 credits Each semester  
Composition and resolution of forces and laws of equilibrium by analytic and graphic methods with emphasis on free body diagrams; trusses and frames; friction; centroids; moments of inertia. Two class periods per week. Prerequisites: Math. 51, Phys. 51. (SUN, STAFF)
- 101 Mechanics (Dynamics)** 2 credits Each semester  
Principles of kinetics; acceleration analysis; systems of particles; work, energy, momentum, impulse, and power in systems with linear and angular motion. Two class periods per week. Prerequisites: E.S. 66, Math. 52 or with Math. 52. (SILHA, STAFF)
- 102 Fluid Mechanics** 2 credits Each semester  
Physical properties of fluids; fluid statics; fluid measurements; viscous and turbulent flow, momentum, lift, drag, and boundary layer effects; flow of fluids in pipes and open channels. Two class periods per week. Prerequisite: E.S. 66. (WARNICK, STAFF)
- 103 Mechanics of Materials** 4 credits Each semester  
The elasticity, strength, and modes of failure of engineering materials; theory of stresses and strains for ties, columns, beams, shafts, and riveted and welded connections. Four class periods per week including periodic laboratory verification of basic principles. Prerequisites: E.S. 66, Math. 52 or with Math. 52. (RUSSELL, STAFF)
- 120 Thermodynamics and Heat Transfer** 3 credits Each semester  
First and second laws of thermodynamics; thermodynamic processes; thermodynamic properties of fluids; flow processes; conversion of heat into work; refrigeration; conduction and radiation. Three class periods per week. Prerequisites: Phys. 52, Math. 52. (BARNES, STAFF)

## English

(English is one of the subject matter fields within the Department of Humanities.)

Professors BANKS, COE, CUSHMAN (Chairman), HOAG, SHERMAN;  
Associate Professors PACKENHAM, TENNEY; Assistant Professors FOY, LAUBER,  
TOLLESON; Instructors ALFORD, BOAS, BRIESMEISTER, EVANOFF, GLECKMAN,  
GUILLORY, KAKONIS, MCCARTHY, MCKIE, MALIK, STALLCUP;  
Acting Instructor ROTHBARD

*Primarily for Undergraduates*

Note:—Except in English 1-2, students may enroll for a second-semester course without having had the first-semester course.

- †1-2 **English Composition** 3 credits Each semester  
The basic skills in writing, reading, and speaking. Required of all first year students and for graduation from the University. Prerequisite to all other courses in English. English 1 must precede English 2. (STAFF)
- 53 **Expository Composition** 3 credits Each semester  
A course providing students who have taken one year of composition with an opportunity to develop additional skill in general, nonliterary writing by means of further instruction, practice, and criticism.
- 65-66 **Introduction to Literature (17-18)** 3 credits  
A study of full-length works of the great writers of English and American literature, to develop efficient reading habits and a critical appreciation of literature. (STAFF)
- 67-68 **Survey of English Literature** 3 credits  
A study of the historical development of English literature: the first semester from Beowulf to Samuel Johnson; the second semester from Robert Burns to the contemporary writers. (TENNEY)
- 75-76 **Modern Literature (13-14)** 3 credits  
Readings of full length works of modern authors for critical appreciation of literature and an awareness of current thought and problems underlying literary expression. (STAFF)
- 85-86 **Great Books** 2 credits  
Great books of the world. (CUSHMAN)
- 91-92 **Creative Writing** 3 credits  
A study of principles and techniques in literary composition by members of the class, with emphasis on narrative prose. Above average ability in writing and some familiarity with literature are presumed. By special permission, the course may be elected two years. (BANKS)

*For Advanced Undergraduates and Graduates*

Note:—All hundreds courses require English 1 and 2 and junior standing as prerequisites.

- \*111 **Engineering Reports (151)** 3 credits Each semester  
For students in the College of Engineering and the College of Mines. Open to other students only by permission of the instructor. A study of

† Students in need of special instruction will be assigned to do additional work in the English or Reading Clinics.

\* Only one of the following courses may be taken for credit: English 111, 113, 115.

technical and semitechnical style, problems in the semitechnical article and in the formal engineering report, and study of the business letter with assignments in letter writing. (SHERMAN, EVANOFF, STALLCUP)

- \*113 Business Writing**      3 credits      Each semester  
 Emphasis on business correspondence; correct form and more particularly content and style of business letters. Practice in writing letters of the usual types. A study of the business report. Ability to type is desirable. (BOAS)
- \*115 Technical Writing (155)**      3 credits      Each semester  
 For students in the College of Agriculture and Forestry, and majors in other technical curricula upon the recommendation of the Head of the Department concerned. A study of technical and semitechnical style, semi-technical articles, reports, and business letters. (PACKENHAM)
- 121 The Novel**      3 credits      First semester  
 A reading course in representative novels, English and American, from the 18th to the 20th century. Psychological and social aspects are emphasized. (BANKS)
- 123-124 The Drama**      2 credits  
 The development of American, British and Continental drama. (CUSHMAN)
- 126 Poetry**      3 credits      Second semester  
 An examination of the origins, content, and techniques of poetry, with emphasis on twentieth-century British and American poets. (TENNEY)
- 131 Chaucer**      3 credits      First semester  
 The language and literature of the *Canterbury Tales* and *Troilus and Criseyde* with some attention to Chaucer's life and time. (CUSHMAN)
- 132 Shakespeare**      3 credits      Second semester  
 The important plays in the light of Shakespeare's development and of their place in English drama. (CUSHMAN)
- 141 Modern English Language**      3 credits      Each semester  
 A study of the development of the English language, with a review of grammar, usage, and mechanics in the light of current practice. (PACKENHAM)
- 144 English for Teachers**      3 credits      Second semester  
 Special problems for students who have taught or plan to teach English.
- 163 The Renaissance**      3 credits      First semester  
 A study of the chief writers of the period, including Spenser, Donne, Jonson, and Milton. (TOLLESON)
- 164 The Eighteenth Century**      3 credits      Second semester  
 The artistic temper, the rational spirit, the emergence of the middle-class and the growth of manners as revealed by significant writers in the period. (BANKS)
- 165 The Romantic Period**      3 credits      First semester  
 From the beginning of the period in the eighteenth century to 1832. Readings of the major writers with emphasis on the changing artistic, social, and philosophical attitudes of the period. (TENNEY)

\* Only one of the following courses may be taken for credit: English 111, 113, 115.

- 166 The Victorian Period** 3 credits Second semester  
A study of the great writers of the Victorian era, their interpretation of the life and ideals of their time, their relation to one another, and their influence on their own and succeeding times. (SHERMAN)
- 175-176 Survey of American Literature** 3 credits  
American literature as the expression of American thought and culture from colonial times to the present. (COE, HOAG)
- 187-188 Modern European Literature** 2 credits  
Readings in translation of the chief European writers, with emphasis on the nineteenth and twentieth centuries. (HOAG)
- 191-192 Advanced Creative Writing** 3 credits  
Prerequisite: English 91 or 92 or the equivalent in writing experience. May be taken in successive years by special permission. (BANKS)

*Primarily for Graduates*

- 221-222 Special Problems in the Development of (a) Poetry, (b) The Drama, (c) The Novel, (d) Literary Criticism, or (e) Biography** 3 credits  
Only one literary type will be considered in any one semester. (BANKS, COE, TOLLESON)
- 261 Seminar in English Literature: (a) The Seventeenth Century, (b) The Eighteenth Century, (c) The Romantic Period, (d) The Victorian Period, (e) The Modern Period** 3 credits Second semester  
Only one period will be considered in any one semester. (BANKS, COE, TENNEY)
- 272 Seminar in American Literature** 3 credits First semester  
Only one area will be considered in any one semester. (HOAG)
- 291-292 Research and Thesis** Credits to be arranged  
Research in preparation for graduate thesis and conferences on results. (STAFF)

## Entomology

Professors MANIS (Head) and BARR;  
Assistant Professors CLARK, GITTINS, and SMITH;  
Acting Assistant Professor FOOTE

- 1 Introduction to Entomology** 2 credits First semester  
A non-technical course designed to acquaint students with insects and their relationships with plants and animals, including man. Two lectures per week. (BARR and GITTINS)
- 51 Applied Entomology** 3 credits First semester  
Identification, life history and control of insect pests in the Pacific Northwest. Two lectures and one two-hour laboratory period per week. Designed especially to meet the entomological needs of students in agriculture. (MANIS and GITTINS)

*For Advanced Undergraduates and Graduates*

- 101 (Zool. 125) General Entomology** 4 credits First semester  
Study of structure, development, classification and ecology of insects. Two lectures and two two-hour laboratory periods per week. Prerequisite: Zool. 1. (BARR and GITTINS)
- \*103 Insect Anatomy and Physiology** 4 credits Second semester  
Comparative internal and external anatomy of insects and the principles of insect physiology. Two lectures and two two-hour laboratory periods per week. Prerequisite: Ent. 101. (BARR and GITTINS)
- \*104 Economic Entomology** 3 credits Second semester  
A general study of methods, insecticides and equipment used in insect control. Detailed study of the biologies and control of insects of direct or indirect importance to man. Two lectures and one two-hour laboratory period per week. Prerequisite: Ent. 51 or Ent. 101. (MANIS)
- 107-108 Special Problems** 2 or 3 credits Each semester  
Prerequisites: senior standing and permission of instructor before registration. (STAFF)
- 109 (For. 169) Forest Entomology** 3 credits First semester  
Introduction to the principles of forest entomology. Identification, life history and ecology of insects associated with forests and forest products. Two lectures and one two-hour laboratory period per week. (CLARK)
- 111-112 Pro-Seminar** 1 credit Each semester  
(a) Basic Entomology (b) Applied Entomology  
Prerequisite: Ent. 101. (MANIS)
- 120 Insect Identification** 3 credits First semester  
Insect collecting and field and laboratory identification of insects. One lecture and two two-hour laboratory periods per week; frequent out-door laboratories and two all-day field trips. Prerequisite: Ent. 101 or consent of instructor. (GITTINS)
- †122 Insect Ecology** 2 credits Second semester  
Factors affecting the distribution, abundance and behavior of insects. Two lectures per week. Prerequisite: Ent. 101. (CLARK)
- †124 Immature Insects** 3 credits Second semester  
The structure, behavior and classification of the immature stages of hemimetabolous and holometabolous insects. One lecture and two two-hour laboratory periods per week. Prerequisite: Ent. 101. (SMITH)

*Primarily for Graduates*

- 209-210 Research and Thesis** Credits to be arranged Each semester  
(STAFF)
- 211-212 Seminar** 1 credit Each semester  
(MANIS)
- 213 Entomological Research Methods** 2 credits First semester  
Principles of entomological research. Procedures and techniques employed in studying insects in the field and laboratory. Two lectures per week. (STAFF)

\* Offered in alternate years; given in 1959-60.

† Offered in alternate years; given in 1960-61.

- 214 Insect Toxicology** 3 credits Second semester  
The composition and evaluation of insecticides and their physiological effects on insects. Two lectures and one two-hour laboratory period per week. Prerequisites, Ent. 103 and 104, and organic chemistry or consent of instructor. (STAFF)
- 215 (For. 269) Advanced Forest Entomology** 3 credits First semester  
Objectives and methods of forest insect surveys. Forest insect control. History of forest entomology and analysis of selected problems. Two lectures and one two-hour laboratory period per week. Prerequisite: Ent. 109. (CLARK)
- 217 Entomological Literature** 1 credit First semester  
The assembly and use of entomological literature. Construction of bibliographies. One lecture per week. (BARR)
- 218 Insect Physiology** 4 credits Second semester  
A study of the functioning of the organ systems of insects. Two lectures and two two-hour laboratory periods per week. Prerequisites: Ent. 103 and a course in organic chemistry. (MANIS, GITTINS)
- 219 Research Measurements** 3 credits First semester  
A study of the several physical measurements ordinarily used in biological research. This course will involve instrumentation but is primarily concerned with the factors limiting measurement accuracy. Three lectures per week. (SMITH)
- 220 Systematic Entomology (121)** 3 credits Second semester  
History and principles of Insect classification. Taxonomic procedure and the rules of zoological nomenclature. Three lectures per week. (BARR)

## Forestry

Professors WOHLETZ (Dean), DALKE, DETERS, TISDALE†;

Associate Professors HUNGERFORD, SEALE, SHARP;

Assistant Professors GILBERTSON, HOWE, LOEWENSTEIN, MACPHEE, SLIPP;

Instructors JOHNSON, PITKIN; Visiting Assistant Professor HALL

### Open to Non-Forestry Students Only

- 16 Tree Identification** 2 credits Second semester  
Identification, distribution and economic use of the important trees of the western United States with special emphasis on the trees of Idaho. One lecture, one two-hour laboratory per week. (JOHNSON)
- 103 Forest Resources Conservation** 2 credits First semester  
A study of the resources of forest and range lands including wood, range plants, wildlife, fish, water, and recreation. Principles of management which lead to their conservation. Two lectures per week.
- 105 Farm Forestry** 2 credits First semester  
Handling the farm woodlot; growing wood products needed on the farm; seasoning, preservation, use and marketing of farm products; windbreak and shelter-belt planting; forestry in the economics of agriculture. Two lectures per week. (Open to juniors and seniors in Agriculture only.)

† On leave 1958-59.

*Primarily for Undergraduates***1-2 Forestry Lectures** 1 credit

Forestry and allied professions; the history of their development, nature of work and career opportunities in them. Forest, range, and wildlife resources, their importance and distribution; background of conservation efforts in the United States. One lecture per week. (WOHLETZ, GILBERTSON)

**22 Silvics (21)** 2 credits Second semester

A study of the ecological basis for the management of vegetation with particular emphasis on the forest environment. Two lectures per week. Prerequisites: Chem. 1 and Bot. 3. (DETERS, LOEWENSTEIN)

*For Advanced Undergraduates and Graduates***S100 Field Measurements and Mapping** 4 credits Summer camp

Units of measure, instruments, techniques of measurements and principles of sampling used in collecting data on forest and range lands. Emphasis will be placed on forest products, trees and stands. (SEALE)

**S101 Field Ecology** 4 credits Summer camp

A study of ecological principles, methods, and concepts as applied to problems in Forest Management, Range Management, Wildlife Management, and Fishery Management. (STAFF)

**107 Elements of Forest Biometry (145)** 3 credits First semester

Measures of central tendency, measures of dispersion, measures of reliability and the normal curve of error, sampling, regression, correlation, simple analysis of variance; importance and applications of statistics to management and research in forestry. Two lectures and one two-hour laboratory per week. Prerequisite: For. S100. (MacPHEE)

**111 (Zool. 111) Ichthyology** 3 credits First semester

See Zoology 111 for course description.

**116 (Zool. 126) Limnology** 3 credits Second semester

The interrelationships of the physical, chemical, and biological features of lakes and streams. Two lectures and discussion periods, one three-hour laboratory per week; occasional field-laboratories; and two all-day field trips. Prerequisites: Zool. 1 and Phys. 1 or 3. (MacPHEE)

**117 Elements of Fishery Management** 2 credits First semester

A study of the basic principles of fishery management and of the life histories and habitat requirements of our more important game species. Two lectures per week, three one-half day field trips. (MacPHEE)

**118 Fishery Management Techniques** 3 credits Second semester

A study of the various methods and techniques employed in fishery management and practice in their use. Two lectures, one three-hour laboratory per week, occasional field-laboratory trips, and two all-day field trips. Prerequisites: For. 107 and 117. (MacPHEE)

**120 Dendrology (112)** 3 credits Second semester

Identification, classification, characteristics, geographic range, and economic importance of commercial tree species of the United States; reference to important shrubs of the region. Two lectures and two two-hour laboratories or field-laboratories per week. Two one-day field trips. Prerequisites: Bot. 3 and 53. (JOHNSON)

- 122 Forest Planting** 2 credits Second semester  
Methods of seed collection, extraction and storage; germination; nursery practice; field planting. One lecture and one three-hour laboratory per week. One two-day field trip. Prerequisite: For. 22. (PITKIN)
- 124 Silviculture** 3 credits Second semester  
A study of the silvicultural cutting systems, cultural operations, and the silvicultural characteristics of the more important commercial species. Two lectures and one three-hour laboratory per week; one or two all-day field trips. Prerequisite: For. 22. (DETERS)
- 125 Regional Silviculture** 2 credits First semester  
A study of the forest regions of the United States and the practical methods for successful handling of the important forest types within the regions. Two lectures per week. Prerequisite: For. 124. (DETERS)
- 131 Wood Technology** 3 credits First semester  
Elements of plant anatomy pertinent to woody plants; identification of woods by gross and minute characteristics; physical properties and uses of commercial woods of the United States. Two lectures and two two-hour laboratories per week. Prerequisite: Bot. 3. (HOWE)
- 134 Logging and Milling (133)** 3 credits Second semester  
Survey, regional and historical, of logging equipment and methods; principles and methods in the manufacture of major products. Three lectures per week, five all-day field trips. (HOWE)
- 137 Utilization Technology I** 3 credits First semester  
Technology and physical properties of wood, including mechanical properties, application of strength data and design, wood preservation, seasoning, veneers and plywood, laminations, and finishing. Two lectures and one laboratory per week. Prerequisites: Math. 51 and For. 131. (HOWE)
- 138 Utilization Technology II** 3 credits Second semester  
Introduction to the chemistry of wood, chemical and technological processes for the conversion of wood into commodities, properties and uses of these products, chemical utilization of other products of forest trees, industrial trends. Two lectures and one laboratory per week. One five-day field trip. Prerequisites: Chem. 75. (HOWE)
- 142 Principles of Wildlife Management (157)** 3 credits Second semester  
A study of the life histories, environments, and management principles of game populations with the objective of obtaining the maximum productivity that economics, land usage and the particular environment will allow. Three lectures per week; two one-day field trips. Prerequisite: For. 151. (HUNGERFORD)
- 143 Wildlife Management Techniques (158)** 3 credits First semester  
Emphasis is placed on the field and laboratory techniques used in wildlife management. Cover mapping, game range analysis, food habits study, census problems, population analysis, field collection and laboratory analysis of specimens and data are included. Two lectures, one three-hour laboratory per week, occasional field-laboratory trips, and one field trip (2 to 3 days). Prerequisite: For. 107 and 142. (HUNGERFORD)
- 144 Big Game Management (159)** 3 credits Second semester  
The study of big game ranges and populations and their management. The field study of big game herds on problem ranges is emphasized and the relation of big game management to other land use is stressed. Two lectures, one three-hour laboratory or field-laboratory per week, two field trips (one three-day and one five-day). Prerequisites: For. 142 and 151; instructor's permission. (HUNGERFORD)



- 151 Elements of Range Management** 3 credits First semester  
Development of the range industry; grazing regions; production and utilization of range forage; range improvement and reseeding; range survey and management plans. The relation of range management to other phases of wild land management is stressed. Three lectures per week. Prerequisites: Bot. 3 and For. S101. (SHARP)
- 152 Range Plants** 3 credits Second semester  
A study dealing with the identification, economic importance, and management of the principal grasses, forbs, and shrubs, including noxious and poisonous plants of the range. Two lectures and one three-hour laboratory per week; field-laboratory trips, and one field trip (1 or 2 days). Prerequisites: Bot. 3 and 53. (SHARP, TISDALE)
- 153 Range Methods and Techniques** 3 credits First semester  
A study of field methods and research techniques and their application in range management. Sampling theory, collection of data, compilation and statistical analysis. Forage inventories, forage utilization and range condition and trend techniques are included in the course. Two lectures, one laboratory per week; field-laboratory trips, and one field trip (1 or 2 days). Prerequisites: For. 107 and 151. (SHARP, HALL)
- 154 Range Management Planning** 3 credits Second semester  
A study of management planning and its place in the management of range lands. Problem definition and analysis, determination of objectives, action planning and follow-up are treated. Sufficient range economics is covered to indicate the economic background for management planning. Actual cases are used as illustrations and problems. Two lectures and one laboratory-discussion per week; field-laboratory trips, and one field trip (one week). Prerequisites: For. 151 and 153. (TISDALE, HALL)
- 162 Watershed Management (156)** 3 credits Second semester  
Discussion of the physical, biological and hydrological bases of watershed management. The influence of forest, shrub and grassland plant communities upon water quality, quantity and regimen are considered. The effect of specific land management practices upon western watersheds is emphasized, as well as the importance of watersheds in multiple-use land management. Three lectures per week; one all-day field trip. Prerequisite: For. S101. (JOHNSON)
- 164 Forest Pathology** 3 credits Second semester  
Lectures on principles of pathology, symptomatology, causes of disease, environmental influences on diseases, disease as part of the forest environment, control and protection as related to silviculture, management and utilization. Laboratory study of representative noninfectious and infectious tree diseases, stains and wood rots, one report from original literature study. One lecture, two laboratory and discussion periods per week, and one all-day field trip. Prerequisite: Bot. 3. (GILBERTSON, SLIPP)
- 166 Wood Products Pathology** 3 credits Second semester  
The decays, stains, and molds affecting wood and wood products; including symptoms, causal organisms and their growth requirements; nature and extent of damage caused and principles of control. Laboratory practice in isolation and identification of wood-inhabiting fungi, evaluation of wood preservatives, and other techniques. One lecture and two laboratories per week; one all-day field trip. Prerequisite: For. 131. (GILBERTSON)
- 167 Fire Prevention and Control (168)** 2 credits First semester  
The role of fire in forest management; forest fuels and factors affecting their inflammability, the causes and effects of fire; formulation of fire control plans, and fire as a land management tool. Two lectures per week. (GILBERTSON)

- 169 (Ent. 109) Forest Entomology (109)** 3 credits First semester  
See Entomology 109 for course description.
- 174 Mensuration (146)** 3 credits Second semester  
Theory of log, tree and stand measurements; construction and use of volume tables; construction and application of yield tables; growth studies. Two lectures or discussions and one laboratory per week. Prerequisite: For. 107. (SEALE)
- 175 Forest Management** 3 credits First semester  
The regulation of American forests for continuous timber production. Three lectures per week. One two-day field trip. Prerequisites: For. 124 and 174. (DETERS)
- 176 Forest Finance** 3 credits Second semester  
The financial aspects of the management of American forests; the appraisal of land, growing stock, stumpage and damages. The application of simple and compound interest, capitalization and discount formulae in forest business. Three lectures per week. (DETERS)
- 182 Economics of Forest Enterprise (181)** 2 credits Second semester  
Economics of the production of forest products and services—agents of production and their combination; planning the use of forest resources by the individual firm. Emphasis is on principles and methods of analysis most useful in making economic decisions and in understanding economic activity. Two lectures per week. Prerequisite: Econ. 52. (SEALE)
- 183 Economics of Conservation** 2 credits First semester  
Resources and conservation defined. The place of economics in resource analysis and conservation programs. Analysis of major economic problems of forestry in the context of the general economy. Goals and responsibilities in public planning of resource use. Two lectures per week. Prerequisite: Econ. 52. (SEALE)
- 184 Forest Policy and Administration** 3 credits Second semester  
Evolution of land and forest problems and policies in the United States. Analysis of current conditions and policies. Historical development of governmental and private agencies concerned with the administration of forest conservation programs. Three lectures per week. Prerequisite: Econ. 52. (WOHLETZ)
- 191-192 (a-f) Directed Studies** 1-3 credits
- a. Forest Management
  - b. Range Management
  - c. Wildlife Management
  - d. Fishery Management
  - e. Wood Utilization Technology
  - f. Legal Aspect of Land Management
- Individual conference courses. Open to seniors and graduate students by permission. (STAFF)
- 197-198 Land Management Seminar (188-189)** 1 credit  
Assigned studies in wild land management. Subjects determined in conference with major professor. Each student will be required to prepare and deliver a minimum of two reports, one of which may be required as a formal paper. One meeting per week. Prerequisite: senior standing. (SLIPP, HUNGERFORD, HALL)

*Primarily for Graduates*

- 201-202 Seminar** 1 credit  
 Research projects or assigned topics; presentation of papers and discussion. (STAFF)
- 204 Fundamentals of Research (190)** 2 credits Second semester  
 An introduction to the objectives and techniques of research. Historical development of the scientific method; preparation of working plans; assembly, interpretation, and presentation of data; structure and use of the scientific literature, and preparation of manuscripts. Two lectures per week. Open to seniors by permission of the instructor. (GILBERTSON)
- 210 Advanced Fishery Management** 2-4 credits Second semester  
 Advanced work in field and laboratory techniques involving the use of original literature and the analysis of field data in the preparation of reports. Occasional field-laboratories, one all-day field trip. Prerequisite: For. 118. (MacPHEE)
- 212 Fishery Ecology** 3 credits Either semester  
 A study of factors affecting competition, predation, migration and spawning activities of fish with some reference to pollution, stream obstructions and diversions. Two lectures and one laboratory per week. (Offered in alternate years; will be offered in 1960-61). (MacPHEE)
- 220 Forest Soils** 3 credits Either semester  
 Origin and development of forest soils and their physical, chemical and biological properties; nature and importance of forest humus; relationship of soils to forest vegetation; improvement of unproductive forest soils; soils and reforestation; management of nursery soils; and techniques of forest soil analysis. Two lectures and one laboratory per week. Prerequisites: a basic soils course and permission of instructor. (LOEWENSTEIN)
- 225 Advanced Silviculture** 2 credits Either semester  
 Advanced treatments of the silvicultural systems. Slash disposal as a silvicultural problem. Two lectures per week and occasional field trips. Prerequisites: For. 124 and 125. (DETERS)
- 227 Forest Genetics** 3 credits Either semester  
 The application of principles of genetics to forest tree improvement. Three lectures per week. (STAFF)
- 231 Advanced Wood Technology** 2-3 credits First semester  
 Anatomical features of wood considered in detail, including fibers, and an introduction to methods of preparing woody tissues for study. Advanced study of the physical properties of wood and their implications on technology. Prerequisite: permission of instructor. (HOWE)
- 236 Wood Chemistry** 3-4 credits Second semester  
 A study of the chemistry of woody tissue, including lignin, cellulose, hemicelluloses, and other polysaccharides. Laboratory work in the analysis and the chemistry of wood. Prerequisite: Chem. 172; Chemistry majors by arrangement. (HOWE)
- 241 Advanced Wildlife Management (255-256)** 2 credits First semester  
 Research methods, ecology and life history studies of native wildlife species with advanced work in analysis of field data and current wildlife management procedures. The student may elect to specialize in upland game or big game but normally only one of these fields will be offered in any one semester. Lecture-discussion periods, laboratories and field laboratories. One to three all-day field trips will be scheduled depending

upon student background and field conditions. Prerequisites: For. 107 and 143, a course in research fundamentals. (HUNGERFORD, DALKE)

- 242 Wetland Habitat Management** 2 credits Either semester  
Life history, ecology and management of the species using wetland habitats, and a study of current procedures for managing such lands. The student may elect to specialize in waterfowl or furbearer management but normally only one of these fields will be offered in any one semester. Lecture-discussion periods, laboratories and field laboratories. One to three all-day field trips will be scheduled depending upon student background and field conditions. Prerequisites: courses in wildlife management, wildlife techniques and a knowledge of aquatic plants. (HUNGERFORD)
- 243 Advanced Wildlife and Fishery Techniques** 3 credits First semester  
An advanced course in laboratory and field techniques including population studies and the application of statistical analysis to animal population problems. A conference and discussion type course with individual study problems assigned. Field trips may be required on an individual basis. Prerequisites: For. 107, or equivalent, and For. 143 or 118. (Offered in alternate years; will be offered in 1959-60). (DALKE, HUNGERFORD, MacPHEE)
- 247 Wildlife Ecology** 3 credits First semester  
The reciprocal relations of wildlife populations and their environment with special reference to game birds, game animals and furbearers. Conferences, reports, and weekly field laboratory periods. Two field trips (one one-day and one two-day). (Taught in alternate years—given in 1958-59.) Prerequisites: plant ecology, animal ecology and instructor's permission. (HUNGERFORD)
- 253 Advanced Range Management** 2-3 credits Either semester  
Advanced work in range management principles and practices with emphases on range research methods, revegetation and animal-plant relationships. (TISDALE, SHARP)
- 254 Range Ecology** 2-3 credits Either semester  
Relationship of ecological principles to the classification and use of range lands, with emphasis upon the grazing effects. Prerequisites: For. 151 and Bot. 105 or equivalent. (TISDALE)
- 263-264 Advanced Forest Pathology** 2-4 credits  
Advanced work in field methods, laboratory technique, and use of original literature in preparation for intensive studies of tree diseases and rots, deterioration of wood products, and the organisms which cause them. Seminar on selected problems in forest pathology and their relation to forest practices. Prerequisite: For. 164 or 166. It is recommended that Bot. 111 or 212 be taken concurrently. (GILBERTSON, SLIPP)
- 269 (Ent. 215) Advanced Forest Entomology** 3 credits First semester  
(See Entomology 215 for course description.)
- 275 Advanced Forest Management** 2 credits Either semester  
Advanced aspects of forest regulation; review of forest management plans; European methods of forest regulation; literature research and assigned problems. Two lectures per week. Prerequisites: For. 175 and 176. (DETERS)
- 281-282 Advanced Forest Economics (283)** 2 credits  
An advanced study of economic principles and laws affecting forestry, particularly those determining the intensity and character of land use. Economic factors such as the law of diminishing returns, comparative ad-

vantage, land classification and utilization, taxation, credit, insurance, and transportation will be studied. (WOHLETZ, SEALE)

**\*291-292 (a-e) Special Problems** 1-3 credits

Problems are assigned on an individual basis and will require library work, and/or studies in the field or the laboratory. Papers reporting the results are usually required. Permission required from the instructor with whom the student desires to work. (STAFF)

- a. Forest
- b. Range
- c. Wildlife
- d. Fishery
- e. Utilization

**297-298 Research and Thesis** 2-5 credits

Opportunities are offered for graduate research in specified lines of Forest Management, Range Management, Wildlife Management, Fishery Management, Wood Utilization Technology. Individual research and/or thesis preparation under the guidance of the major professor concerned. (STAFF)

## French

For general information concerning Languages see Page 266.

*Primarily for Undergraduates*

**1-2 Elementary French** 4 credits Each semester

Pronunciation, vocabulary study, reading practice, exercises in spoken French, functional grammar. (STAFF)

**X10 French Language and Civilization Tour I** 6 credits Summer school

A study tour to French-speaking Europe for students with an elementary knowledge of French. Each student enrolled will pay his own expenses. Students will spend four weeks in intermediate French language, literature, and civilization classes at the University of Caen in Normandy, and will then travel in France and Switzerland in order to deepen their understanding of European culture. Prerequisite: two units of high school French or two semesters of college French.

**13-14 Intermediate French** 4 credits

The aim of this course is the development of a sound reading knowledge of French. Systematic grammar review and practice in speaking and writing are included. Prerequisite: Fr. 2 or the equivalent. (WOLFE, RENT-FRO)

**X100 French Language and Civilization Tour II** 6 credits Summer school

A study tour to French-speaking Europe for students with advanced knowledge of French. Each student enrolled will pay his own expenses. Students will spend four weeks in advanced French language, literature, and civilization classes at the University of Caen in Normandy, and will then travel in France and Switzerland in order to deepen their understanding of European culture. Prerequisite: French 14 or equivalent preparation.

\* The nature of the problem studied will be indicated in each case in parentheses after the name of the course, e. g., (Forest Pathology).

*For Advanced Undergraduates and Graduates***101-102 Advanced French** 3 credits

A language course flexible in content to meet the special needs of the students enrolled. It includes composition, the fundamentals of stylistics, and practice in using the spoken tongue. Prerequisite: Fr. 13-14. (WOLFE)

**121-122 Survey of French Literature** 3 credits

A rapid view of the main currents of French literature, from the middle ages to the present, illustrated by the reading of representative masterpieces. Works of the Old French period will be read in modern French translations. Prerequisite: Fr. 13-14. (WOLFE)

**135-136 The Nineteenth Century** 3 credits

A study of representative masterpieces of the nineteenth century in lyric poetry, drama, and the novel. (WOLFE)

**141-142 The Seventeenth Century** 3 credits

The course deals with the origins of French Classicism, and with the masterpieces of the classical period in drama, poetry, the novel, the philosophical writings. Attention is given to work of the Independents, and to the transition to the 18th century. (WOLFE)

**143-144 The Eighteenth Century** 3 credits

A study of the French Enlightenment. Selected writings of Montesquieu, Voltaire, Diderot, and Rousseau will be read, as will the more important novels and dramas of the period. (WOLFE)

**145-146 Contemporary Literature** 3 credits

French literature of the twentieth century. For students able and willing to read in unedited texts. Prerequisite: senior standing or consent of instructor. (WOLFE)

**161-162 Directed Reading** 1 to 3 credits

Open by special permission to advanced students in French.

**181-182 Free Composition and Conversation** 2 credits

The course seeks to develop in the student the ability to express himself freely in French, both in conversation and in written work. A thorough knowledge of French grammar is essential. Limited to ten students. Prerequisite: Fr. 13-14.

**191-192 French for Teachers** 2 credits

Consideration in outline of the essentials of the French language and French culture. Pronunciation and diction. Open to majors in French, and to others only by special permission.

**195-196 Thesis** 2 credits

For majors only, in their senior year. (RENTFRO)

*Primarily for Graduates***201-202 Old French** 3 credits

Reading and interpretation of Old French texts selected from Constans: *Chrestomathie de l'Ancien Francais*, with some study of Old French phonology and morphology. Some knowledge of Latin is required.

**261-262 Seminar in French Literature: (a) The Novel, (b) The Drama, (c) Poetry, (d) Literary Criticism** 3 credits

Only one literary type will be considered in any one semester. (WOLFE)

271-272 **Research and Thesis** Credits to be arranged  
(WOLFE)

## Geology and Geography

Professor COOK (Head); Associate Professors CALDWELL, WILLIAMS;  
Assistant Professors GRIMM, REID; Instructors CHOATE, MACINKO

## Geography

*Primarily for Undergraduates*

**3 Physical Geography** 4 credits First semester

A study of the earth sciences, emphasizing the principles and interrelationships of weather, climate, landforms, water resources, ocean and ocean basins, native plants and animals, and soils. Laboratory consists of data and map analysis and interpretation and special projects. Three lectures and one two-hour laboratory a week. (MACINKO)

**12 Economic Geography** 3 credits Each semester

A study of the reciprocal relationships between mankind and its earth environment, resource distribution, and the changing pattern of commodity movement. These elements are viewed from the perspective of their effect upon national and international development. Three lectures a week. (CALDWELL)

**54 World Regional Geography** 2 credits Second semester

A study of the countries and peoples of the world; the interrelationships between man and his physical and cultural environments. Two lectures a week. (MACINKO)

*For Advanced Undergraduates and Graduates*

**101 Weather and Climate** 3 credits First semester

A survey of the elements of weather, air masses, storms and associated phenomena, meteorological instruments, weather maps, and forecasting. The characteristics and distribution of the world's weather and climatic types are considered with emphasis on their application to man. Three lecture periods a week. One one-day field trip. Prerequisite: Either Geog. 3, Geog. 12, Geol. 4, or permission of the instructor. (CALDWELL)

**110 Cartography** 4 credits Second semester

Principles and techniques of map, chart, and diagram construction. Emphasis on design, reproduction problems, and use of aerial photos. Two lectures and two three-hour laboratory periods a week. (CALDWELL)

**116 Geography of Europe** 3 credits Summer school

A study of Europe exclusive of the U.S.S.R. by geographic regions and occupancy patterns. Careful consideration is given to such basic factors as climate, topography, human and economic resources, which underlie contemporary European problems. Prerequisite: junior standing.

**137 Conservation of Natural Resources** 3 credits Either semester

An analysis of the use of mineral, soil, vegetation, and water resources of the United States. Study of the physical, social and economic problems

involved in integrating resource development. On the international scale, concentration on the relation between population growth and resource. Three lectures a week. (MACINKO)

- 140 Geography of North America** 3 credits Second semester  
A study of Anglo-America by geographic regions and occupancy patterns. Careful consideration is given to such basic factors as climate, topography, industries, and natural resources which underlie modern problems. Three lectures a week. Prerequisite: junior standing. (CALDWELL)
- 143 Geography of Idaho and the Pacific Northwest** 3 credits First semester  
A study of the human and physical resources of Idaho and adjacent regions, with particular emphasis upon changes that are taking place. Case studies will be undertaken of specific areas, problems of industries. Three lectures a week. One one-day field trip. (CALDWELL)
- 155 Geography of Asia** 3 credits First semester  
An analysis of political units; physical, cultural, and economic regions; demographic problems; and the role of Asia including the U.S.S.R. in world affairs. Three lectures a week. Prerequisite: junior standing. (CALDWELL)
- 170 Urban Geography** 3 credits Second semester  
The origin, development, and distribution of cities; urban patterns, forms and functions; systems of urban land classification; forces affecting urban land use; geographic aspects of city planning. Three lectures a week. Two half-day field trips. (CALDWELL)
- 180 Political Geography** 3 credits First semester  
A study of the geographic nature of States. Their organization, power, boundaries, ethnic units, internal and external relations as influenced by, and adjusted to, geographic conditions. Geopolitics and contemporary problems are considered. Three lectures a week. Prerequisite: junior standing. (CALDWELL)

*Primarily for Graduates*

- 201-202 Advanced Geography** 1 to 4 credits Each semester
- 291-292 Research and Thesis** Credits to be arranged Each semester

## Geology

*Primarily for Undergraduates*

- 4 Fundamentals of Geology** 4 credits Second semester  
A study of the earth sciences, emphasizing physical and historical geology; geological processes and their effects on the earth's crust; rock and fossil record of the earth's history and methods of interpreting geological data. Laboratory study of rocks, fossils, and geologic maps. Three lectures and one two-hour laboratory a week. (GRIMM)
- 11 Physical Geology** 3 or 4 credits First semester  
Introduction to the theoretical and practical aspects of the composition and structure of the earth. Description, identification and classification of rock-forming and ore minerals and the common rocks. Hand lens required for laboratory. Three lectures or three lectures and one three-hour laboratory per week. One one-day and one half-day field trips. Prerequisite: Chem. 1. (May be taken concurrently.) (REID)



- 14 Mineralogy** 4 credits Second semester  
 Fundamental principles of crystallography and mineralogy; properties, occurrence, uses, identification and classification of important rock-forming and ore minerals with an introduction to crystal structure. Two lectures and two two-hour laboratory periods a week. Three half-day field trips. Prerequisites: Chem. 1 and Geol. 11. (JONES)
- X16 Rocks and Minerals** 3 credits Extension only  
 Hand specimen identification of important rock-forming and ore minerals, and the principal igneous, sedimentary, and metamorphic rocks; study of the origin, occurrence, composition, and uses of these minerals and rocks; fundamentals of prospecting.
- X23 Geology of Idaho and the Pacific Northwest** 3 credits Extension only  
 The geologic history of Idaho and adjacent regions with particular reference to the development of geologic structures and the present-day distribution of rocks and mineral deposits. Detailed study of the geology of the area in which the course is given.
- X50 Applied Geology** 3 credits Extension only  
 Application of geology to prospecting, mineral property development, water well location, flood control, foundation and excavation problems. Laws affecting mineral resource exploration and development are discussed. Prerequisite: permission of instructor.
- 51 Rock Study** 2 credits First semester  
 Hand specimen identification of igneous, sedimentary, and metamorphic rocks including study of their composition, modes of occurrence, and genesis. One lecture and one two-hour laboratory period a week. Two one-day and one two-day field trips. Prerequisite: Geol. 11. (WILLIAMS)
- 52 Historical Geology** 4 credits Second semester  
 A consideration of the origin of the earth, its geologic history, and the history and evolution of animal and plant life. Three lectures and one three-hour laboratory period a week. Prerequisite: Geol. 4 or 11, or Geog. 3. (GRIMM)

*For Advanced Undergraduates and Graduates*

- 101 Geomorphology** 3 credits First semester  
 Study of the origin and classification of land forces. Regional geomorphic problems are emphasized. Three lectures a week. One two-day field trip. Prerequisite: Geol. 4 or 11. (MACINKO)
- 102 Map Interpretation** 2 credits Second semester  
 Geologic interpretations of topographic maps. Three-dimensional analysis of geologic maps. Introduction to the use of air photos in geologic mapping. Two two-hour combined laboratory and recitation periods a week. Prerequisite: Geol. 101. (REID)
- 103 Stratigraphy** 2 credits First semester  
 A study of the order, significance, and description of the layered rocks of the earth's crust. The classification of stratigraphic units, facies, unconformities, and principles of correlation. Two lectures a week. Prerequisites: Geol. 51 and Geol. 52. (GRIMM)
- 104 Sedimentation** 2 credits Second semester  
 A study of the physical, chemical, and biological processes responsible for the transportation, deposition, compaction, and lithofaction of sediments. One lecture and one three-hour laboratory. One one-day field trip. Prerequisites: Geol. 51 and Geol. 52. (WILLIAMS)

- 112 Invertebrate Paleontology** 3 credits Second semester  
 A study of the distribution of the different invertebrate fossil groups throughout geologic time together with their morphology, evolutionary trends, and classification. Two lectures and one three-hour laboratory period a week. Prerequisite: Geol. 52. (GRIMM)
- 121 Structural Geology** 3 credits First semester  
 A study of the origin, forms, and interpretation of geologic structures. Outside assignments consist of interpretation of geologic maps and the solution of some problems commonly encountered in the field. Three lectures a week. Prerequisite: Geol. 52 and Engr. 2. (GRIMM)
- 130 Geological Field Methods** 1 credit Second semester  
 Lectures and assigned reading on methods of geological field work, note-taking, and the interpretation of geologic maps, in preparation for the application of these principles in the field. Practice in plane table and Brunton compass surveying. Prerequisites: Geol. 51 and 121. (JONES)
- 131 Field Geology** 1 to 4 credits Summer camp  
 A course in surface and underground geologic mapping. Use of Brunton compass, plane table, and air photos is emphasized. Accident and health insurance is required. Prerequisite: Geol. 130 or permission. (GRIMM)
- 133 Geologic Reports** 2 credits First semester  
 Preparation and illustration of geologic reports. Students who have taken Geology 131 will use the field data in their assignments. Prerequisites: Geol. 131 or permission. (JONES)
- 141 Engineering Geology** 3 credits Either semester  
 Application of geology to engineering. Study of geologic factors in foundation and excavation problems, route location, and landslide control. Three lectures a week. Prerequisite: Geology 11. (WILLIAMS)
- 150 Economic Mineral Deposits** 3 credits Second semester  
 The occurrence, classification, and description of economic mineral deposits, both metallic and nonmetallic. Detailed study of some representative occurrences. Emphasis is on the study of petrologic, mineralogic, and structural associations of possible genetic significance. Three lectures a week. Three one-day or one three-day trip to operating mines for geologic study. Prerequisites: Geol. 14 and 121. (WILLIAMS)
- 151 Origin of Mineral Deposits** 3 credits First semester  
 Study of hypotheses and evidence bearing on the sources, depositional controls, and alteration of metallic and nonmetallic mineral deposits. Three lectures a week. Prerequisite: Geol. 150 or permission of instructor. (REID)
- 160 Exploration Geology** 3 credits Second semester  
 The design of exploration and mineral development programs based on geologic data. Evaluation of exploration techniques. Three lectures a week. Prerequisite: Geology 150. (WILLIAMS)
- 163 Optical Mineralogy** 4 credits First semester  
 Principles of crystal optics with special reference to the theory and application of the petrographic microscope in the description and identification of minerals in thin sections and fragments. Two lectures and two two-hour laboratory periods a week. Prerequisites: senior standing or permission, Geol. 14 and 51. (Geol. 51 may be taken concurrently.) (JONES)
- 164 Petrography and Petrology** 4 credits Second semester  
 Microscopic and megascopic characteristics, origin, and classification of igneous, sedimentary and metamorphic rocks; their description and

identification by use of the petrographic microscope and hand specimens. Two lectures and two two-hour laboratory periods a week. One three-day field trip. Prerequisite: Geol. 163. (JONES)

**197-198 Pro-Seminar** 1 credit

The first semester will be devoted to evolution of geologic thought and to features of geology as a science and as a profession. During the second semester geologic problems will be reviewed in selected literature, presented formally and discussed. Prerequisite: senior standing. (STAFF)

*Primarily for Graduates*

**201-202 Advanced Geology** 1 to 5 credits

(a) General geology, (b) regional geology, (c) geomorphology, (d) structural geology, (e) paleontology, (f) stratigraphy, (g) mineralogy, (h) petrology, (j) petrography, (k) sedimentation, (p) mineral deposits, (s) economics of the mineral industry, (t) groundwater, (u) engineering geology, (v) geologic research methods, (w) history of geology, (x) geochemistry, (y) Pleistocene geology, (z) mineragraphy. These courses consist of lectures, supervised reading, laboratory or field work, and periodic conferences. May be elected more than once to pursue different studies. (STAFF)

**210 Photogeology** 3 credits Either semester

Application of the principles of photogrammetry and stereoscopy to the geologic interpretation of air photographs and the construction of geologic maps. One lecture and six hours of laboratory work a week. (STAFF)

**240 Metamorphism** 3 credits Either semester

Advanced study of metamorphic minerals, processes and facies, including assigned readings and discussion on granitization. Three lectures a week. Prerequisite: Geol. 163. (REID)

**250 Applied Paleontology** 3 credits Either semester

Application of the principles of paleontology, including micropaleontology, to problems of stratigraphy, time-rock correlation, taxonomy, morphologic description, and evolution. Study of photographic techniques and the care and preservation of fossil specimens. Three lectures a week. (GRIMM)

**260 Theory of Mineral Exploration** 3 credits Either semester

Advanced study of the genetic factors in mineral deposition and concentration, as a basis for the establishment of guides in the exploration for economic mineral deposits. History of the development of thought on the genesis of ore deposits. Three lectures a week. (STAFF)

**270 Advanced Structural Geology** 3 credits Either semester

A study of the relations of geologic structure to tectonic history; a survey of the structural provinces of the world; theory in structural geology, and current developments in the field and in the laboratory. Three lectures a week. (JONES)

**286 Petroleum Geology** 3 credits Either semester

A study of the origin and accumulation of petroleum and natural gas, the stratigraphy and structure of typical oil fields, and the surface and subsurface methods of oil exploration. Three lectures a week. (STAFF)

- 297-298 Research and Thesis** Credits to be arranged Each semester  
 (a) General geology, (b) regional geology, (c) geomorphology, (d) structural geology, (e) paleontology, (f) stratigraphy, (g) mineralogy, (h) petrology, (j) petrography, (k) sedimentation, (m) metamorphism, (p) mineral deposits, (r) petroleum geology, (s) economics of the mineral industry, (t) groundwater, (u) engineering geology, (x) geochemistry, (y) Pleistocene geology, (z) mineragraphy. The instructional facilities of the department are placed at the disposal of properly qualified students. (STAFF)

## German

For general information concerning Languages see Page 266.

### *Primarily for Undergraduates*

- 1-2 Elementary German** 4 credits  
 Pronunciation, vocabulary study, reading practice, exercises in spoken German, functional grammar. (SUTTNER)
- \*13-14 Intermediate German** 4 credits  
 The aim of this course is the development of a sound reading knowledge of German. Systematic grammar review and practice in speaking and writing are included. Prerequisite: Ger. 2 or the equivalent. (SUTTNER)
- \*52 Scientific German** 4 credits  
 Reading of materials adapted to the needs of students in scientific curricula, especially chemistry, physics, and premedical studies. Prerequisite: German 13, or equivalent preparation. (SUTTNER)

### *For Advanced Undergraduates and Graduates*

- 101-102 Advanced German** 2 or 3 credits  
 A language course flexible in content to meet the special needs of the students enrolled. It includes composition, the fundamentals of stylistics, and practice in using the spoken tongue.
- 121-122 Survey of German Literature** 3 credits  
 A study of representative prose and poetry and lectures on the history of German literature.
- 135-136 The Nineteenth Century** 3 credits  
 An intensive study of the principal works in fiction, drama, and poetry. Lectures, reading, reports, discussions. (SUTTNER)
- 138-139 Modern German Literature** 3 credits  
 Special attention is given to the social problem in the works of such authors as Hauptmann, Thomas Mann, Carossa, Hesse, Wiechert, and others.
- 141-142 The Eighteenth Century** 3 credits  
 In the first semester the major writers of the century, up to and including Lessing, will be studied; the second semester will be devoted to the work of Schiller.

\* For German 14 and 52 no more than 4 credits are allowed.

**143-144 Goethe** 3 credits

This course offers primarily an investigation of the origin and development of *Faust* and an interpretation of its message. Outside reading: Selected lyrics and ballads, plays, prose works, and a standard biography.

**161-162 Directed Reading** 1 to 3 credits

Open by special permission to advanced students in German.  
(SUTTNER)

**191-192 German for Teachers** 2 credits

Philological work necessary for the efficient teacher with attention to the cultural background. Open to majors, and others by special permission.

**195-196 Thesis** 2 credits

For majors only, in their senior year.

*Primarily for Graduates***201-202 Middle High German** 3 credits

Phonology and accidence. Reading of Hartmann's *Der arme Heinrich*, Johannes von Tepl's *Der Ackermann*, selections from the *Nibelungenlied* and from the works of Walter von der Vogelweide, Wolfram von Eschenbach, and Wernher der Gartenaere. (SUTTNER)

**231 Gothic** 3 credits

First semester

Introduction to the study of Germanic philology. After a brief treatment of the phonology and morphology of Gothic, reading in *Ulfilas*. Prerequisite: Old English or two years of German.

**261-262 Seminar in German Literature: a) The Novel, b) The Drama, c) Poetry, d) Literary Criticism** 3 credits

Only one literary type will be considered in any one semester. (SUTTNER)

**271-272 Research and Thesis** Credits to be arranged  
(SUTTNER)**Greek\***

For general information concerning Languages see Page 266.

*Primarily for Undergraduates***1-2 Elementary Greek** 4 credits

First lessons comprising the main features of inflection and syntax are learned, simple sentences are written into Greek, and easy selections from Greek authors are translated. Emphasis is placed upon the Greek words in current use in modern English writing.

**13-14 Intermediate Greek** 4 credits

In the first semester selections from Xenophon and Herodotus and other prose writers are translated, and practice in writing Greek is continued. In the second semester passages from Homer are translated and various topics such as the influence of Homer upon English literature are investigated. Prerequisite: Greek 1-2.

\* Students who wish chiefly an acquaintance with Greek history should elect History 137.

**53-54 Scientific Terminology** 2 credits

A study of the fundamental Latin and Greek words used in the humanistic and natural sciences. Particular attention will be given to the terminology of the study in which each student is especially interested. Previous study of Greek or Latin is not a prerequisite. (RENTFRO)

## History

(History is one of the subject matter fields within the Department of Social Sciences.)

Professors CHURCH (Emeritus), GREEVER (Chairman);  
Associate Professors HAUSE, ROLLAND;  
Assistant Professors LEGUIN, WINKLER

*Primarily for Undergraduates*

These courses require no prerequisite. Students may enroll for a second semester course without having had the first semester course.

**3-4 History of Civilization** 3 credits

The first semester surveys the rise and contribution to the modern world of the great streams of civilization to the middle of the seventeenth century. The second semester continues this survey to the present. (HAUSE, WINKLER, LeGUIN)

**9-10 Introduction to United States History** 3 credits

A broad survey of the political, diplomatic, economic, social, and cultural history of the United States, from the earliest times to the present. (GREEVER, ROLLAND, WINKLER)

**57-58 History of England** 3 credits

A survey of the history of the British Isles; their political, social, economic, and religious development from prehistoric times to the present. (HAUSE)

*For Advanced Undergraduates and Graduates*

Ordinarily six credits in lower division courses in history are required for registration in the following courses. Exceptions may be made in special cases with the consent of the instructor concerned. Students may enroll for a second semester course without having had the first semester course.

**102 Modern Europe, 1492-1789** 3 credits First semester

The evolution of the modern state system and of international relations through the Renaissance, the Reformation, and the Age of Louis XIV, together with the eve of the French Revolution. (LeGUIN)

**103 History of France, 1715-1815** 3 credits Second semester

France from Louis XIV through Napoleon: the Old Regime and its critics, the Revolutionary experiments, the Empire and the career of Napoleon. (LeGUIN)

**105-106 History of Europe from Vienna to Versailles** 3 credits

Revolution and reform in the nineteenth century, and international friction after 1870, culminating in irredentist and imperialist rivalries and resulting in world war. (HAUSE)

**107-108 The British Empire** 2 credits

The Second Hundred Years' War and the resulting expansion of England in the West and the East; relations of England with other colonial powers; acquisition of India; rise of a consciousness of empire and an imperial policy; the Commonwealth of Nations. (HAUSE)

**109-110 History of Russia** 3 credits

First semester: the evolution of Russia from the ninth century through her appearance on the Western European scene in Napoleon's time; second semester: nineteenth and twentieth century Russia. Attention will be directed to the East-West conflict in Russian history and culture. (LeGUIN)

**111-112 History of Latin America** 3 credits

A study of Spanish and Portuguese America; winning Latin American Independence; rise of the republics of Mexico, Central America, Caribbean, and South America; Pan-Americanism; Panama Canal, Latin American cultural, social, and political evolution; international relations of Latin America and the Second World War. (ROLLAND)

**115-116 History of American Diplomacy** 3 credits

First semester: the period before 1914. Second semester: the period since 1914. The origins and development of major foreign policies (neutrality, the Monroe Doctrine, territorial expansion, promotion of commerce); inter-American relations; the problems of war and the quest for peace. (WINKLER)

**117-118 Recent Times** 3 credits

The first semester treats world history from 1914 to 1939; the second semester covers World War II and the postwar era. Emphasis is placed upon major domestic policies of nations and upon international policies in war and peace. Attention is given to national cultures and intercultural understanding. (HAUSE)

**123 Idaho and the Pacific Northwest** 3 credits Either semester

The political, economic and social development of the Pacific Northwest from the earliest times to the present, with particular attention to Idaho and the Inland Empire. (ROLLAND)

**127-128 History of the Westward Movement** 3 credits

The history of the westward migration of people, customs and institutions in the United States, appropriating and developing the wilderness to the uses of man. (GREEVER)

**133-134 Social and Cultural History of the United States** 3 credits

Traces the growth of customs, traditions, and intellectual habits which made up the American way of life from colonial times to the present. (GREEVER)

**135 Economic History of Europe** 3 credits Second semester

The history of agriculture, industry, and commerce in England and the continent. (HAUSE)

**136 Economic History of the United States** 3 credits First semester

History of agriculture, industry, and commerce in the Thirteen Colonies and the Federal Union. (GREEVER)

**137-138 Classical Civilization** 3 credits

The course deals with the Grecian and Roman governments, customs, art, literature, and institutions, and their contributions to the modern world. It is carried on through lectures by instructors, and reports, papers, and written exercises of the class. (ROLLAND)

**139-140 American Colonial and Revolutionary History to 1789** 3 credits

First semester: an examination of the foundations, and of the political, intellectual, economic and military history of the colonies to 1763. Second semester: the achievement of independence and the founding of a new nation, with emphasis on the Confederation period and the framing and adoption of the Constitution. (ROLLAND)

**141 History of France from Charlemagne through Louis XIV**

3 credits

First semester

The Gallo-Roman-Germanic background of French civilization; the development of the medieval monarchy; the New Monarchy; the French hegemony. (LeGUIN)

**142 History of Modern France, 1815-1958** 3 credits

Second semester

France from Napoleon to the Fifth Republic: the Restoration; Second Empire; Second, Third and Fourth Republics, with emphasis on the dilemma of authoritarian-revolutionary traditions and the effects of three wars with Germany. (LeGUIN)

**143 Problems in European Diplomatic History, 1500-1914**

3 credits

Either semester

The major trends in European diplomacy with emphasis upon the struggle for control over central Europe, the Near Eastern Question, the diplomacy of imperialism, and the diplomatic background of World War I. (WINKLER)

**145 The History of the Middle East** 3 credits

First semester

A survey of the history of the Middle East from early times to the present. Offered only in 1958-1959. (ESMER)

**155-156 Tudor and Stuart England** 3 credits

The first semester covers the Tudor rulers; the second semester covers the Stuarts. Emphasis on royal prerogative versus representative government, the rise of the middle class, exploration and colonialization, religious changes and conflicts, and cultural characteristics. (HAUSE)

**157 English Constitutional History** 3 credits

First semester

An analysis of the origin, expansion and change of the constitution and government of England from Anglo-Saxon times to the present. (HAUSE)

**173-174 Social and Cultural History of Europe** 3 credits

After an appraisal of the Classical heritage, the course will examine the development of European society and culture until contemporary times. Emphasis will be placed on periods of advance in social evolution and of great achievement in the arts, literature, music and thought. (LeGUIN)

**181-182 Medieval Europe** 3 credits

European History from the German invasions to the downfall of the feudal system. Contributions from the Classical, the Christian, and the Saracen civilization. (LeGUIN)

**191-192 Great Epochs of World History** 3 credits

Topical and comparative studies of major problems and concepts in history, such as church-state relations, the development of representative institutions, the idea and practice of revolution. The method is that of a pro-seminar; lectures are supplemented by readings, discussions, oral and written reports. (LeGUIN)



*Primarily for Graduates*

- 207-208 Seminar** 2 to 4 credits One or more each semester
- European History (LeGUIN)
  - English History (HAUSE)
  - American History (GREEVER, ROLLAND, WINKLER)
  - Problems in the History of the West (GREEVER, ROLLAND)
- 209-210 Directed Reading** 2 or 3 credits
- Problems in American History (GREEVER, ROLLAND, WINKLER)
  - Problems in European History (HAUSE, LeGUIN)
- Directed study and research in the literature of the field. In addition to acquiring proficiency at the graduate level of scholarship, the student, after consulting the instructor, must demonstrate his acquisition of a broader background by concurrent mastery in a related upper division subject for which no credit will be allowed. Prerequisite: Permission of the instructor.
- 211-212 Research and Thesis** Credits to be arranged
- This is thesis credit for students working toward a graduate degree. It is done under direction of the professor in whose subject the greater part of the work is offered. (STAFF)
- 290 Introduction to Historical Research** 2 credits First semester
- Techniques in compiling a bibliography, assembling material, composition, interpretation, and historical criticism. Required of all M.A. and Ph.D. candidates. (STAFF)
- 291-292 Historiography** 2 credits
- The nature of history, the major historians, ideas in history, philosophy of history, and a bibliography of the entire field of American, European and British history. First semester: American historians. Second semester: European and British historians. (STAFF)

**Home Economics**

Professor RITCHIE (Head); Associate Professors FEATHERSTONE, NIELSEN; Assistant Professors NEWCOMB, RAY, PEARSON; Instructor JACKLE; Professor PRICHARD

*Primarily for Undergraduates*

- 1 Cooking and Serving** 2 credits First semester
- Preparation of food and the serving of meals. Cost considerations. Two three-hour laboratory periods per week. (PEARSON)
- 6 Elementary Nutrition** 2 credits First semester
- Study of fundamentals of nutrition. Two lectures a week. (RITCHIE)
- \*8 Introduction to Foods** 4 credits Second semester
- Principles involved in basic cookery and meal planning. Two lectures and two three-hour laboratory periods a week. Prerequisite: Chem. 1 or 7, may parallel Chem. 2 or 8.

\* Not more than 4 credits can be earned in H.Ec. 4 and H.Ec. 8.

- 9 Introduction to Home Economics** 1 credit First semester  
Study of home economics and its relation to personal and family living. One lecture a week. (RITCHIE)
- 11-12 Art Structure and Design** 2 credits  
Study of line, dark and light and color. Crafts. Two three-hour laboratory periods a week. (FEATHERSTONE)
- 14 Handweaving** 1 credit Second semester  
Practical problems in weaving. One three-hour laboratory period a week. (FEATHERSTONE)
- 21 Clothing** 2 credits First semester  
Problems involved in construction and remodeling of clothes. Two three-hour laboratory periods a week. Open to non-majors only. (NIELSEN)
- 23 Textiles** 3 credits Second semester  
A study of the factors involved in the intelligent selection and purchase of textile materials including identification of fibers and fabrics, fundamental weaves, yarns, colors and finishes; standardization and trade conditions affecting the consumer. Two lectures and one two-hour laboratory period a week. (NIELSEN, JACKLE)
- 24 Elementary Clothing** 2 credits First semester  
Basic problems of clothing construction. Two three-hour laboratory periods a week. Clothing Placement Test is used for sectioning. Open to major students only. (NIELSEN, JACKLE)
- 25 Clothing Construction** 2 credits First semester  
Construction techniques with wool, fitting and pattern alteration, and special problems to meet individual needs. Two three-hour laboratory periods a week. (NIELSEN)
- 32 The House** 2 credits Second semester  
To develop an appreciation of problems in connection with the furnishing of a house. Two lectures a week. (FEATHERSTONE)
- 33 The House (laboratory)** 1 credit Second semester  
Practical problems in color, construction of draperies, slip covers, and decorative accessories. One three-hour laboratory period a week. Prerequisite: H.Ec. 32 or may be taken with H.Ec. 32. (FEATHERSTONE)
- 35 Home Nursing** 1 credit First semester  
Personal hygiene; family health; home care of sick. One two-hour laboratory period a week. (RAY)
- 61 Tailoring** 2 credits First semester  
Study of tailoring techniques; construction of coats and suits. Two three-hour laboratory periods a week. Prerequisite: H.Ec. 24. (NIELSEN)
- 65 Costume Design** 2 credits First semester  
A study of the design, selection, and purchasing of clothing for the individual and the family. Two two-hour periods per week with outside work. Prerequisite: H.Ec. 11. (FEATHERSTONE)
- 71 Selection and Preparation of Foods** 3 credits First semester  
Food preservation. Demonstration techniques. Nutritive values. Seasonal problems. One lecture and two three-hour laboratory periods a week. Prerequisite: H.Ec. 4. (PEARSON)

- 72 Marketing and Serving** 3 credits Second semester  
Problems in marketing and meal service. Nutritive values. Entertaining. One lecture and two three-hour laboratory periods a week. (PEARSON)
- 73 Food Preparation and Serving** 3 credits First semester  
I. Food preservation. II. Meal planning, marketing, and table service. III. Demonstration techniques. One lecture and two three-hour laboratory periods a week. Prerequisite: H.Ec. 8.
- 82 House Construction** 2 credits Second semester  
Problems involved in designing a house; the plan; the interior and exterior design; building materials; and methods of construction. Two lectures a week. Prerequisite: H.Ec. 11. (PRICHARD)

*For Advanced Undergraduates and Graduates*

- 103 Nutrition** 3 credits First semester  
Normal nutrition; food problems of adults and children. Three lectures a week. (RITCHIE)
- 104 Dietetics** 4 credits Second semester  
Diet therapy. Adaptation of the normal diet to meet needs of adults and children in disease and convalescence. Four lectures a week. Prerequisite: A.H. 105. (RITCHIE)
- 106 Problems in Nutrition** 2 credits Second semester  
Study of recent investigations in infant, child, and adult nutrition. Two lectures a week. (RITCHIE)
- 107 Investigation of Foods** 2 credits First semester  
Advanced course for investigation of problems in cookery. Formulation of new recipes. Testing of new food products. One lecture and one three-hour laboratory period a week. Prerequisite: H.Ec. 72. (PEARSON)
- 124 Advanced Clothing** 2 credits Second semester  
Advanced problems in garment construction. Selection, design and construction of suitable clothing for both children and adults. Two three-hour laboratory periods a week. Prerequisite: H.Ec. 24. (NIELSEN)
- 129 Pattern Design and Draping** 3 credits First semester  
A course to develop skill in designing, fitting, and constructing of basic patterns. One lecture and two three-hour laboratory periods a week. (NIELSEN)
- 130 Family Relations** 2 credits Second semester  
Study of underlying factors in family life, functioning in relationship between parents and children. Two lectures a week. (RITCHIE)
- 132 Household Equipment** 2 credits Second semester  
Study of household appliances, points of selection, methods of operation, and care. One lecture and one two-hour laboratory period a week. (NEWCOMB)
- 133 Home Management House** 4 credits Each semester  
Managing the house, planning and cooking all the meals, buying and paying bills. Time and money management emphasized. House residence and two lectures a week. (NEWCOMB)
- 135 Child Development** 3 credits First semester  
Study of human development as applied to the infant and pre-school child with emphasis on home living and parental guidance. Two lectures

and nursery school experience equivalent to one three-hour laboratory period per week. (RITCHIE, JACKLE))

- C136 Economic Problems of the Family** 2 credits Offered by correspondence only  
A course dealing with the problems of household production; earning and spending the family income.
- 137 Clothing for the Family** 2 credits Summer school  
Time saving techniques, clothing economics, and today's fabrics. Demonstration and discussion two hours a day. (NIELSEN)
- 138 Furnishings for the House** 2 credits Summer school  
Selection, purchasing, use and care of home furnishings. Demonstration and discussion two hours a day. (FEATHERSTONE)
- 141 Home Furnishing** 2 credits First semester  
A study of furniture, materials and color in the present day home. Practical problems. Two two-hour laboratory periods a week with outside work. (FEATHERSTONE)
- 144 Advanced Home Furnishings** 2 credits Second semester  
A study of furnishings and room plans for various types of houses. One lecture and two one-hour laboratory periods a week with outside work. (FEATHERSTONE)
- 146 Home Management Lectures** 2 credits Second semester  
Managing family resources; work simplification; emphasis on family finance and consumer buying. Two lectures a week. (NEWCOMB)
- 147 Home Management House Residence** 3 credits Each semester  
Managing the house, planning and cooking all meals, buying and paying bills. Time and money management emphasized. House residence and one lecture a week. Prerequisite: H.Ec. 146. (NEWCOMB)
- 152 Methods in Teaching Homemaking** 3 credits Second semester  
Building a philosophy of home economics education. Study of principles of teaching with guided observations. Three lectures a week. (RAY)
- 153 Problems in Teaching Homemaking** 2 credits Each semester  
Curriculum planning. Study and evaluation of materials and methods of teaching homemaking. Two lectures a week. Prerequisite: H.Ec. 152. (RAY)
- 156 Methods in Adult Homemaking Education** 2 credits Each semester  
Participation in developing and evaluating a community program. Two lectures a week. Prerequisite: H.Ec. 152. (RAY)
- 157 Student Teaching in Homemaking Classes** 6-9 credits Each semester  
Observation, teaching and school lunch experience under supervision in Moscow and other high schools. Prerequisite: H.Ec. 152 and parallel H.Ec. 153. (RAY)
- 166 Historic Costume** 2 credits Second semester  
A comprehensive study of historic and national dress. Two lectures a week. (FEATHERSTONE)
- 182 Quantity Cookery** 3 credits Second semester  
Preparation of food in large quantities; menu planning for institutions; experience in food service. One lecture and laboratory. Prerequisite: H.Ec. 71. (NEWCOMB)

- 183 Institution Administration** 4 credits First semester  
Includes principles of organization and scientific management applied to institutional administration. Selection, arrangement, and care of institution equipment. Three lectures and one two-hour laboratory period a week. One two-day field trip. (NEWCOMB)
- 185 Institution Food Buying** 2 credits First semester  
Includes study of food distribution, specifications and legislation. Methods of quantity food purchasing. Two lectures a week. (NEWCOMB)
- Primarily for Graduates*
- 201-202 Research and Thesis** Credits to be arranged Each semester  
(STAFF)
- 203 Home Economics Education Workshop (S181)** 2-4 credits Summer session
- 205 Seminar** 1-2 credits Either semester  
(STAFF)
- 207 Technique of Supervision** 2 credits Summer session

## Honors

These courses are offered by the various departments within the College of Letters and Science.

- 101-102 Honors I** 3 credits  
A directed program of study offered by the various departments individually or collectively to provide the student opportunity for more advanced and individual work than normally available to undergraduates. (STAFF)
- 103-104 Honors II** 3 credits  
Intended to provide the student with more intensive training and/or research experience than is ordinarily available to the undergraduate. (STAFF)

## Horticulture

Professors WOODBURY (Head) and VERNER;  
Assistant Professor SNYDER

*Primarily for Undergraduates*

- 56 Home Flower Growing** 2 credits Second semester  
For those not majoring in Horticulture. Emphasis on care of house plants and garden flowers and flower arranging in the home. One lecture and one two-hour laboratory period per week. (SNYDER)
- 58 Propagation of Agricultural Plants** 3 credits Second semester  
A course designed to acquaint the beginning student with horticulture plant materials and methods of propagation. Emphasis will be placed on seed formation, physiology of the seed, seed longevity and storage, and

methods of seeding. Plant anatomy and physiology as they relate to asexual reproduction will be studied. Some of the common propagation methods will be studied in the laboratory. Two lectures and one two-hour laboratory period per week. Prerequisite: Bot. 3 or equivalent. May be taken concurrently. (SNYDER)

**\*110 Commercial Floriculture** 3 credits Second semester

Emphasis on classification and production of commercial floricultural crops. All phases of greenhouse operation and wholesale and retail marketing are considered. Two lectures and one two-hour laboratory period per week. One one-day field trip. (SNYDER)

**117 Woody Plant Materials** 2 credits First semester

A taxonomic study of ornamental woody plants for landscape use. Growth characteristics of deciduous and evergreen trees, shrubs, and vines are critically studied. Two two-hour laboratory periods per week. One one-day field trip. Prerequisite: Bot. 3 or equivalent. (SNYDER)

**\*120 Landscape Gardening** 3 credits First semester

A study of the basic principles of landscape design, and the use of woody plant materials in landscape practice. Two lectures and one two-hour laboratory period per week. One one-day field trip. (SNYDER)

**†122 Advanced Landscape Design** 3 credits Second semester

Principles studied in Hort. 120 are applied in a series of practical problems. One lecture and two two-hour laboratory periods per week. One one-day field trip. Prerequisite: Hort. 120. (SNYDER)

**\*123 Floral Decorations** 3 credits First semester

A study of the use of flowers as a decorative medium for the homemakers and the professional. Special uses of flowers, table settings, banquet decorations and commercial designs are featured. One lecture and two two-hour laboratory periods per week. (SNYDER)

**†130 Garden Flowers** 3 credits Second semester

Outdoor culture and uses of annual and perennial flowering plants. Two lectures and one three-hour laboratory period per week. One one-day field trip. (SNYDER)

**†140 Vegetable Gardening** 3 credits Second semester

Fundamental principles and practices in the production and handling of vegetable crops. Two lectures and one two-hour laboratory period per week. Prerequisite: Hort. 58. (WOODBURY)

**†141 Vegetable Seed Production** 2 credits First semester

Fundamental principles and practices of vegetable seed production and of handling and marketing of vegetable seeds. Two lectures per week. (WOODBURY)

**\*147 Potato Culture** 3 credits First semester

A course dealing with the history, acreage and distribution, varieties, planting and general culture and handling of the potato. Designed especially for those desiring to grow potatoes on a commercial scale. Three lectures per week. (WOODBURY)

**†161 Tree-Fruit Production** 3 credits First semester

Fundamental principles and practices in the production and handling of tree-fruit crops. Two lectures and one recitation period per week. One one-day field trip. Prerequisite: Hort. 58. (VERNER)

\* Offered in alternate years; given in 1959-60.

† Offered in alternate years; given in 1960-61.

- \*168 Small-Fruit Production** 2 credits Second semester  
Fundamental principles and practices in the production and handling of small-fruit crops. Two lectures per week. (VERNER)
- \*183 Systematic Horticulture** 2 credits First semester  
Classification, nomenclature, and description of horticultural plants with consideration of varietal characteristics. Two lectures per week. Three one-day field trips. (WOODBURY, VERNER)
- †**185 Improvement of Horticultural Crops** 2 credits First semester  
Study of the characteristics desired, methods used, results obtained, and the importance of breeding and selection, in the improvement of woody and herbaceous horticultural plants. Two lectures per week. Prerequisite: Agron. 101. (WOODBURY, VERNER)
- S186 Horticultural Practicum** 1-3 credits Summer session  
For students employed through the summer for practical or technical field work when this is supplemented by organized study under supervision of a staff member on the campus or at a branch or field station. Requires written reports and the same number of student-instructor contact hours per credit as for courses on the campus. Prerequisites: junior standing and consent of department head. (STAFF)
- 193-194 Special Problems** 3 credits Each semester  
A course affording an opportunity for advanced majors to secure additional, specialized training in one of the three main subdivisions of the field, namely, fruit production, vegetable production or ornamental horticulture. Assigned reading or laboratory work as arranged. Prerequisite: Consent of department head. (STAFF)
- 195-196 Pro-Seminar** 1 credit Each semester  
Review of current literature in Horticulture. Papers by members of the department and students. For advanced majors only. (STAFF)

*Primarily for Graduates*

- 201-202 Advanced Horticulture** 3 credits Each semester  
(STAFF)
- 203-204 Research and Thesis** Credits to be arranged Each semester  
(STAFF)
- 205-206 Seminar** 1-2 credits Each semester  
Review of experimental work. Papers by members of the department on investigations in progress. Student reports on special topics. One hour per week. (STAFF)

\* Offered in alternate years; given in 1959-60.

† Offered in alternate years; given in 1960-61.

## Humanities

Professor COE (Head); Associate Professor TENNEY

The Department of Humanities includes four subject matter fields: Dramatics, English, Languages, and Speech. A student in this department may major in Dramatics, English, French, German, Latin, Spanish, or Speech.

For course offerings, see under:

**Dramatics**  
**English**  
**French**  
**German**  
**Greek**  
**Humanities**

**Italian**  
**Languages**  
**Latin**  
**Russian**  
**Spanish**  
**Speech**

The Department of Humanities offers one general introductory course.

- 1-2 Introduction to the Humanities**      2 credits      Each semester  
A study of selected masterpieces, including literature, music, and art, illustrating the development of Western thought and culture. (COE, TENNEY, TOLLESON)

## Industrial Arts Education

(Industrial Arts Education is one of the subject matter fields within the College of Education.)

Assistant Professor BIGGAM

- 40 Woodworking I**      3 credits      Each semester  
A basic course in wood-working for industrial arts teachers with emphasis placed on the selection of suitable projects and the use and care of hand tools. One hour lecture and four hours laboratory. One one-day field trip to nearby mills or lumber yards. (BIGGAM)

- 51 Educational Arts and Crafts**      3 credits each registration      Second semester  
A course for the instruction of teachers in the use of art and craft materials such as plastics, leather, clays, metals, etcetera as teaching media. This course may be repeated when different media are used for a total of 6 semester credits. (BIGGAM)

- a. Plastics
- b. Leather
- c. Metals
- d. Clay

- X60 Crafts for Elementary School Teachers**      3 credits

A course designed to give teachers a working knowledge of the common hand tools and processes useful in developing activity programs in elementary schools. Correlation of manual activities with instruction in elementary school subjects. One hour lecture and four hours laboratory. (BIGGAM)



- 70 Woodworking II** 3 credits Each semester  
The use of machine tools in working with wood. "A" General Machine Woodwork will include some work with the lathe as well as other machines. "B" is devoted entirely to wood turning. (BIGGAM)  
A. General Machine Woodwork  
B. Woodturning
- 110 Maintenance of Tools and Equipment** 3 credits First semester  
The selection, care and maintenance of hand and machine tools common to industrial arts shops. Two two-hour laboratory periods. Required of all Industrial Arts Education majors. Prerequisite: I.A.Ed. 70 or equivalent. (BIGGAM)
- 151 Organization and Administration of Industrial Arts Programs** 3 credits First semester  
Types of industrial organizations and shops. Problems of administration, shop layout, care of equipment, storage and issuing of tools and supplies, and techniques of shop instruction. Prerequisite: junior or senior standing. (BIGGAM)
- 162 Industrial Arts Curriculum** 3 credits Second semester  
Course making, objectives, content selection and arrangements, preparation of job and information assignments. Prerequisite: junior or senior standing. (BIGGAM)
- 172 Industrial Arts Methods** 3 credits Second semester  
General concepts and techniques of method particularized for Industrial Arts teaching situations. Conduct of shop classes without reference to production work: plans, demonstrations, drill, testing, evaluating and grading reports and records. (BIGGAM)

## Italian

For general information concerning Languages see Page 266.

*Primarily for Undergraduates*

- 1-2 Elementary Italian** 4 credits  
Pronunciation, vocabulary study, reading practice, exercises in spoken Italian, functional grammar. (KAPPLER)
- 13-14 Intermediate Italian** 4 credits  
The aim of this course is to develop a sound reading knowledge of Italian. Systematic grammar review and practice in speaking and writing are included. Prerequisite: Italian 2 or the equivalent. (KAPPLER)

## Journalism

(Journalism is one of the subject matter fields within the Department of Communications)

Professor PRICE (Chairman); Instructor NELSON;  
Professors FITZGERALD and GIBBS

*Primarily for Undergraduates*

- 7-8 The News** 1 credit Each semester  
News as a social process. How to understand news. Production, editing, and distribution of news. (PRICE)
- 81 Elements of Journalism** 2 credits First semester  
An introduction to the principles of news writing for newspapers and radio. A study of organization and methods of news media. All written work is done on the typewriter. (PRICE)
- 82 Reporting** 4 credits Second semester  
Types of news and news sources. Practical work in gathering and writing news for newspaper and radio use. Two recitation periods and two three-hour laboratory periods per week. Prerequisite: Journalism 81. (PRICE, NELSON)

*For Advanced Undergraduates and Graduates*

- 101-102 College Journalism** 1 credit  
Credit will be given for work on University publications done under the following conditions: the student must be an upperclassman majoring in journalism; he must register for the credit. (NELSON)
- 162 Magazine Article Writing** 2 credits Second semester  
For upperclass students majoring in any field who are seriously interested in magazine writing. All types of magazines are studied. Students develop articles to submit to trade, regional, and national magazines for publication. Prerequisite: Mastery of the elements of composition and ability either as professional writers or as part-time writers in specialized fields. (GIBBS)
- 172 Vocational Journalism** 2 credits First semester  
Practical help in dealing with newspapers, magazines, and the radio. Primarily for majors in agriculture who are planning careers as county agents, teachers of vocational agriculture, or other fields involving public relations. Open to others by permission of the instructor. (FITZGERALD)
- 175 School Publications Workshop** 2 credits Summer school  
Study and practice in writing, editing, and management of school or college publications. Principles of news in the school situation. Letterpress, lithograph, and mimeograph methods of production. (PRICE)
- 181 Advanced Reporting** 4 credits First semester  
Practical training in reporting and newswriting. General assignment and "run" work for city daily newspaper. Study of courts, public offices, and public affairs as a source of news. Two recitations and two three-hour laboratory periods weekly. Prerequisite: Jour. 81-82 or equivalent. (PRICE, NELSON)

- 183 Editorial Writing** 2 credits First semester  
Discussion of current events. The process of logical thinking. Instruction and practice in the writing of editorial, news reviews and columns. Prerequisite: Jour. 81-82, or consent of the instructor. (PRICE)
- 184 News Editing** 4 credits Second semester  
Problems in news selection, evaluation, editing, and display. Responsibilities of the copyreader. Three recitations and one three-hour laboratory period weekly in copyreading, headline writing, picture editing, and make-up. (PRICE)
- 185 History of Journalism** 2 credits First semester  
History of the principles and the persons contributing to the development of American journalism. Present tendencies. Outstanding newspapers and editors. (NELSON)
- 186 Special Feature Articles** 3 credits Second semester  
The writing of non-fiction special feature articles for newspapers and magazines. Practical and specific study of markets for manuscripts. Individual instruction is given during private conferences. Prerequisite: Jour. 181. (PRICE)
- 188 Newspaper Promotion and Advertising** 3 credits Second semester  
Instruction and practice in the preparation of newspaper promotion. Study of campaigns. Analysis of newspaper practices to discover promotion ideas. Instruction and practice in soliciting newspaper advertising. Study of copy-mat services. Practice in layout and writing of advertisements for newspapers. Newspaper advertising typography. Two recitations and one three-hour laboratory per week. Prerequisite: Jour. 181, or special permission of the instructor. (NELSON)
- 191 Law of the Press** 2 credits First semester  
Chiefly a study of the law of libel. Consideration is given also to such topics as the right of privacy, contempt of court, freedom of the press, copyright, statutory limitations, postal regulations, and the right to reprint public affairs. (PRICE)
- 194 News Production** 3 credits Either semester  
Laboratory work on a city daily or other publication, or in the preparation of news for a radio or television station. Two three-hour laboratory periods and one conference per week. Open to students who have demonstrated ability in reporting. (NELSON)
- 196 Pro-Seminar** 1 credit Second semester  
A study of current professional and research publications in journalism. Prerequisites: Jour. 181 and senior standing. (PRICE, NELSON)
- 197 Problems in Newspaper Publishing** 3 credits First semester  
Editorial, business, and print shop problems of the weekly and small daily newspaper. Circulation, advertising, promotion, and administration. Newspaper correspondence. The newspaper analysis and community survey. One print shop laboratory weekly. Prerequisite: Jour. 81-82, or special permission of the instructor. (NELSON)

## Languages

(Languages constitute a subject matter field within the Department of Humanities.)

Professor ELDRIDGE, Assistant Professor ASHBY (Emeriti);  
Associate Professors HOWE, WOLFE (Chairman), RENTFRO;  
Assistant Professors KAPPLER, SUTTNER; Instructors MURBACH, OGLES

This field includes French, German, Greek, Italian, Latin, Russian and Spanish.

A year's study of a foreign language in high school is considered the equivalent of a semester's work in college in the same subject. A student who is continuing a language begun in high school should enter the intermediate course (e.g., French 13, German 13, Latin 13, or Spanish 13) if he has had in high school two years' study of the subject; he should begin with the second semester of the elementary course (e.g., French 2, German 2, Latin 2, or Spanish 2) if he has had but one year's study of it in high school. He may take a less advanced course in review, but he will not receive credit for it.

A student should not attempt to take concurrently the elementary courses in both French and Spanish.

In each language the intermediate course, or equivalent preparation, is a basic prerequisite to all advanced courses

For course offerings see under:

**French**  
**German**  
**Greek**  
**Italian**

**Latin**  
**Russian**  
**Spanish**

## Latin\*

For general information concerning Languages see Page 266.

*Primarily for Undergraduates*

### 1-2 Elementary Latin 4 credits

Besides preparing to read Latin the course deals especially with the Latin-English words and phrases in literature, law, and the sciences. Translation of easy selections from classic myths and stories from Roman history. Conversation using modern Latin vocabulary. (RENTFRO)

### 13-14 Intermediate Latin 4 credits

Translation of narratives dealing with Roman life combined with a review of grammar, and study of idioms, reading of selected orations of Cicero, and study of Roman government constitute the work of the first semester. In the second semester Vergil's *Aeneid* is translated in part and the principles of his poetry are studied. Prerequisite: Lat. 1-2, or equivalent. (RENTFRO)

\* Students who wish chiefly an acquaintance with Roman history and institutions should elect History 137-138, "Classical Civilization."

*For Advanced Undergraduates and Graduates*

- C107 Teachers' Review of Latin** 3 credits Offered by correspondence only  
Intended primarily for teachers in service. The textbook, drawing its illustrative material from Roman life and institutions, provides a thorough review of vocabulary, the forms and structure of the language, and other points usually taught in a high school course.
- C108 Teachers' Review of Latin** 3 credits  
Continuation of Latin C107.
- 101-102 Advanced Latin** 2 or 3 credits  
Study of selections from Latin authors, including Horace, Livy, and Pliny.
- 121-122 Directed Reading** 2 or 3 credits  
Open by special permission to advanced students in Latin.
- 123 History of Latin Literature** 2 credits First semester  
A study of development of Latin literature to the third century, A.D. Textbooks, lectures and outside reading in translation. Prerequisite: Six credits in advanced undergraduate courses in Latin.
- 124 Latin for Teachers** 2 credits Second semester  
Comprehensive and advanced work in detail in Latin philology necessary for the efficient teacher. Prerequisite: Lat. 53-54, or 101-102, or equivalent courses.
- 125-126 Pro-Seminar** 1 to 3 credits
- 195-196 Thesis** 2 credits  
For majors only, in their senior year.

*Primarily for Graduates*

- 201-202 Research and Thesis** Credits to be arranged  
Special topics in Latin literature or antiquities will be set for investigation.

**Law**

Professors STIMSON, BROCKELBANK, WALENTA, BELL and BERMAN;  
Associate Professor PETERSON

Registration in any law course by non-law students requires permission in advance by the Dean of the College of Law.

**FIRST YEAR**  
(Required)

- 101 Contracts I** 3 credits First semester
- 102 Contracts II** 3 credits Second semester  
Formation and performance of promissory undertakings in formal and informal business transactions, including breach and the remedies therefor. (STIMSON)

- 103 Legal Writing I** 1 credit First semester
- 104 Legal Writing II** 1 credit Second semester  
Practice in the use of legal source materials and preparation of memoranda and appellate briefs in relation to concepts of personal property, its possession, ownership, and use as security. (BROCKELBANK)
- 106 Agency** 2 credits Second semester  
Creation, form, and nature of the agency relationship; powers, duties and liabilities of agents and principals; termination of the representative relationship with its legal effect. (WALENTA)
- 109 Judicial Remedies** 4 credits First semester  
The common law and equity as an introduction to modern civil procedure, including forms of action, extraordinary legal remedies, equitable remedies, organization of courts, jurisdiction and judicial power. (PETERSON)
- 112 Real Property** 3 credits First semester  
The basic history and fundamentals of real property law; estates; common-law methods of conveyancing and protecting possessory estates; reversions; remainders; the statute of uses; executory limitations; merger; acceleration; powers of appointment; restraints on alienations; rule against perpetuities; suspension of the power of alienation. (WALENTA)
- 114 Constitutional Law** 3 credits Second semester  
The function of judicial review; the national state and its governmental organization; independence and interrelation of departments; citizenship, national and state; due process of law; equal protection of the laws; retrospective laws; regulations of interstate commerce. (BROCKELBANK)
- 115 Torts I** 3 credits First semester
- 116 Torts II** 2 credits Second semester  
The law of civil injuries, including both intended and unintended interference with personal and property interests as well as liability without fault. (BELL)
- 122 Trusts** 3 credits Second semester  
The nature, creation, elements and administration of express trusts. (BERMAN)

#### SECOND AND THIRD YEARS

- 203 Persons** 2 credits First semester  
Marriage, divorce, relations between husband and wife, and between parent and child. (BROCKELBANK)
- 205 Community Property** 2 credits First semester  
Property rights of husband and wife; liability of one spouse to the other and to third persons in tort and contract; presumptions and proof as to character of property, devolution of community and separate estate. (BROCKELBANK)
- 207 Evidence** 4 credits First semester  
The rules governing the presentation of evidence to the tribunal; judicial notice; burden of proof and presumptions; relevancy; examination and impeachment of witnesses; competency and privilege; expert opinion; hearsay; best evidence rule; authentication; functions of judge and jury. (BELL)

- 212 Wills** 2 credits First semester  
Testate and intestate succession. (BERMAN)
- 213 Administration of Decedents' Estates** 1 credit Second semester  
(BERMAN)
- 216 Titles** 3 credits First semester  
Nature of title to interests in land; modes and means of conveyancing; statute of frauds; adverse possession; boundaries; priorities and title of record; covenants; easements; licenses; rents; fixtures and waste; escrows and examination of abstracts. (WALENTA)
- 224 Administrative Law** 3 credits Second semester  
Scope of administrative law; functions of administrative agencies; procedures before administrative tribunals; judicial control of administrative actions. (BROCKELBANK)
- 226 Municipal Corporations** 2 credits Second semester  
Creation, consolidation and dissolution of municipal corporations; municipal powers, contracts, quasi contractual liability, and debt limitations; city zoning; licenses and franchises; tort liability of municipalities. (BELL)
- 227 Legal Profession I** 1 credit First semester  
Problems as they come to a lawyer in his office involving legal ethics; facts embodying several unlabeled branches of the law, counseling and drafting. (PETERSON)
- 228 Legal Profession II** 1 credit First semester  
A continuation of Legal Profession I. (WALENTA)
- 229 Estate Planning** 3 credits Second semester  
The making of estate plans involving the drafting of necessary instruments (wills, deeds, trust agreements) to carry out the donor's intent without undue cost, delay or violating applicable rules of law. The course will provide basic training in future interests, State and Federal gift and estate taxation. (WALENTA)
- 231 Code Pleading** 3 credits Second semester  
Jurisdictions, pleading and parties with emphasis on practice under the Idaho Code and the Federal Rules of Civil Procedure. (PETERSON)
- 233 Criminal Law and its Administration** 3 credits Second semester  
The sources and purposes of the criminal law; the meaning of criminal responsibility; the elements of particular crimes; the administration of criminal justice. (BERMAN)
- 236 Creditors' Rights** 3 credits First semester  
Insolvency, fraudulent conveyances, general assignments, receivership, bankruptcy. (BERMAN)
- 239 Contracts III** 3 credits First semester  
The remedies available to a contracting party, including damages, specific performance, reformation and rescission; the law of quasi contracts, and of restitution based on the concept of unjust enrichment, including a study of devices to secure restitution, such as constructive trust, equitable lien and subrogation. (BERMAN)
- 241 Bills and Notes** 3 credits First semester  
The concept of negotiability and its consequences in relation to promissory notes, checks, and other bills of exchange. (BROCKELBANK)

- 242 Suretyship** 2 credits First semester  
The inception and consequences of guaranty and accommodation. (BROCKELBANK)
- 248 Irrigation and Mining Law** 3 credits Second semester  
A study of the acquisition and protection of rights to water and minerals; riparian and appropriation rights to water. Due consideration is given to the Federal and State laws, with particular emphasis on conservation and development of our natural resources. (WALENTA)
- 255 Conflict of Laws I** 2 credits First semester  
Principles for ascertaining the applicable law, time when law applies, area, property and parties to which and to whom law applies. (STIMSON)
- 256 Conflict of Laws II** 2 credits Second semester  
Jurisdiction of courts, jurisdiction for divorce, law governing the administration of estates of decedents and insolvents, the enforcement of foreign judgments. (STIMSON)
- 268 Business Associations** 3 credits Second semester  
The formation of partnerships, corporations, and other types of business organizations; a comparison of the various forms; limitations on powers and authority of partners, corporate officers and directors; corporate securities; shareholders' and creditors' rights in corporations. (BELL)
- 274 Taxation** 3 credits Second semester  
The Federal income tax and its consequences in legal transactions. (PETERSON)
- 277 Labor Law** 2 credits Second semester  
The law governing relations between employer and employee, including the strike, boycott, picketing and collective bargaining; the National Labor Relations Act and comparable state legislation. (BELL)
- 279 Practice Court I** 1 credit First semester
- 280 Practice Court II** 1 credit Second semester  
See description of the two semesters of Practice Court page 103 (PETERSON)
- 281-282 Research** 1 or 2 credits Each semester  
Individual research on a selected problem and the writing of a legal essay embodying the results of that research. No student shall enroll for a total of more than two semester credits of legal research. (ALL MEMBERS OF THE FACULTY)

## Library Science

(Library Science is one of the subject fields within the College of Education.)

- 120 Classification and Cataloging** 4 credits Summer school  
Elementary classification and cataloging for school libraries. Some aspects of the general administration for school libraries. (ANDERSON)
- 121 Book Selection for School Libraries** 3 credits Summer school  
A study of lists, book reviews, and other aids to book selection in general. (ANDERSON)



- 122 **Use of the School Library**     2 credits     Summer school  
 Methods of interesting students in the library and teaching them to use it to the best advantage. Covers use of catalog, bibliographies, indexes, periodicals and other sources of information. (ANDERSON)
- 123 **Reference in School Libraries**     3 credits     Summer school  
 The study and use of reference books in school libraries. (ANDERSON)
- 124 **Children's Literature**     3 credits     Summer school  
 Selection of children's literature for elementary school libraries, including trends in children's literature and reading interests of various ages. Includes illustrators of children's books. (ANDERSON)
- 125 **School Library Problems**     2-4 credits     Summer school  
 Directed study of the problems of organization and management of school libraries. (ANDERSON)

## Mathematics

Professor BUSH (Head); Associate Professors BOTSFORD, SAGAN;  
 Assistant Professors CROWLEY, LABARRE, ROORDA, WALKER;  
 Instructors GRAHN, ROHLFS; Acting Instructors KESTER,  
 LUTHER, NANCE, NATHAN, POTRATZ

*Primarily for Undergraduates*

- A Remedial Mathematics**     No credit     Each semester  
 A second course in advanced high school mathematics integrated with Mathematics 11. Not offered separately and available only in conjunction with registration in Mathematics 11. Designed for students whose preparation in mathematics is insufficient. Two periods per week. Prerequisites: One year of high school algebra and one year of plane geometry. (STAFF)
- C Elementary High School Algebra**     No credit     First semester  
 A course to meet the entrance requirements of a year of high school algebra assuming no previous work in the subject. Four periods per week. (STAFF)
- E Plane Geometry**     No credit     Each semester  
 A course in plane geometry to meet the entrance requirements of one year of high school geometry assuming no previous work in the subject. (STAFF)
- \*1-2 Fundamentals of Mathematics**     4 credits     Each semester  
 A terminal course stressing the nature of mathematics, its fundamental concepts, skills, and applications rather than the development of manipulative skills of an involved nature. Topics chosen from algebra (including algebra of sets), trigonometry, analytic geometry, the calculus, probability and statistics. Prerequisites: One year of high school algebra and one year of plane geometry. (STAFF)
- \*11-12 Elementary Mathematical Analysis**     5 credits     Each semester  
 A thorough study of college algebra, trigonometry, analytic geometry, and an introduction to the calculus. Prerequisites: One and one-half years

\* A maximum of 12 credits will be allowed for any combination of Math. 1, 2, 11, 12. If 1 is followed by 11, 11 shall carry a maximum of 3 credits.

of high school algebra and one year of plane geometry or one year of algebra, one year of plane geometry, and concurrent registration in Mathematics A. (STAFF)

- 14 Mathematics of Finance** 3 credits First semester  
The mathematical principles involved in the problems of compound interest, annuities, bonds, and insurance. Prerequisite: Math. 1 or 11. (ROORDA, WALKER)
- 51-52 Calculus** 4 credits Each semester  
Fundamental processes and applications of differential and integral calculus including an introduction to differential equations and infinite series. Prerequisite: Math. 2 with consent of the instructor or Math. 12. (STAFF)

*For Advanced Undergraduates and Graduates*

- 101-102 Advanced Engineering Mathematics** 3 credits Each semester  
Ordinary differential equations, Fourier series, Laplace transform, vector analysis, partial differential equations, orthogonal functions, differentiation and integration of functions of one complex variable. Prerequisite: Math. 52. (STAFF)
- 104 General Astronomy** 3 credits Second semester  
An introduction to descriptive and mathematical astronomy. Prerequisite: Permission of the instructor. (CROWLEY)
- 105 Probability** 3 credits First semester  
A study of mathematical probability with applications and an introduction to mathematical statistics. Prerequisite: Math. 52. (BUSH)
- 106 Mathematical Statistics** 3 credits Second semester  
The mathematical theory of modern statistics. Prerequisite: Math. 105. (BUSH)
- 108 Numerical Analysis** 3 credits Second semester  
Numerical methods useful in solving applied problems with an introduction to the calculus of finite differences. Prerequisite: Math. 52. (CROWLEY)
- 109-110 Higher Algebra** 3 credits Each semester  
An introduction to abstract algebra. Prerequisite: Math. 52 or consent of instructor. (LABARRE)
- 113-114 Pro-Seminar** 1 credit Each semester  
A survey of aspects of mathematics not usually covered in standard courses. Students with sufficient linguistic preparation will be assigned readings in mathematics in French, German, and Russian. The content will be variable to meet specific student needs and may be taken for credit more than once. (STAFF)
- 115 Matrices** 3 credits Either semester  
Linear algebra, quadratic forms, orthogonal and Hermitean matrices, eigenvalues. Prerequisite: Math. 52 or consent of instructor. (CROWLEY)
- 121-122 Advanced Calculus** 3 credits Each semester  
Partial differentiation, definite integral, vector analysis, line and surface integrals, infinite series, and theory of integration. Prerequisite: Math. 52. (BOTSFORD)

**131-132 Applied Mathematics**      3 credits      Each semester

The variational principles of point mechanics and of mechanic continua. Boundary value problems for partial differential equations of mathematical physics. Theory of convergence, Fourier series and orthogonal functions. Eigenvalue problems and computation of eigenvalues. Prerequisite: Math. 101. (SAGAN)

**142 Mathematics for Teachers**      3 credits      Either semester

The natural numbers, theory of numbers, real and complex numbers, algebra of sets, geometrical constructions and the impossibility of certain geometrical constructions, algebra of number-fields, projective geometry, Euclidean geometry. Prerequisite: Math. 52 or consent of instructor. (BOTSFORD)

*Primarily for Graduates*

**203-204 Seminar**      1 credit      Each semester

The purpose of this seminar is to acquaint students during their first two years of graduate studies with various phases of mathematics that are still open to research. Can be taken for credit twice. (STAFF)

**207 Number Theory**      3 credits      Either semester

Theory of integers, Diophantine equations, theory of residues, quadratic forms, analytic and geometric number theory, Diophantine approximations. Prerequisite: consent of instructor. (SAGAN)

**210 Operations Research**      3 credits      Either semester

An analytic approach to the problems of production, business organization, and tactics using mathematical methods. Prerequisite: consent of the instructor. (BUSH)

**216 Foundations of Mathematics**      3 credits      Either semester

Theory of sets, the paradoxes, intuitionism and formalism, statement and predicate calculus, formalization of number theory, primitive recursive functions, Goedel's theorem. Prerequisite: Math. 109 or consent of the instructor. (SAGAN)

**217 Vector Spaces**      3 credits      Either semester

Euclidean, affine, and projective geometry from a group-theoretic standpoint. Prerequisite: Math. 115 or consent of instructor. (LABARRE)

**218 Differential Geometry**      3 credits      Either semester

Theory of space curves, surfaces and geometry on surfaces, Gaussian and mean curvature, non-Euclidean geometries, Riemannian geometry. Prerequisite: Math. 217 or consent of instructor. (BOTSFORD)

**220 Abstract Algebra**      3 credits      Either semester

Theory of groups, rings, and ideals, fields and field-extensions, Galois' theory. Prerequisite: Math. 109 or consent of instructor. (LABARRE)

**221 Complex Variables**      3 credits      Either semester

An introductory course in the theory of functions of a complex variable. Prerequisite: consent of the instructor. (BOTSFORD)

**223-224 Research and Thesis**      3 credits      Each semester

For Master's Degree candidates only. (STAFF)

**225 Theory of Games**      3 credits      Either semester

Zero-sum two person games, minimax theorem, Savage's criterion, applications in statistics, economics and warfare. Prerequisite: consent of instructor. (LABARRE)

- 226 Real Variables** 3 credits Either semester  
Selected topics in the theory of functions of a real variable. Prerequisite: Consent of the instructor. (CROWLEY)
- 227 Measure Theory and Integration** 3 credits Either semester  
The modern theory of integration from the standpoint of abstract measures. Prerequisite: Math. 226 or permission of the instructor. (LABARRE)
- 228 Mathematical Economics** 3 credits Either semester  
A study of contributions of leading mathematical economists from Pareto to the present day. Prerequisite: consent of instructor. (BUSH)
- 229 Advanced Probability Theory** 3 credits Either semester  
Recurrent events, ruin problems, Markov-chains and other advanced topics. Prerequisite: consent of instructor. (BUSH)
- 230 Linear Programming** 3 credits Either semester  
A mathematical study of the optimal allocation and use of resources and the study of linear inequalities. Prerequisite: Math. 225 or consent of instructor. (BUSH)
- 234 Analysis of Variance and Design of Experiments** 3 credits Either semester  
The general linear hypothesis, least squares, and linear estimation, balanced incomplete block, randomized and other designs. Prerequisite: consent of instructor. (BUSH)
- 235-236 Advanced Mathematical Statistics** 3 credits Each semester  
Multivariate analysis, testing of hypotheses, and theory of estimation. Prerequisite: Math. 106 or consent of instructor. (BUSH)
- 238 Advanced Matrix Theory** 3 credits Either semester  
Canonical representations, eigenvalues, equivalent and similar matrices, functions of matrices. Prerequisite: consent of instructor. (BUSH)
- 241 Theory of Ordinary Differential Equations** 3 credits Either semester  
Existence and uniqueness of solutions of systems of ordinary differential equations of first order, homogeneous and nonhomogeneous boundary value problems. Prerequisite: Math. 101 or consent of instructor. (SAGAN)
- 243 Theory of Laplace Transform** 3 credits Either semester  
Linear functional transforms, theory of Laplace transform and its inversion, theory of distributions (Delta-functions). Prerequisites: Math. 101 and Math. 221. (SAGAN)
- 244 Calculus of Variations** 3 credits Either semester  
Theory of first and second variation, Weierstrass' field theory, isoperimetric problems. Prerequisite: Math. 241 or consent of instructor. (SAGAN)
- 245 General Topology** 3 credits Either semester  
Topological spaces, topological spaces with a countable basis, Hausdorff-spaces, normal topological spaces, metric spaces, complete spaces. Prerequisite: Math. 226 or consent of instructor. (LABARRE)
- 246 Advanced Theory of Functions** 3 credits Either semester  
A continuation of Math. 221. Prerequisite: Math 221 or consent of instructor. (SAGAN)

- 247-248 Functional Analysis** 3 credits Each semester  
 Lebesgue's theorem on the derivative of a monotonic function, interval functions, absolutely continuous functions, the space  $L^2$  and its linear functionals,  $L^p$  spaces, Hilbert and Banach spaces, Prerequisite: Math. 227 or consent of instructor. (LABARRE)
- 253 Theoretical Astrophysics** 3 credits Either semester  
 A study of stellar interiors and atmospheres, integral equations of radiative equilibrium, kinematics and dynamics of stellar systems. Prerequisite: Math. 132 or consent of instructor. (CROWLEY)
- 254 Topics in Applied Mathematics** 3 credits Either semester  
 Differential and integral equations of mathematical physics. Prerequisite: consent of instructor. (SAGAN)
- 263-264 Colloquium** 1 credit Each semester  
 This is to give the student an opportunity to discuss his research problems with a group. Can be taken for credit twice. (STAFF)
- 269-270 Research and Thesis** credits arranged Each semester  
 For Ph.D. candidates only. (STAFF)

## Mechanical Engineering

Associate Professors SILHA, BARNES; Assistant Professors AMOS, NORGORD;  
 Instructors ABBASI, VAN SANT

*Primarily for Undergraduates*

- 53 Machine Tool Laboratory I (3)** 1 credit First semester  
 Designed to acquaint the student with the operation of machine tools and with the shaping methods for metals. Exercises include casting, turning, milling, drilling, shaping and cutting. One demonstration and one two-hour laboratory period per week. Prerequisite: Engr. 1 and sophomore standing. (SILHA, AMOS, STAFF)
- 54 Machine Tool Laboratory II (4)** 2 credits Second semester  
 A continuation of M.E. 53. Fundamentals of production are illustrated by machining and assembling a commercial machine (band or table saw or similar project). Jigs and fixtures used. Two three-hour laboratory periods per week. A charge is required for materials used in the project made in this course. This charge is payable at the Bursar's Office before the third week of the semester. Prerequisite: M.E. 53. (SILHA, AMOS, STAFF)
- 60 Welding (6)** 2 credits Each semester  
 Theory of welding. Practice in the art of welding. One recitation and one laboratory period per week. A charge, payable at the Bursar's Office before the third week of the semester, is made for materials used in the course. Elective. Prerequisite: sophomore standing. (SILHA, AMOS)
- 61 Materials and Processes** 3 credits First semester  
 Properties of materials used by engineers including metallic and non-metallic materials, plastics, rubber, glasses, refractories. A survey of casting, powder metallurgy, heat treatment, hot and cold working and welding processes and their relation to engineering design. Also cleaning, plating, organic finishing, gauging, inspection, testing, and quality control. Three recitations per week. Prerequisite: Chem. 2. (AMOS, STAFF)

- 63 Kinematics** 3 credits Each semester  
 The principles underlying the displacement, velocity, and acceleration of machine elements; the communication of motion by gears, belts, cams, screws, and linkages; relationships between shape and kinematic characteristics. Two recitations and one three-hour laboratory period per week. Prerequisite: Engr. 2 and Math. 51. (STAFF)
- 65 Heat Treatment of Metal** 2 credits Either semester  
 Mechanical properties of metals; annealing and normalizing, hardening by quenching, tempering, hardenability, surface hardening; cast irons and their heat treatment; heat treatment of non-ferrous metals; stress relief of welds; and equipment and methods used in heat treatment practice. One lecture and one laboratory per week. Elective. Prerequisite: M.E. 61 or Met. 103. (SILHA)
- 103 Advanced Machine Tool Laboratory** 1 to 3 credits Either semester  
 A prescribed course of study and laboratory practice consisting of one or more of the following topics: selection of equipment; job planning and control; heat treating; tool design; design and construction of jigs and fixtures; metal cutting; casting practices; specialized studies. Elective. Prerequisite: M. E. 54. (SILHA)
- 121 Thermodynamics I** 3 credits First semester  
 Definitions, units, energy transformations; thermal capacities, properties of gases; laws of thermodynamics; equations of state; gaseous mixtures; internal combustion engines; compressed air; flows of gases. A one-day field trip to visit regional industrial developments normally will be required. Prerequisites: Chem. 2, Phys. 51 and Math. 52. (SILHA, STAFF)
- 122 Thermodynamics II** 3 credits Second semester  
 A continuation of M.E. 121. Liquids and vapors; vapor cycles; steam engines and turbines; power plants; flow of fluids; refrigeration; mixtures of vapors and gases. A one-day field trip to visit regional industrial developments normally will be required. Prerequisite: M.E. 121. (SILHA, STAFF)
- 123 Compressible Fluid Mechanics** 3 credits First semester  
 A course emphasizing the thermodynamic aspects of compressible fluid flow, as related to air foils and channels. Compressibility and boundary-layer phenomena, shock waves, energy losses, friction, and heat transfer, general features of fluid machinery, unsteady flow and fluid vibrations. Three recitations per week. Prerequisites. E.S. 102 and E.S. 120 or M.E. 121. (NORGORD, STAFF)
- 124 Machine Design I** 3 credits First semester  
 A review of fundamental stress and strain analysis, failure theories and engineering materials. An introduction to variable loads and stress concentration, design procedures for screw fastenings, shafting, couplings, bearings and power transmission equipment. Three recitations per week. Prerequisites: M.E. 63, E.S. 101, E.S. 103. (STAFF)
- 125 Machine Design II** 4 credits Second semester  
 A continuation of M.E. 124 covering spur, helical, bevel and worm gearing, brakes and clutches and welding design. Laboratory devoted to designing (calculations, drafting, specifications) of a project with emphasis on creativeness. Two recitations and two three-hour design periods per week. Prerequisite: M.E. 124. (STAFF)
- 126 Mechanical Engineering Project** 2 or 3 credits Either semester  
 Students work on projects requiring ingenuity and thought for solutions. Projects may be assigned by instructors in Mechanical Engineering De-

- partment. Use of catalogs and other sources of information fostered. Elective. Prerequisite: senior standing. (STAFF)
- 131 Engine Analysis** 3 credits First semester  
 General considerations. Review of thermodynamic principles. Fuels and combustion, cycles, carburetion, fuel injection, performance of internal combustion engines. Design and applications. The airplane engine. Prerequisites: E.S. 120 or M.E. 121. (BARNES, STAFF)
- 135 Mechanical Engineering Laboratory (137a)** 2 credits Either semester  
 A brief composite course in mechanical engineering laboratory primarily for electrical engineers. Fuels, lubricants, both steam and internal combustion power equipment, and the use of various types of testing apparatus. One three-hour laboratory period per week. Prerequisites: E.S. 120. (BARNES, STAFF)
- 136 Mechanical Engineering Laboratory I** 1 credit Either semester  
 Introductory course in mechanical engineering laboratory work. Heating values of fuels, such as coal, gas, gasoline, fuel oils; lubricant testing; power-plant piping; study of gas and steam power-producing unit accessories. One three-hour laboratory period per week. Prerequisites: M.E. 121 and with M.E. 122, or E.S. 120. (BARNES, STAFF)
- 137 Mechanical Engineering Laboratory II** 2 credits Either semester  
 The generally approved methods of testing steam engines, turbines, pumps and auxiliary apparatus found in power plants. The calibration and proper use of testing apparatus. One three-hour period and three hours of outside preparation per week. Prerequisite: M.E. 136. (BARNES, STAFF)
- 138 Mechanical Engineering Laboratory III** 2 credits Either semester  
 A course designed to demonstrate the theories and principles used in practice. Fuel consumption, efficiencies, fuel systems, ignition systems, pressure-time data, energy balance, and lubrication of internal combustion engines. One three-hour laboratory period and three hours of outside preparation per week. Prerequisites: M.E. 131 and M.E. 136. (BARNES, STAFF)
- 140 Pro-Seminar** 1 or 2 credits Second semester  
 A study of technical periodicals and selected literature. Papers on engineering topics are prepared, read and discussed. Prerequisite: senior standing. (STAFF)
- 141 Power Plant Engineering** 3 credits Second semester  
 The variable load problem; power plant economics; power plant building; hydro-electric power; steam power; vapor cycles; steam boilers; feed-water; heat balance; piping systems; meters. Prerequisite: E.S. 120 or M.E. 122. (NORGORD)
- 144 Air Conditioning and Refrigeration** 3 credits Second semester  
 Principles and practice of heating, ventilation, and air conditioning; measurement of heat, temperature, and humidity; appliances; heat losses; types of heating and air conditioning; temperature and humidity control; refrigeration; tests. Elective. Prerequisite: E.S. 120 or M.E. 122. (STAFF)
- 145 Heat Transfer** 3 credits First semester  
 A study of the laws which govern heat transmission; conduction of heat in the steady and unsteady states; heat transfer by free and forced convection; heat transfer by radiation; combined effects of conduction, convection, and radiation; heat transfer and fluid friction. Prerequisites: E.S. 102 and E.S. 120 or M.E. 122. (NORGORD, STAFF)

- 154 Mechanical Engineering Problems** 2 or 3 credits Either semester  
Practical problems suitable for undergraduate work. Elective. Prerequisite: senior standing. (STAFF)
- 160 Nuclear Reactor Design** 3 credits Second semester  
Basic reactor design problems in thermodynamics, reactor lattice design, reactor safety, shielding, etc., as they affect the engineering analysis. Elective. Prerequisites: Ch.E. 161 or equivalent in Nuclear Physics and M.E. 145 or equivalent. (BARNES)
- 163-164 Conferences and Field Trips**  
Conferences, supervised inspection of engineering works (one major trip 3 to 6 days in length and normally two minor one-day trips) and group study of special professional subjects including safety, fire prevention, and professional recognition. Approved written reports required. One credit given upon completion of both courses. Prerequisite: senior standing. (STAFF)
- 170 Gas Turbines and Jet Propulsion** 3 credits Either semester  
Theory of gas turbines and jet propulsion, power plant cycles, typical power plants, performance characteristics, centrifugal and axial-flow compressors and turbines. Elective. Prerequisite: E.S. 120 or M.E. 121. (BARNES, STAFF)
- 172 Mechanical Vibrations** 2 credits Either semester  
Free and forced vibration, damped and undamped vibrations, equivalent systems, dynamic balancing. Two recitation periods per week. Elective. Prerequisite: senior standing. (STAFF)
- 173 Elementary Photoelasticity** 2 credits Either semester  
The production of stress patterns; study of photoelasticity materials; polarized light; double refraction; construction of isoclinics and stress trajectories. Elective. Prerequisites: E.S. 103, Physics 52, Math. 101. (STAFF)

*Primarily for Graduates*

- 201-202 Seminar** 1 to 3 credits Either semester  
Subjects for investigation and group discussion will be selected in some field of special activity. (STAFF)
- 203 Fluid Dynamics** 3 credits Either semester  
Boundary layers, turbulence, and shock waves in compressible flow, studied from the thermodynamic view point. Analytic study of fluid machinery. Fluid vibrations. Prerequisites: E.S. 102 and M.E. 121, or their equivalent. (NORGORD)
- 204 Advanced Fluid Dynamics**
- \***(a) Hydrodynamics** 2 credits  
Velocity potential and the stream function. Vortex motion. Application of conformal mapping to ideal fluid flow. The Blasius theorem and the Schwartz-Christoffel theorem. Prerequisites: E.S. 102 or equivalent and some knowledge of complex variables. (NORGORD)
- \***(b) Boundary Layer Theory** 3 credits  
The Navier-Stokes equations. Approximate and exact solutions of the boundary-layer equations. The fundamentals of turbulent flow. Prerequisite: E.S. 102 or equivalent and some knowledge of vector analysis. (NORGORD)

\* One part offered per semester.



**\* (c) Gas Dynamics** 3 credits

Similarity rules of high-speed flow, bodies of revolution, slender body theory, transonic and supersonic flow, concepts of gas kinetics. Prerequisite: M.E. 123 or M.E. 203 or equivalent. (NORGORD)

**205 Advanced Dynamics** 3 credits Either semester

Kinematical analysis, dynamic specification of a solid body, basic principles of dynamics, dynamics of rectangular, angular, and plane motion and dynamics in three dimensions. Beams. Prerequisites: E.S. 101 or equivalent. (SILHA)

**206 Photoelasticity** 2 or 3 credits Second semester

Mathematical approach to photoelasticity and study of the optical bench, its parts and their functions. Analysis of specimens of various materials in two dimensions, and if time allows in three dimensions. Prerequisites: Physics 52, Math. 52, and Mech. 103 of their equivalent. (STAFF)

**207 Advanced Machine Design** 2 or 3 credits Second semester

A study of subjects beyond those discussed in M.E. 124 and 125. Special projects in design. Prerequisites: M.E. 124 and 125 or their equivalent. (STAFF)

**224 Advanced Thermodynamics** 3 credits Second semester

An advanced study of thermodynamic laws and relationships. Thermodynamic characteristics of pure substances, mixtures of gases and vapors, and fluids in general. Reversible and irreversible processes; available and unavailable energy; flow of fluids; thermochemical calculations; thermodynamic cycles. Prerequisites: M.E. 121 and 122 or their equivalent: (SILHA)

**239-240 Research and Thesis** Credits to be arranged Each semester

Subjects for investigation and group discussion will be selected in some field of special activity. (STAFF)

**250 Advanced Mechanical Vibrations** 3 credits First semester

Advanced analysis of vibrating systems, including those with several degrees of freedom, branched systems, closed systems, and applications of the energy method. Prerequisite: M.E. 171. (STAFF)

**253 Advanced Heat Transfer** 3 credits Either semester

Analytical study of thermal conduction, radiation, and convection. Integral methods. Prerequisites: Math. 101 and M.E. 145 or equivalent. (NORGORD, SILHA)

**254 Advanced Jet Propulsion** 3 credits Either semester

The thermodynamics of rockets and guided missiles including a discussion of solid and liquid propellants, dissociation of gases during combustion, and basic jet propulsion systems. Prerequisites: M.E. 131 or equivalent. (BARNES)

**255 Advanced Reactor Design** 3 credits Either semester

Nuclear reactor design from a standpoint of heat transfer, metallurgy, fluid flow, machine design, and engineering economics. Special problems in these areas to be solved by students. Prerequisites: Ch.E. 161 and M.E. 145 or equivalent. (BARNES)

\* One part offered per semester.

## Mining and Metallurgy

Professors NEWTON (Head), FAHRENWALD and STALEY;  
Assistant Professors CLIFTON and WHITING

### Metallurgy

*For Advanced Undergraduates and Graduates*

- 103 Principles of Metallurgy** 3 credits First semester  
An introductory course in adaptive metallurgy. Topics covered are the properties of metals, a brief introduction to the theory of metals and alloys, manufacturing processes and treatments, inspection and testing, and corrosion and its prevention. Several metals are studied in detail to show the relations between their properties, processing, and uses. Three lectures a week. Prerequisites: Phys. 4 or 52, Chem. 1-2. (CLIFTON)
- 104 Physical Metallurgy** 3 credits Second semester  
An introductory treatment of the theory of metals and alloys with examples of applications to industrial problems. Three lectures a week. Prerequisite: Met. 103. (CLIFTON)
- 106 Experimental Physical Metallurgy** 2 credits Second semester  
A laboratory course on the more important instruments and experimental techniques of physical metallurgy. Many of the experiments are planned to illustrate principles in physical metallurgy and their application to industrial problems. Two three-hour laboratory periods a week. Prerequisites: Met. 103, 104 (Met. 104 may be taken concurrently). (CLIFTON)
- 110 Ore Dressing (111)** 3 credits Second semester  
Fundamentals of ore dressing processes. Topics covered will include crushing and grinding, screening, classification, gravity concentration, flotation, magnetic and electrostatic concentration, and flowsheets. Two lectures and one two-hour demonstration and problem laboratory per week. Two one-day field trips to ore dressing plants. Prerequisites: Chem. 1-2 and Phys. 3-4 or 51-52. May be taken concurrently with Phys. 4 or 52. (NEWTON)
- 112 Metallurgical Laboratory** 3 credits First semester  
Laboratory experiments on ore dressing; ore testing; hydrometallurgy; sampling; fire assaying of gold and silver. Three three-hour laboratory periods a week. Prerequisite: Met. 110. (NEWTON)
- 127-128 Production Metallurgy** 3 credits  
Chemistry and practice of extracting and refining ferrous and non-ferrous metals. Three lectures a week. Three one-day field trips to metallurgical plants. Prerequisites: Chem. 1-2, Phys. 3-4 or Phys. 51-52. (NEWTON)
- 131-132 Metallurgical Calculations** 1 credit  
Problems of extractive metallurgy. Must be taken concurrently with Met. 127-128. A slide rule will be required. One three-hour laboratory a week. (CLIFTON)

**151 X-ray Diffraction** 2 credits First semester  
Principles of the diffraction of X-rays by crystals and applications to the study of polycrystalline materials. Two lectures a week. Prerequisites: Phys. 4 or 52. (CLIFTON)

**152 X-ray Diffraction Laboratory** 1 credit Each semester  
A laboratory course in X-ray diffraction techniques. The individual student is given considerable opportunity to specialize on the experimental techniques most used in his field of interest. Prerequisite: Metallurgy 151 or consent of instructor. One three-hour laboratory period a week. (CLIFTON)

**155-156 Special Topics in Metallurgy** 1-3 credits  
This course gives the undergraduate student an opportunity to do supervised work on some aspect of metallurgy. The work to be done will be arranged with the instructor. Depending upon the nature of the work and the number of students electing a course, it may be given as a formal lecture course; directed study problems; laboratory work; or a short research project. Except when given as a lecture course, a formal report will be required. Work covered may in any one of the following fields: (a) ore dressing, (b) pyrometallurgy, (c) hydrometallurgy, (d) electrometallurgy, (e) vacuum metallurgy, (f) metallurgical design, (g) metallography, (h) physical metallurgy, (i) X-rays, (j) powder metallurgy, (k) chemical metallurgy, (l) casting, (m) fabrication, (n) ceramics, or (o) mechanical metallurgy. May be elected more than once to pursue different studies. A maximum of 12 hours may be taken in 155-156 and a maximum of 6 hours in any one subdivision. Not more than four of these courses will be offered in any one year. Prerequisite: senior standing or consent of instructor. (CLIFTON, FAHRENWALD, NEWTON)

**161 Ceramic Materials** 3 credits First semester  
A study of the properties and uses of ceramic materials, including cermets and related materials. Three lectures a week. Prerequisites: Physics 3-4 or 51-52 and Chem. 1-2. (NEWTON)

**187-188 Pro-Seminar** 1 credit  
Review and discussion of current literature. Prerequisites: senior standing or consent of instructor. (CLIFTON, FAHRENWALD, NEWTON)

*Primarily for Graduates*

**201-202 Research and Thesis** Credits to be arranged Each semester  
Research on metallurgical problems. (CLIFTON, FAHRENWALD, NEWTON)

**215-216 Seminar** 1 credit  
Review and discussion of current literature. (STAFF)

**223-224 Advanced Metallurgy** 1-3 credits  
Advanced work in (a) physical metallurgy, (b) X-rays, (c) ore dressing, (d) process metallurgy, (e) metallurgical design, or (f) ceramics. These courses may consist of lectures, supervised reading, or laboratory work. No more than three of these courses will be offered in any one semester. (CLIFTON, FAHRENWALD, NEWTON)

## Mining

### 1 Mineral Industry Lectures 1 credit First semester

A survey course designed to acquaint the student with the basic characteristics and scope of the several professional fields of the minerals industry. The nature and importance of geologic interpretations, mining techniques, and metallurgical practices are discussed as to how each of such elements is applied to the procurement of metallic and non-metallic mineral commodities. (COOK)

*For Advanced Undergraduates and Graduates*

### 101 Elements of Mining 3 credits First semester

Prospecting, boring, drilling, explosives and blasting, rock-breaking, support of excavations, underground transport, mine drainage, ventilation, quarrying, open-pit and alluvial mining. One one-day field trip. Prerequisites: Math. 1-2 and Phys. 3 or 51. (STALEY)

### 105-106 Mine Plant Design (103-104) 2 credits

First semester discusses the design of mine structures and headframes; selection of hoisting, pumping, compressed air, and power plant equipment, skip-dumps, ore bins, and safety devices. The second semester consists of two drafting periods devoted to the design of mine buildings, headframes, and ore bins. One one-day field trip each semester. Prerequisites: E.S. 66 and E.S. 103. (WHITING)

### 108 Mine Surveying (106) 2 credits Second semester

Lectures on standard method of surveying practice in the large mining districts of this country, including instruments and equipment, carrying the meridian underground, underground traverses, notebooks and office records, maps, stope surveying, and calculations of tonnages extracted. Calculations and reductions of notes from the mine survey and plotting by coordinates. Claim surveying. Two recitations a week. Prerequisite: C.E. 53. (STALEY)

### 109 Tunneling Methods 2 credits First semester

A study of modern tunneling methods. Aqueducts, railroad tunnels, and vehicular tunnels are considered. Emphasis is placed on current mechanized construction methods. Explosives and their pertinent applications are discussed briefly. One one-day field trip. (STALEY)

### 111 Safety Engineering 2 credits First semester

The fundamental principles and practices of accident prevention and safety are treated. The studies include control of accidents, responsibilities of the individual worker, sanitation and safety equipment. In addition, duties of the Safety Engineer and organization of the Safety Administration are presented. The course is specifically designed to accommodate the needs for basic safety education in the Minerals Industry, in Forestry and in various Engineering fields, as a whole. However, it will be of value also to anyone interested in gaining the principles of Safety Education. (WHITING)

### 113 Mine Ventilation 2 credits First semester

Theory, principles, and practice of mine ventilation; investigation of mine ventilation flow-sheets; air-conditioning as practiced by deep mines. Two recitations. One one-day field trip. Prerequisite: Min. 101. (STALEY)

### 115 Mine Rescue and First Aid 1 credit Either semester

This course is given in cooperation with the U.S. Bureau of Mines, the mine rescue car visiting Moscow for this purpose. (WHITING)

- 118 Mine Surveying and Mapping** 1 to 3 credits Summer Camp  
A portion of an underground mine is surveyed and mapped. Familiarization and adjustment of equipment is required of students in residence prior to leaving the campus for summer camp. Field trips to mines in the region may be taken. Students other than University of Idaho by permission. Accident and health insurance is required. Prerequisite: Min. 108.
- 122 Mining Methods (112)** 2 credits Second semester  
Various methods of underground mining are taken up. Choice of level interval, open stopes, supported stopes, and caving methods are discussed along with the choice of method and the combination of these various methods. Two lectures. One one-day field trip. Prerequisite: Min. 101. (STALEY)
- 124 Mining Economics** 2 credits Second semester  
Mine sampling and valuation; calculation of value of ore from widths and assays; probable and prospective ore; capitalization; amortization; costs of production; cost-keeping; the more important aspects of mining law; essential features of reports by mining engineers. Prerequisite: Geol. 14. (STALEY)
- 128 Rock Mechanics** 2 credits Second semester  
An investigation of the behavior of rocks when stressed near or beyond their elastic limit. Methods for counteracting reaction of rock masses so stressed and detection of movement are studied. Photoelastic, barodynamic, and other methods of investigation are considered. Origin of rock bursts and counter-measures to be taken will be considered. Prerequisites: Min. 101, E.S. 103, (E.S. 103 may be taken concurrently). (WHITING)
- 130 Surface Mining** 2 credits Second semester  
Sampling, estimating tonnage, equipment used, drilling and blasting applied to open pits, quarries, dredging operations are studied. Typical metallic and nonmetallic deposits will be included. Prerequisite: Min. 101. (STALEY)
- 131 Support of Ground** 2 credits First semester  
Methods of support; pillars, fill (broken rock and/or mill tailings) timber, concrete, steel; rock bolts; change of support with increasing depth; effect of rock bursts is considered. Prerequisite: Min. 128. (WHITING)
- 140 Mining Laboratory** 1 credit Second semester  
Field studies and laboratory experiments of mining engineering problems. Special emphasis is given to theory and practice of mine ventilation and air conditioning. One three-day field trip. One three-hour laboratory a week. Prerequisite: Min. 113. (WHITING)
- 161 Geophysical Prospecting** 2 credits Second semester  
A study of geophysical devices for locating mineral deposits, magnetic, electrical, seismic, gravity, and geothermal methods, also those dependent upon radioactivity of matter. Prerequisites: Geol. 14, Phys. 3-4, or Phys. 51-52. (STALEY)
- 180 Explosives and their Uses** 2 credits Second semester  
A study of the theory, properties, and uses of commercial explosives and detonators. The applications are stressed of explosives used in modern engineering and related enterprises. Ditching, accelerating settlement of filled-earth, seismic shooting, demolition, agricultural uses and numerous other applications of explosives are covered. One one-day field trip. (STALEY)
- 197-198 Pro-Seminar** 1-2 credits

*Primarily for Graduates*

**201-202 Research and Thesis** Credits to be arranged Each semester

Special problems and investigations in mining methods, mining machinery, equipment and design. (STALEY, WHITING)

**203-204 Advanced Mining** 1-5 credits Each semester

(a) Mine mechanization, (b) mine plant design, (c) mining methods, (d) mine development and exploitation, (e) mining industry economics, (f) mine management, (g) mining law, (h) mine safety, (i) mine air conditioning, (j) theory of high explosives, (k) rock mechanics, (l) current mining problems and research. These courses consist of lectures, supervised readings, laboratory or field work, and periodic conferences. A maximum of 12 hours may be taken in 203-204 and a maximum of 8 hours in any one subdivisions. (STALEY, WHITING)

## Music

Professors LOCKERY, MACKLIN (Head); Associate Professors BAUER, LOGAN, SCHULD, SCHWARTZ; Assistant Professors BELLIS, FRYKMAN, LITTLE (Emeritus); Instructors BILLINGSLEY, MORRISON, ROMANIO, TUMBLESON, WHISNER

Note: The Department of Music is an institutional member of the National Association of Schools of Music.

### DEGREES

The Department of Music offers specialized curricula leading to the following degrees: (a) Bachelor of Music; (b) Bachelor of Arts, with music for a major study; (c) Bachelor of Science in Music Education; (d) Bachelor of Science in Education, with public school music as a teaching subject; (e) Master of Music; (f) Master of Arts; (g) Master of Science in Music Education; and (h) Master of Music Education.

### ORGANIZED MUSIC

Membership in organized music groups is open to all students in the University after consultation with directors. A maximum of eight credits is allowed toward graduation in organized music courses. Not more than four of these credits may be in upper division organized music. Students may register in any organized music course after receiving the maximum number of credits, but will receive no credit.

Juniors and seniors who have had four semesters of participation in organized music, or who have attained junior standing in applied music, will register for upper division credit.

The following organized music courses are offered: University Symphony Orchestra, Vandaleers (concert choir), University Singers (men & women), University Concert, Marching, and ROTC Bands.

### ENSEMBLE

Membership in small instrumental and vocal groups is open to all students in the University after consultation with the departmental office. One credit per semester is offered in each group. Students will

register for Mus. 67-68 or 167-168, Ensemble (includes Opera Workshop, Madrigal Singers, brass, woodwind, and string ensembles, etc.)

### APPLIED MUSIC

Applied music is defined as private lessons for which two credits are offered for one lesson per week or four credits for two lessons per week, for a semester. Applied music credit is offered in voice, piano, organ, all conventional string and wind instruments, and percussion. Although students may register for applied music at any time for as many lessons as desired, no credit will be given unless the registration is for at least one lesson per week for a full semester or for a summer session.

Applied music may be taken as an elective by any student in the University and credit may be counted toward graduation. Students not of University rank may register for the courses in applied music under certain conditions but will not be given credit.

Thirty-two credits in a major instrument and eight in a minor instrument are required for graduation for a Bachelor of Music degree, twenty-eight credits in a major instrument and four in a minor instrument are required for graduation for a Bachelor of Arts degree and sixteen credits in a major instrument or voice are required for graduation for a Bachelor of Science degree in Music Education. Normally students in each degree program will register in their major applied music field each semester.

At the end of the sophomore year a candidate for the degree of Bachelor of Music or Bachelor of Arts in Music will be given an examination in applied music to determine his eligibility for upper division credit. Completion of the following work or its equivalent is prerequisite to the examination in each field:

*Piano:* Selections from the literature of the contrapuntal period, from the classic sonatas, and from the romantic or modern period.

*Voice:* Proficiency in the principles of voice production. Ability to sing selections from the standard repertory in English, Italian, and German or French.

*Violin:* Studies by Kreutzer, Sevcik, Casorti, and Rode; scales and arpeggios in two and three octaves; Sonatas by Handel and Tartini; and Concertos by Viotti, Vivaldi, Mozart, and Mendelssohn, or studies of equal difficulty.

*Viola:* Selected studies from Kreutzer, Gavinies and Dont; scales and arpeggios in two and three octaves; Sonatas by Handel; solo pieces such as Romanze by Max Bruch.

*Cello:* Scales and arpeggios in two and three octaves; etudes by Werner, Schroeder, Lee, Dotzauer, Grutzmacher, easy Concertos by Klengel, Romberg and Goltermann, or studies of equal difficulty.

*Organ:* Pedal studies, trios (two manuals and pedal), organ literature by Bach, Mendelssohn, Guilman, Rheinberger, and Cesar Franck, or studies of equal difficulty.

*Flute:* Etudes by Anderson and Popp-Soussmann; duets by Kuhlau; Handel Sonatas, Mozart Concertos.

*Oboe:* Sonatas, Studies and Exercises from Barret Methods. Twenty Etudes by Brod; Handel Sonatas.

*Clarinet:* Klose Method, Part I. Thirty-two Etudes by Rose. Forty Studies by Rose. Fingered Scale Studies by Langenus. Paris Conservatory Solos.

*Bassoon:* Weissenborn Complete Method. Studies by Weissenborn. Exercises by Jancourt; Weber Concerto.

*Saxophone:* Etudes by Traxler, Runyon, Rascher and Ferling. Handel Sonatas, Glazanow Concerto and selected solos edited by Rascher and M. Mule.

*French Horn:* Etudes by Alphonse, Chantl, Gallay, Michiels. Duets by Amsden, Franz. Solos by Atterberg, Beethoven, Mozart, F. Strauss, R. Strauss. Clef transportation to include F, E, Eb, D, C, B, Bb, A, G Horn. Knowledge of Double Horn required.

*Trumpet or Cornet:* Complete Arban Method; Etudes by Glantz, St. Jacome, Kreutzer, Wurm. Clef transposition to include Bb, A, Ab, G, F, E, Eb, D, C, Trumpet.

*Trombone or Baritone:* (Majors on trombone must pass examination on baritone as well and vice versa.) Methods by Arban, Clarke, Muller, Rochut, Tyrrell. Use of Treble, Alto, Tenor, Bass Clefs. Use of F attachment and fourth valve on bass trombone and Euphonium, respectively.

*Tuba:* Etudes by Tyrrell, Blume, Rochut, Cimera, Blazhevich.

*Percussion:* Majors may choose drum (snare, concert or street), tympani, or marimba for examination. Drum: demonstrate ability on all 24 basic rudiments; solos will be chosen from current literature including NARD Book of Rudimental Drum Solos. Tympani: demonstrate ability on two and three tympani orchestral parts and literature by Kristufek, etc. Marimba: demonstrate ability in two, three and four hammer work; one solo will be performed unaccompanied, one with piano accompaniment.

Graduation recitals are required of candidates for the B.A. and B.M. degrees, such recitals serving as final examinations in applied music. Graduation depends on proficiency attained and not necessarily on the number of credits earned.

### ADVANCED CREDIT

A student who has studied applied music of college grade with private teachers after high school graduation, or at an unaccredited institution, may apply for an examination for advanced credit with the approval of a teacher in that branch of applied music, and the head of the Department of Music.

### SCHOLARSHIPS

Fifteen scholarships are offered to Idaho students majoring in music. These scholarships consist of a waiver of the fee for applied music and are continuous for the year or semester in which they are awarded. Scholarship awards are made on a competitive basis at the beginning of each school year, and are allotted on the basis of ability, need and scholarship.

### FEES

Fees are payable in advance for the semester or unexpired portion thereof. Students entering after the opening of the semester are charged pro-rata, except that no allowance will be made for absence for the first week in any semester.

No deduction will be made for lessons missed by the student, nor will such lessons be made up. In case of serious illness, make-up lessons will be ar-



ranged in the departmental office. Lessons missed because of University holidays or during examination weeks will not be made up.

On withdrawal from the University, refunds for private instruction will be made in accordance with the requirements under "Refund of Fees" in Part I of this catalog.

All students will be required to do their practicing in the practice rooms provided for this purpose, unless special permission to practice elsewhere is granted.

Fees per semester for lessons in applied music, payable at the Cashier's office, are as follows:

#### APPLIED MUSIC LESSONS

One lesson per week, one-half hour (two credits) .....	\$30
Two lessons per week, one-half hour each (four credits) .....	60

#### GENERAL MUSIC COURSES

*Primarily for Undergraduates*

#### 1-2 Theory of Music      3 credits—1st sem.      4 credits—2nd sem.

The fundamental elements and skills of music, including singing, playing, dictation, and writing of scales, intervals, chords and progressions through the dominant seventh chord. Keyboard facility or piano study concurrently with course is required. (BILLINGSLEY, ROMANIO, WHISNER)

#### 7 Introduction to Music Literature      2 credits      Each semester

A beginner's course in listening to music. Significant examples from Bach to contemporary composers. Comments by the instructor on records played to familiarize the student with various fields of musical experiences which contribute to music appreciation. (BAUER)

#### 9-10 ROTC Band      ½ credit

Open to selected first and second year ROTC students. The ROTC Band furnishes music for all military parades, reviews and other designated functions of the ROTC units. (BELLIS)

#### 17 Wind Instrument Class      1 or 2 credits      Each semester

(a) clarinet class; (b) cornet class; (c) percussion class; (d) trombone and baritone class. A maximum of four credits is allowed in the class. Students enrolled also participate in the laboratory instrumental ensemble. (BELLIS, BILLINGSLEY)

#### 23-24 Piano Class      2 credits

Consult with Music Department before registering. (FRYKMAN)

#### 25-26 University Concert Band      1 credit

Membership is determined by auditions, and by approval of the director. The Band appears at designated football and basketball games, formal and informal concerts at the University and elsewhere. Standard and advanced literature in all styles is performed. Students registered in this course must meet eligibility requirements to participate in extra-curricular activities. (BELLIS)

#### 27 Wind Instrument Class      1 or 2 credits      Each semester

(a) flute and saxophone class; (b) French horn and tuba class; (c) oboe class; (d) bassoon class. A maximum of four credits is allowed in the class. Students enrolled also participate in the laboratory ensemble. (BELLIS, BILLINGSLEY)

**33-34 Voice Class** 2 credits

Consult with Music Department before registering. (MORRISON)

**35-36 Vandaleers** 1 credit

Membership in Vandaleers (concert choir) is open to all University students, subject to audition and approval by the director. Materials consist of significant compositions of the choral art selected from the Renaissance to contemporary repertory. Activities include concerts, short programs, high school assemblies, and an annual tour. Students registered in this course must meet eligibility requirements to participate in extra-curricular activities. (LOCKERY)

**37-38 University Singers** 1 credit

Membership is open, without audition, to all students in the University. Each semester a major choral work is presented in concert. Students registered in this course must meet eligibility requirements to participate in extra-curricular activities. (LOGAN)

**39 Summer School Choir** 1 credit  
(STAFF)

Summer school

**40 Summer Festival Choir** 1 credit

Summer school

Study and performance of standard choral literature, including presentation of one or more major works in the Inland Empire Summer Music Festival concert series.

**43-44 Violin and Viola Class** 2 credits

Students enrolled also participate in the laboratory instrumental ensemble. (BAUER)

**45-46 University Symphony Orchestra** 1 credit

Membership is open to all students who can qualify, after consultation with the conductor. Sight reading, thorough study of orchestral literature and rehearsal routine, performance of the greatest masterworks in their original form. Presentation of three formal concerts a year. Students registered in this course must meet eligibility requirements to participate in extra-curricular activities. (BAUER)

**47 Summer Festival Chamber Orchestra** 1 credit

Summer school

Study and performance of orchestra literature, including one or more performances in the Inland Empire Summer Music Festival concert series. (BAUER)

**48 Clinic Choir** 1 credit

Summer school

A laboratory group for the study and performance of choral literature on the high school level.

**57-58 Accompanying and Sight Reading** 1 credit

A practical course in rapid sight reading with practical experience in accompanying singers and instrumentalists. Prerequisite: Ability to play the piano. (MACKLIN)

**59-60 The Singer's Diction** 2 credits

Designed to furnish the singer with the ability to pronounce French and German, with special emphasis on their oral and aural aspects. Not a substitute for adequate speaking knowledge of those languages. French first semester, German second. (LOGAN)

**63-64 Cello and Bass Class** 2 credits

Students enrolled also participate in the laboratory instrumental ensemble. (WHISNER)

**67-68 Ensemble** 1 credit

Small instrumental and vocal ensembles. Students should consult with the department office before registering. (STAFF)

**69 Elements of Music** 2 credits First semester

A course designed to acquaint the grade teacher with the music fundamentals and skills necessary for the teaching of music in the elementary school. Students other than Education majors should consult with Music Department before registering. (SCHWARTZ)

**X73 Elements and Literature of Music** 3 credits Extension only

Elements of music, elementary theory, choral and instrumental literature. Aids to the teacher of music in teaching fundamentals of music reading, writing, selection, and playing of music.

**75-76 Theory of Music** 4 credits

Continuation of Music 1-2. Singing, playing, writing, and dictation of four part harmony. A study of harmonic resources from secondary seventh chords through modulation and altered chords. Prerequisite: Mus. 2. (WHISNER)

**Recreational Community Music**

See P.E. 64. Available to students in Physical Education.

*For Advanced Undergraduates and Graduates***101-102 History and Literature of Music** 3 credits

A study of the history of music in Western civilization. (SCHULDT)

**103 Musical Form** 2 credits First semester

Analysis of form as it is employed in the smaller and larger standard musical compositions. Prerequisite: Mus. 76 or equivalent. (FRYKMAN)

**104 Modern Music** 2 credits Second semester

A study of the structural devices, the style and the forms of contemporary music. Prerequisite: Mus. 76 or equivalent. (SCHULDT)

**105-106 Counterpoint** 2-4 credits

A study of fundamental counterpoint. Writing of melodies for one, two, three and four voices. Registration for 4 credits permitted only by approval of head of Department of Music. Prerequisite: Mus. 76. (BILLINGSLEY)

**108 Piano Class Techniques** 2 credits Second semester

A comparative survey of materials and techniques of class piano instruction with emphasis on the various published courses of study. Mus. 108 or Mus. 114 required of piano majors in B.M. curriculum. Prerequisite: eight credits in piano or consent of instructor. (FRYKMAN)

**109-110 Elementary Composition** 2-4 credits

A practice course in the writing of original music. Registration for 4 credits permitted only by approval of head of Department of Music. Prerequisite: Mus. 76 (BILLINGSLEY)

**111 Band Arranging** 2-4 credits First semester

Practical arranging for band instruments, including a study of range, transposition and tone color. Registration for 4 credits permitted only by approval of head of Department of Music. Prerequisite: Mus. 76. (BELLIS)

- 112 Orchestration** 2-4 credits Second semester  
 A study of the range, tone color and uses of the orchestral stringed instruments; arranging for various ensembles up to and including the standard symphony orchestra. Registration for 4 credits permitted only by approval of head of Department of Music. Prerequisite: Mus. 111. (BAUER)
- 114 Piano Literature** 2 credits Second semester  
 A study of selected works from the keyboard writings of Bach, Mozart, Beethoven, Schubert, Schumann, Chopin, Brahms, and Debussy. Mus. 108 or Mus. 114 required of piano majors in B.M. curriculum. Prerequisite: Eight credits in piano or consent of instructor. (FRYKMAN)
- 125-126 University Concert Band** 1 credit  
 See description under 25-26. (BELLIS)
- 135-136 Vandaleers** 1 credit  
 See description under 35-36. (LOCKERY)
- 137-138 University Singers** 1 credit  
 See description under 37-38. (LOGAN)
- 139 Summer School Choir** 1 credit Summer school  
 (STAFF)
- 140 Summer Festival Choir** 1 credit Summer school  
 See description under 40.
- 142 Problems in Theory of Music** 3 credits Summer school  
 A practical course in the solution of music theory problems, with emphasis on the teaching aspects. May be repeated for a total of 12 credits. (STAFF)
- 145-146 University Orchestra** 1 credit  
 See description under 45-46. (BAUER)
- 147 Summer Festival Chamber Orchestra** 1 credit Summer school  
 See description under 47. (BAUER)
- 148 Clinic Choir** 1 credit Summer school  
 See description under 48.
- 150 Senior Seminar** 2 credits Each semester  
 Critical readings, discussions, and the presentation of papers in specially assigned fields of musical literature. (STAFF)
- 152 Elementary School Music Workshop** 2 credits Summer school  
 A two-week concentrated course designed especially for teachers of self-contained classrooms. 4-5 hours' lecture and laboratory work each day.
- 153 Piano Teaching Workshop** 2 credits Summer school  
 A two-week concentrated course designed primarily for the private teacher of piano. Adult beginner and class piano techniques stressed. 4-5 hours' lecture and laboratory each day.
- 154 Piano Master Class** 1 credit Summer school  
 A one-week concentrated workshop course in performance, techniques, interpretation, and literature of the piano. Four hours of lecture and laboratory work each day. (SCHULDT)

- 167-168 Advanced Ensemble** 1 credit  
Small instrumental and vocal ensembles. Students should consult with the departmental office before registering. (STAFF)
- 171 Elementary School Music** 3 credits First semester  
Philosophy of the teaching of music; materials, presentation of the listening, singing, creative—including the reading and writing of music—rhythmic, and instrumental experiences in the primary and intermediate grades. (SCHWARTZ)
- 172 Music Education Workshop** 2 credits Summer school  
A two-week concentrated course presenting the philosophy, materials and techniques in teaching elementary and secondary school music. For instrumental, vocal and general classroom music teachers. 4-5 hours' lecture and laboratory each day.
- 178 Junior and Senior High School Music** 3 credits Second semester  
Philosophy; materials; principles in administering the secondary school music curriculum; presentation of the teaching areas of the general music course, vocal music, instrumental music, theory, history, literature of music; correlation of music with the secondary curriculum. (SCHWARTZ)
- 179 Conducting** 2 credits First semester  
A study of the basic technique of the baton including interpretation, score reading, and rehearsal. (BAUER)
- 180 Conducting** 2 credits Second semester  
Continuation of Mus. 179 with intensive study of scores, rehearsal procedure, and organization. Students will conduct orchestra, band, and chorus and have charge of the laboratory instrumental ensemble. (BAUER)
- 183 School Band Techniques Workshop** 2 credits Summer school  
A two-week concentrated course in materials and techniques of band activities with emphasis on the secondary school level. 4-5 hours' lecture and laboratory work each day.
- 187 Instrumental Repair Laboratory** 2 credits Summer school  
A two-week concentrated course in the repair of all instruments commonly used in the public schools, including minor repairs to pianos. Four hours each day.
- 189 Church Music Techniques Workshop** 2 credits Summer school  
A two-week concentrated course covering all phases of music in the church service. Choral and vocal music and techniques; instrumental accompanying, including organ recital and church repertoire. 4-5 hours' lecture and laboratory work each day.
- 190 High School Band Activities Workshop** 2 credits Summer school  
A two-week concentrated course dealing with all aspects of band organizations in high school. Use of laboratory group where practical. Four hours each day.
- 192 Instrumental Techniques Laboratory** 3 credits Summer school  
A comprehensive course covering all practical phases of strings, woodwinds, brasses, and percussion instruments, applicable to teaching in the public schools. Two hours daily. (BAUER, SCHWARTZ, BELLIS, BILLINGSLEY)
- 193 Marching Band Workshop** 2 credits Summer school  
A two-week concentrated course dealing with all phases of the marching band. Demonstration with laboratory group. Four hours each day.

- 194 Period Studies in Music Literature** 2 credits Summer school  
An intensive course in the literature of music of one period. One of the following periods will be chosen: The Renaissance, the Baroque, or the Viennese Classic.
- 196 School Music Administration** 2 credits First semester  
The presentation of the fundamental principles and problems of the organization and administration of school music programs. (SCHWARTZ)

*Primarily for Graduates*

- 201 Modern Communicative Resources in Teaching Music** 2 credits Summer school  
A survey, evaluation, demonstration course of audio, visual, electronic and material aids available to the teacher of public school music. Emphasis on research by the individual student. (SCHWARTZ)
- 203 Problems in Music Education** 2 credits Second semester  
Lectures and discussion of the problems of music education from the elementary through the college level. Particular reference to newer innovations and trends. Primarily for teachers in service. Prerequisite: 8 credits in music education courses. (SCHWARTZ)
- 205-206 Canon and Fugue** 2 credits  
An advanced course in contrapuntal writing, including double counterpoint, imitation, sequence, canon, and fugue in three or more voices. Prerequisite: Music 106. (BILLINGSLEY)
- 209-210 Advanced Composition** 2 credits  
Practice in original writing in the larger musical forms including writing for the orchestra. (BILLINGSLEY)
- 211-212 Advanced Orchestration** 2 credits  
An advanced course in arranging and scoring for the orchestra, with emphasis on modern trends. Prerequisite: Mus. 112. (BAUER)
- 213 Literature of Music** 2 credits First semester  
Advanced practical course in the literature and interpretation of music for voice, violin, piano, or cello. Survey of concert and program literature and program building. Prerequisite: 16 credits in applied music. (BAUER)
- 214 Literature of Music** 2 credits Second semester  
A practical course in the interpretation and music of Bach, Beethoven, Brahms, Wagner, and contemporary composers. Prerequisite: 16 credits in applied music. (BAUER)
- 215 Seminar in Music Education** 2 credits Second semester  
Presentation, discussion, and analysis of trends in the teaching of public school music, music in the community, and music teaching as a science and an art. (SCHWARTZ)
- 220 Modern Trends in Music Education** 2 credits Summer school  
Lectures and discussion of current trends in music in the public schools, including consideration of college curricula.
- 222 Research and Thesis** Credits to be arranged Either semester
- 224 Band Problems** 2 credits Summer school  
Consideration of the administrative and technical problems confronting the school band director. (BELLIS)

- 225 Modern Band Techniques** 2 credits Summer school
- 235 Modern Choral Techniques** 2 credits Summer school
- 276 Choral Literature** 2 credits Summer school  
A survey of major choral works selected from the pre-Bach era to the present with emphasis on musical significance, use of textual material, and interpretation. (LOCKERY)
- 278 Choral Problems** 2 credits Summer school  
An advanced course designed to investigate and discuss the problems incident to the organization, administration, and direction of the various types of choral activities in secondary schools and colleges.
- 279 Advanced Choral Conducting** 2 credits First semester  
Advanced practical course in choral interpretation and baton technique, rehearsal procedure, evaluation of literature and program building. Prerequisite: Mus. 179 or equivalent. (LOCKERY)
- 280 Advanced Orchestra Conducting** 2 credits Second semester  
Advanced practical course in techniques of orchestra conducting and orchestral interpretation, and study of symphonic scores by Haydn, Mozart, Beethoven and others. Practice in conducting required. Prerequisite: Mus. 179 or equivalent. (BAUER)
- 281 Advanced Band Organization and Conducting** 2 credits First semester  
Laboratory course in band organization, literature, instrumentation, interpretation, program building, band formations, and conducting. Particular reference to the drum major and marching band. Prerequisite: Mus. 179 or equivalent. (BELLIS)
- 282 School Band and Orchestra Problems** 2 credits Summer school  
An advanced course in the investigation and discussion of problems incident to the organization, administration, and direction of various types of instrumental activities in secondary schools and colleges.
- 283 School Band Techniques** 2 credits Summer school
- 291-292 Professional Problems** 3 credits  
A course designed for students working for the master's degree. Work is arranged by the major professor.

#### APPLIED MUSIC COURSES

- 21 Piano (Lower Division)** 2 or 4 credits Each semester
- 121 Piano (Upper Division)** 2 or 4 credits Each semester
- 221 Piano (Graduate)** 2 or 4 credits Each semester  
(MACKLIN, SCHULDT, FRYKMAN, ROMANIO)
- 31 Voice (Lower Division)** 2 or 4 credits Each semester
- 131 Voice (Upper Division)** 2 or 4 credits Each semester
- 231 Voice (Graduate)** 2 or 4 credits Each semester  
(LOCKERY, LOGAN, MORRISON, TUMBLESON)

<b>41 Violin (Lower Division)</b>	2 or 4 credits	Each semester
<b>141 Violin (Upper Division)</b>	2 or 4 credits	Each semester
<b>241 Violin (Graduate)</b> (BAUER)	2 or 4 credits	Each semester
<b>51 Organ (Lower Division)</b>	2 or 4 credits	Each semester
<b>151 Organ (Upper Division)</b>	2 or 4 credits	Each semester
<b>251 Organ (Graduate)</b> (MACKLIN, FRYKMAN, ROMANIO)	2 or 4 credits	Each semester
<b>61 Cello (Lower Division)</b>	2 or 4 credits	Each semester
<b>161 Cello (Upper Division)</b>	2 or 4 credits	Each semester
<b>261 Cello (Graduate)</b> (WHISNER)	2 or 4 credits	Each semester
<b>81 Viola (Lower Division)</b>	2 or 4 credits	Each semester
<b>181 Viola (Upper Division)</b> (BAUER)	2 or 4 credits	Each semester
<b>85 Double Bass (Lower Division)</b>	2 or 4 credits	Each semester
<b>185 Double Bass (Upper Division)</b> (WHISNER)	2 or 4 credits	Each semester
<b>91 Brass Instruments (Lower Division)</b>	2 or 4 credits	Each semester
<b>191 Brass Instruments (Upper Division)</b> (SCHWARTZ, BILLINGSLEY)	2 or 4 credits	Each semester
<b>95 Woodwind Instruments (Lower Division)</b>	2 or 4 credits	Each semester
<b>195 Woodwind Instruments (Upper Division)</b> (BELLIS)	2 or 4 credits	Each semester
<b>97 Percussion Instruments (Lower Division)</b>	2 or 4 credits	Each semester
<b>197 Percussion Instruments (Upper Division)</b> (SCHWARTZ)	2 or 4 credits	Each semester

## Navy ROTC

(The Naval ROTC is one unit of the Reserve Officers Training Corps)

Captain G. F. RICHARDSON, USN, Professor of Naval Science; Commander C. P. WORMAN, USNR, Associate Professor of Naval Science; Lieutenant Commander W. L. MCGONAGLE, USN, Major A. NOVACK, (junior grade) USMC, Lieutenant G. P. SHABE, USN, Lieutenant (junior grade) M. C. SANDERS, USN, and Lieutenant (junior grade) C. W. BARNES, USN, Assistant Professors of Naval Science.

Naval ROTC students are of two types: "Regular" students and "Contract" students. The naval science course, the same for both types of students, is a four-year course based on the U. S. Navy Standard Curriculum. The Uni-



versity offers the degree of Bachelor of Naval Science (See page 72) under certain conditions, but NROTC students normally will seek one of the other degrees offered.

Regular NROTC students are selected each winter in a nation-wide competitive testing and screening program. They receive Navy subsidies which pay most of the costs of their four years of education. Upon graduation and receipt of a bachelor's degree they are commissioned as regular officers in the Navy or in the Marine Corps.

Contract NROTC students are selected from the incoming freshmen by the University NROTC staff. Contract students agree with the Navy to complete the four-year NROTC curriculum and to accept reserve commissions in the Navy or Marine Corps upon graduation. They are subsidized by the Navy to the extent of a payment of about \$.90 a day during their last two years in college plus necessary uniforms and equipment during the four years.

The training of both regular and contract students fulfills the University's requirement for military training. They are deferred from Selective Service as long as they are in good standing in the NROTC.

The NROTC curriculum consists of twenty-two semester hours of naval science, divided into three hours of classroom instruction and two hours of laboratory work each week. Regular students must complete one year of college physics and one year of college mathematics, and both contract and regular students must satisfactorily complete one semester of general psychology by the end of sophomore year and must qualify as first class swimmers prior to graduation. A course in public speaking is recommended when scheduling permits.

### COURSES

#### **11 Naval Orientation and History of Sea Power**      3 credits      First semester

Introduction to organization for national defense, naval organization, naval communications, security, administration, leadership, discipline, military justice, ship types and construction, and present employment of the Navy. Covers fundamental concepts of sea power related to geopolitical theories and includes a historical study of the rise of sea power through the Age of Exploration.

#### **12 Influence of Sea Power upon History**      3 credits      Second semester

A study of the influence of naval command of the seas on world affairs from the American Revolution to the present day. Presents parallels of history as guides to understanding the roles of navies in the world today and those basic elements of naval strategy which have remained relatively constant. Particular emphasis is placed on the attributes of successful leadership and the development of other elements of victory within the framework of significant naval battles and campaigns throughout the period.

#### **51 Naval Weapons**      3 credits      Each semester

A course dealing primarily with the description, design, and theory of modern naval weapons and weapons systems, including guided missiles and nuclear propulsion. Engineering principles, embracing mechanics, physics, trigonometry, calculus, chemistry, electricity, electronics, and hydraulics, are utilized. Much of the course deals with theory of fire control as employed against underseas, surface, and air targets. Representative system descriptions include digital and analog computers and other elements associated with automation and the use of electric-hydraulic and amplidyne power drive systems. A portion of the course deals with subsonic, transonic, supersonic and hypersonic aerodynamics, and guidance and propulsion systems of current guided missiles. Nuclear propul-

sion, nuclear weapons, and the effects of nuclear explosion are briefly covered. (NS 51 is classified and is available only to NROTC students.)

**52 Introduction to Naval Leadership** 1 credit Each semester

A two-hour course divided between seminar type instruction in problems of naval leadership and practical instruction in naval subjects. Sophomore NROTC students who are taking Psychology 1 or who have taken Psychology 1 and are not registered for NS 51 will register for this course.

**131 Naval Engineering** 3 credits First semester

This course relates the fundamental principles of mechanics and thermodynamics, and electrical and nuclear engineering to the study of conventional and nuclear naval engineering installations. A thorough study is made of the applications of thermodynamic principles to high pressure, closed cycle engineering systems, and to related auxiliary equipment including refrigeration systems, diesel engines, and gas turbines. The fundamental principles of electrical engineering are applied in a study of shipboard electrical systems and equipment. Nuclear engineering as applied to ship propulsion is briefly considered.

**132 Navigation** 3 credits Second semester

A study of terrestrial, electronic, and celestial navigation. Lectures develop the study of the concepts of the solar system, celestial coordinates, and the astronomical triangle, and the principles of time. Laboratory sessions are devoted to the solution of the various navigation problems including piloting.

**\*133 Evolution of the Art of War** 3 credits First semester

A study of military history from Alexander the Great through the Civil War. Examines the development of weapons, equipment, tactics, and techniques through an analysis of selected campaigns and battles throughout the world. Presents the evolution of the principles of war and their inter-relationship by development of classical historical examples.

**\*134 Basic Strategy and Tactics** 3 credits Second semester

Continuation of the study of military history from the Franco-Prussia War through World War II analyzing the development of U. S. and foreign military strategy. Covers organizational structure of the U. S. Marine Corps and provides the student with a basic knowledge of modern combat tactical principles and techniques.

**141 Naval Operations** 3 credits First semester

A study of naval operations and tactics from individual ship to fleet-size units. Includes development and application of relative motion problems, the rules of the nautical road, and multi-ship formations. Inspects art of preparing plans and orders. Carrier striking force doctrine is discussed in the light of tactical, strategic, and diplomatic considerations. Laboratory sessions provide practice in tactical maneuvering and communication procedure.

**142 Principles of Naval Leadership and Administration**

3 credits

Second semester

A study of the principles and problems of human relations and personnel management as related to the leadership responsibilities of naval officers. Included are the concepts of leadership, the development of effective relations with others, the principles of group motivation, and the basic concepts, functions, and objectives of scientific management. The principles and application of military law are then studied in relation to the

\* Open only to Naval ROTC students enrolled in the Marine Corps option and taken in lieu of Naval Science 131, 132 and 141, 142.

structure and functions of naval organizations and the principles of leadership and personnel management. Prerequisite: NS 52 and Psych. 1.

**\*143 Amphibious Warfare I**      3 credits      First semester

Studies history of amphibious warfare with emphasis upon the U. S. Marine Corps role in its development. Discusses amphibious operations and their significance in recent wars. Introduces doctrinal techniques and present concepts of amphibious warfare including use of nuclear weapons and vertical envelopment.

**\*144 Amphibious Warfare II, Leadership**      3 credits      Second semester

Continues the study of current amphibious doctrines emphasizing recent technological developments. Introduces the principles of military justice and the administration of courts-martial. Provides the student with a knowledge of the basic principles of military leadership and Marine Corps administration.

## Office Administration

Associate Professor KESSEL (Head); Assistant Professor ANDERSON;  
Instructors MACPHEE and MEINERS

*Primarily for Undergraduates*

**1 Beginning Typewriting**      2 credits      Each semester

The development of typewriting skill sufficient for personal use. Students with one year of previous typewriting instruction will not receive credit. (KESSEL)

**2 Typewriting Skill Development**      2 credits      Each semester

The development of typewriting speed and control to occupational competency levels. Prerequisite: consent of instructor. (MEINERS)

**3 Typewriting Problems**      2 credits      Each semester

The development of occupational competence in office-type production problems including correspondence, manuscripts, legal documents, and other special problems. Prerequisite: consent of instructor. (MacPHEE)

**15n Shorthand Theory**      4 credits      First semester

A first course in Gregg Shorthand Simplified theory. Students with one year previous Gregg shorthand instruction will not receive credit. (ANDERSON, MEINERS)

**16 Shorthand Dictation**      4 credits      Second semester

Development of skill in taking dictation in Gregg Shorthand Simplified; introduction to transcription. Prerequisite: consent of instructor. (ANDERSON, MEINERS)

**71 Shorthand Speed Development**      3 credits      First semester

The development of the ability to take dictation at high speeds. Prerequisite: consent of instructor. (MEINERS)

**72 Shorthand Transcription**      3 credits      Second semester

The development of transcription skills to occupational competency levels. Prerequisite: consent of instructor. (MEINERS)

\* Open only to Naval ROTC students enrolled in the Marine Corps option and taken in lieu of Naval Science 131, 132 and 141, 142.

- 85 Office Machines**      2 credits      Each semester  
 A first course in the operation of commonly used office adding-calculating machines. (MacPHEE)
- 195 Secretarial Office Procedures**      3 credits      Each semester  
 A study of the various filing systems and practice in the use of them; training in the operation of transcribing and duplicating machines; training in secretarial duties, responsibilities, and procedures. Prerequisites: consent of instructor. (ANDERSON)
- 196-197 Applied Secretarial Procedures**      3 credits      Each semester  
 Supervised office experience with related seminars; problems in secretarial administration; advanced dictation and transcription. Prerequisite: consent of instructor. (ANDERSON)

## Philosophy

(Philosophy is one of the subject matter fields within the Department of Social Sciences.)

Professor MOORE (Chairman);  
 Assistant Professor SEAMAN

*Primarily for Undergraduates*

- 1 Introduction to Philosophy**      3 credits      Each semester  
 The main problems in philosophy. Selected readings from the works of several major philosophers. (MOORE, SEAMAN)
- 61 Ethics**      3 credits      Each semester  
 The development of ethical thought, with the object of deriving a standard for governing individual and social conduct. Prerequisite: Sophomore standing or Philosophy 1. (MOORE)
- 71 Logic**      3 credits      Each semester  
 Valid and invalid methods of reasoning with special attention to the function of logic in the methods of science. Prerequisite: Sophomore standing or Philosophy 1. (SEAMAN)
- 81 Inductive Logic**      3 credits      First semester  
 The history of science with special attention to the development of the logic of science. (SEAMAN)

*For Advanced Undergraduates and Graduates*

- 103 Advanced Logic**      3 credits      Second semester  
 The ideas and techniques of contemporary logic. (SEAMAN)
- 105 Philosophy of Religion**      3 credits      Each semester  
 Major religious philosophies of the world. (SEAMAN)
- 109 History of Ancient Philosophy**      3 credits      Each semester  
 The development of philosophical thought from the early Greeks through the Middle Ages. Prerequisite: Junior standing. (SEAMAN)

- 110 History of Modern Philosophy** 3 credits Each semester  
The history of modern philosophical systems from Descartes through Kant. Prerequisite: Junior standing. (MOORE)
- 112 Philosophy of Science** 3 credits First semester  
The basic concepts of modern science. (MOORE)
- 113 Esthetics** 3 credits Second semester  
The esthetic experience and the leading philosophies of art. Prerequisite: Junior standing. (SEAMAN)
- 115-116 Contemporary Philosophy** 3 credits  
The important philosophical movements of the twentieth century. Lectures and a critical reading of a few representative works. (MOORE)
- 122 Philosophical Ideas in Recent Literature** 3 credits Second semester  
Current ethical, social and political trends through the medium of the work of such writers as Nietzsche, Stein, Sartre, Maugham, Joyce, and Hardy. (SEAMAN)
- 125 American Philosophy** 3 credits Second semester  
The development of philosophical ideas in the United States with emphasis on the period since 1875. (MOORE)
- 142 Empiricism and Rationalism** 3 credits Second semester  
The philosophies of Descartes, Leibniz, Locke, Berkeley, Hume and Kant, as introducing the main currents of modern philosophy. (MOORE)
- 191 Pro-Seminar** 3 credits Second semester  
Prerequisites: Instructor's permission and Senior standing. (STAFF)

*Primarily for Graduates*

- 207-208 Seminar** 2 to 4 credits
- The philosophy of Kant. A detailed study of the "Critique of Pure Reason." (MOORE)
  - American Pragmatism: Pierce, James, and Dewey. (MOORE)
  - Epistemology. (MOORE)
  - Philosophy of Science. (SEAMAN)
- 209-210 Directed Readings in Philosophy** 3 credits  
Directed study aimed at providing a graduate level of proficiency in the literature of philosophy. While concurrent mastery of a related undergraduate course may be required, no separate undergraduate credit will be given. Prerequisite: Permission of the instructor. (STAFF)
- 211-212 Research and Thesis** Credits to be arranged  
This is thesis credit for students working toward a graduate degree. It is done under direction of the professor in whose subject the greater part of the work is offered. (STAFF)

## Physical Education

Professor and Head of Physical Education, Chairman of Physical Education for Men, GREEN; Professor and Chairman of Physical Education for Women, LOCKE; Associate Professors GLANDER, COFFEY, and YOUNG; Assistant Professors KIRKLAND, PARBERRY, BETTS, and ROWE; Instructors BOYLE, MITCHELL, WEISKOPF, FORD, and SHUTE; Acting Assistant Professor HASSMAN; Coaches: Head Football, STAHLEY; Basketball, HODGES; Baseball, ANDERSON; Track and Cross Country, GLANDER; Swimming, MITCHELL

Physical and medical examinations are required of all new students on matriculation.

Unless excused by the University Physician, all students are required to enroll in activity courses during their freshman and sophomore years. All men students are required to complete four semesters of activity courses. All women students are required to earn six credits in physical education, two credits in healthful living, except those women students who are registered in the home economics, pre-nursing, pre-medic or bacteriology curricula, and four credits in activity courses (one each semester) normally to be taken during the freshman and sophomore year. In taking the four required activity courses women students should select one in each of the following four areas: rhythmic, individual sports, swimming, and team sports-body mechanics. Any woman student who wishes to take a proficiency test (skill and knowledge) in the activity in any of the above areas and who satisfactorily passes such a test will for that one unit be allowed to elect within any area. Any woman who satisfactorily passes a standardized health knowledge test will be exempt from meeting the healthful living requirement.

The following required activity courses are acceptable for meeting the University freshman and sophomore physical education requirements.

### HEALTH COURSE FOR WOMEN

- 1 Healthful Living**      2 credits      Each semester  
 Informal discussion of and project approach to consideration of problems of the college woman. Two hours per week. (STAFF)

### REQUIRED ACTIVITY COURSES FOR WOMEN

- 3 Restricted Physical Education**      1 credit      Each semester  
 Required for graduation in lieu of P.E. 5, 6, 7, 8 when physical and medical examination as certified by the University physician necessitates prescribing specific activities to meet the individual need. (STAFF)
- 5 Rhythms**      1 credit      Each semester  
 Instruction and practice in fundamentals and techniques of modern dancing and folk dancing. Two hours per week. (STAFF)
- 6 Individual and Dual Sports**      1 credit      Each semester  
 Instruction and practice in fundamentals and techniques of golf, tennis, badminton, archery, bowling, skiing, fencing. Two hours per week. (STAFF)
- 7 Team Sports and Body Mechanics**      1 credit      Either semester  
 Nine weeks instruction and practice in fundamentals and techniques of field hockey, volleyball, basketball, softball. Nine weeks of body mech-

anics techniques with emphasis on physical efficiency, poise, posture-training, exercises and relaxation. Two hours per week. (STAFF)

- 8 Swimming** 1 credit Each semester  
Instruction and practice in all levels of swimming, including senior life-saving and diving. Two hours per week. (STAFF)

#### REQUIRED ACTIVITY COURSES FOR MEN

- 31 Freshman Physical Education** ½ credit Each semester  
Instruction in fundamental skills and participation in touch football, volleyball, basketball, and softball. One hour per week. (STAFF)
- 33 Sophomore Physical Education** ½ credit Each semester  
Instruction in fundamental skills and participation in archery, badminton, basketball, baseball, bowling, boxing, fencing, football, golf, handball, life saving, swimming, table tennis, trampoline, tumbling, wrestling. One hour per week. (STAFF)
- 35 Restricted Physical Education** ½ credit Each semester  
Required for freshmen and sophomores in lieu of P.E. 31 and 33 when physical and medical examinations necessitate prescribing specific activities to meet the individual need. One hour per week. (STAFF)

#### FUNDAMENTAL SKILL COURSES

Designed Primarily for Students Majoring or Minorng in  
Physical Education

- 11-12 Advanced Dancing** 1 credit  
Advanced modern dance techniques with opportunities for individual expression and group composition. Prerequisite: Permission of instructor. Two hours per week. (ROWE)
- 28 American Country Dance** 1 credit Either semester  
Instruction in various square, long and round dances. Theory and practice of directing and calling the dances. Enrollment limited to 50 students and the permission of the instructor. Two hours per week. (COFFEY)
- 37 Individual Sports** 1 credit Either semester  
Instruction in fundamental skills and participation in golf, archery, and fencing. Two hours per week. (STAFF)
- 38 Beginner's Swimming** 1 credit Either semester  
An elective course offering instruction in fundamental skills and participation in swimming. Majors in Physical Education may be excused from taking this course if they can satisfactorily pass an elementary swimming test. Prerequisite: Permission of instructor. Two hours per week. (GLANDER)
- 39 Fundamental Gymnastics** 2 credits First semester  
Instruction in fundamental skills, techniques of calisthenics and gymnasium apparatus. Students will receive instruction in the following gymnastic apparatus: rings, horizontal bars, horse, and parallel bars. Opportunity is provided to devise exercises appropriate to certain sports and practical experience in teaching. Three hours per week. (MITCHELL)
- 40 Recreational Sports** 1 credit First semester  
Instruction in fundamental skills and participation in badminton, tennis, and bowling. Two hours per week. (STAFF)

- 41 Boxing and Wrestling** 2 credits First semester  
One lecture and two laboratory periods per week covering the techniques and skills of boxing and wrestling; practice in the fundamentals of these sports. (YOUNG, GLANDER)
- 42 Tumbling, Pyramids and Stunts** 2 credits Either semester  
One lecture and two laboratory periods per week covering the techniques and skills in tumbling, pyramid building and stunts; practice in the fundamentals of these activities. (MITCHELL, BETTS)
- 43 High Organized Games** 2 credits Either semester  
One lecture and two laboratory periods a week covering the techniques and skills of games of high organization. (KIRKLAND, BETTS)
- 44 Swimming** 2 credits Either semester  
One lecture and two laboratory periods per week covering the techniques and skills in swimming, life saving and diving, practice in the fundamentals of these skills. Students satisfactorily passing the Red Cross tests will receive Advanced Swimmers and Life-Saving Certificates. (GLANDER, COFFEY)
- 46 Recreation Gymnastics** 1 credit Either semester  
An elective course in gymnastics offering stunts and recreational activities on the following types of apparatus: rings, parallel bars, bucks, horse, horizontal bar and springboard, and trampoline. Two hours per week. (MITCHELL)
- 55 Body Mechanics (Women)** 1 credit Either semester  
A course designed to develop physical efficiency and poise, through posture training, exercise, and relaxation techniques. Two hours per week. (BETTS)

### PROFESSIONAL COURSES

#### These Courses are Intended for Students Majoring or Minoring in Physical Education

- 45 Introduction to Physical Education** 2 credits First semester  
A course designed especially to orient students intending to major in the field of physical education. It will include an approach to philosophy, aims and objectives, and a general survey of the field of physical education. Two hours per week. (GREEN)
- C47 History of Physical Education** 2 credits Correspondence only  
A study of the backgrounds and the development of the physical education movement, the comparison of distinctive trends in different countries with special emphasis upon the modern trend in the United States. (STAFF)
- 50 General Hygiene** 3 credits Either semester  
A three-hour lecture course covering the important factors in maintaining health. Individual health practices and the measures of public health are included. (WEISKOPF)
- 52 Physical Education Activities for Elementary School** 3 credits Second semester  
Organization and conduct of elementary school activities in the playroom and on the playground; attitudes, understandings and skills related to stages of growth; practice in teaching suitable physical education activities to elementary school children. Especially recommended for those preparing to teach younger children. Three hours per week. (ROWE)



- 54 Camp Leadership** 2 or 3 credits Second semester  
Two lectures and an assigned laboratory period. Theory and practice of camp leadership, providing training for those interested in summer camp positions. The third credit to be given to those who do summer work of at least six weeks, in approved camps, under competent leadership. One field trip. (COFFEY)
- 61 Recreational Arts and Crafts** 2 credits Each semester  
A study of handicraft techniques and forms suitable for playground projects. Students will make handicraft projects and study special procedures of teaching these projects. (KIRKLAND)
- 64 Recreational Music** 1 credit Second semester  
A course in the techniques and materials for a musical program in recreational and community centers. Song leading, program building, and rhythmic activities. (KIRKLAND)
- 66 Aquatic Instructors Course (110)** 2 credits Second semester  
This course is divided into two phases. The first phase is a review of swimming skills, swimming strokes and life-saving. The second phase is concerned with the teaching and practice in the methods of instruction of all the areas of swimming and life-saving. One lecture period and one laboratory period with a third assigned period for practice in swimming instruction. Those students satisfactorily passing the Red Cross tests will receive Red Cross Water Safety Instructors certificates. Prerequisite: Senior life-saving and nineteen years of age. (KIRKLAND)
- 71 History and Principles of Physical Education** 3 credits First semester  
A study of Physical Education theory and practice and its relation and contribution to general education, beginning with the Greeks and extending through various contemporary developments. (GREEN)
- 83 Beginning Social Dance** 1 credit Either semester  
Instruction in basic ballroom steps. Theory and practice in direction and teaching ballroom dancing. Enrollment limited to 50 students and permission of the instructor. Two hours per week. (ROWE)
- 88 First Aid** 2 credits Each semester  
Emphasis is placed on emergency care of injuries as a result of accidents and illness. Control of hemorrhage, artificial respiration, shock, first aid for fractures, and proper methods of transportation of injured persons are included in the course. American Red Cross standard and advanced certificates are issued to those students completing the course. (KIRKLAND)
- 103 Playground and Community Recreation** 2 credits Second semester  
A study of the promotion and organization of recreational activities, stages of growth and adaptation of activities for all age groups in the community; construction and equipment of playgrounds. One field trip. (GREEN)
- 118 Physiology of Exercise** 2 credits Second semester  
The effects of various forms of physical activity on the circulatory, respiratory and other physiological processes. Prerequisite: Zool. 6. (WEISKOPF)
- 119 Human Kinesiology** 3 credits First semester  
A study of the body in movement, leading to an understanding of various types of muscular exercise with reference to corrective and developmental problems. (LOCKE)

- 121 Theory and Techniques of Dance** 3 credits First semester  
 Analysis and methods in progressive teaching of skills and rhythmic fundamentals of various forms of educational dance. Includes practice in the teaching of modern, social, and folk dance. Four hours per week. (ROWE)
- 124 Theory of Individual Gymnastics** 2 credits Second semester  
 A study of the physical and orthopedic examinations for the purpose of selecting suitable activities for preventing and correcting poor body mechanics. Occasional lab. (LOCKE)
- 125-126 Management of Women's Athletics** 3 credits  
 Two hours lecture, one hour laboratory, and one hour practice teaching per week. A study of the complete field of team and individual sports for women with emphasis on technique analysis, knowledge of rules, and development of skills in coaching and officiating. Two field trips. (BETTS)
- 129 Leadership in Social Recreation** 2 credits Either semester  
 This course deals with the organization, planning and conduct of school and community, social, recreational and extra-curricular events. (ROWE, COFFEY)
- 141 Technique and Methods of Coaching Basketball**  
 2 credits First semester  
 Two-hour lecture course in the methods of coaching basketball teams. Details of teaching individual fundamentals, offensive and defensive team play, strategy, and conditioning of athletes. In addition, all students will receive practical instruction on the field in basketball from the coach's viewpoint. Prerequisite: Junior standing. (HODGES)
- 142 Techniques and Methods of Coaching Baseball**  
 2 credits Second semester  
 Two-hour lecture course in the methods of coaching baseball teams. Details of teaching individual fundamentals, offensive and defensive team play, strategy, and conditioning of athletes. In addition, all students will receive practical instruction on the field in baseball from the coach's viewpoint. Prerequisite: Junior standing. (PARBERRY)
- 143 Techniques and Methods of Coaching Track** 2 credits First semester  
 Two-hour lecture course in the methods of coaching track teams. Details of teaching individual fundamentals, strategy, and conditioning of athletes. In addition, all students will receive practical instruction on the field in track from the coach's viewpoint. (GLANDER)
- 144 Techniques and Methods of Coaching Football**  
 2 credits Second semester  
 Two-hour lecture course in the methods of coaching football teams. Details of teaching individual fundamentals, offensive and defensive play, strategy, and conditioning of athletes. In addition to eleven-man football, a certain amount of time will be given to fundamentals of six-man football. All students will receive practical instruction on the field in football from the coach's viewpoint. Prerequisite: Junior standing. (STAHLEY)
- 148 Athletic Injuries** 2 credits First semester  
 The care, prevention, and treatment of athletic injuries. The study and practice of modern athletic training methods. (BOYLE)
- 150 Coaching Clinic** 1, 2 or 3 credits Summer school  
 Procedures and techniques involved in coaching high school and collegiate sports. The first eight weeks of the course will be held on the campus, and a final week at the Idaho Coaches' Association Clinic. Students

may register for 1 credit for Association Clinic participation only, 2 credits for Campus Clinic participation only, and 3 credits for complete participation. A special additional fee is charged for Association Clinic participation. (STAFF)

- C171 Principles of Physical Education** 3 credits Correspondence only  
 Interpretation of the aims and objectives of physical education, the principles and procedures upon which the physical education program should be based, and its relation and contribution to general education. (STAFF)
- 181 Physical Education Tests and Measurements** 3 credits First semester  
 A study of the general historical background and the need for the use of tests in physical education. Elementary statistical methods, scoring methods, how to build tests, administration of tests, and their use in classification and placement. Prerequisites: Psych. 1 or Psych. 55-56, and junior standing. (STAFF)
- 187 Intramurals and Athletic Officiating** 3 credits First semester  
 The organization and administration of intramural programs in elementary and secondary schools. Rules and methods of officiating athletic contests. Thirty hours of officiating in intramural sports and other athletic contests. (PARBERRY)
- 196 Organization and Administration** 3 credits Second semester  
 The organization of a staff, of programs, constructing the gymnasium arrangement, and care of equipment, care and administration of courts, tanks, and fields, and general problems of supervision of a physical education department. (GREEN)

*Primarily for Graduates*

- 261-262 Research and Thesis** Credits to be arranged Each semester  
 This course is primarily designed for students working toward the master's degree. It is done under the direction of the professor in whose field the greater portion of the work is offered. It should be taken by those students satisfying their thesis requirements. (STAFF)
- 281-282 Professional Problems in Physical Education**  
 Credits to be arranged Each semester  
 This course is primarily designed for students working toward the master's degree. It is done under the direction of the professor in whose field the greater portion of the work is offered. It should be taken by those students satisfying their professional problems requirements. (PARBERRY and KIRKLAND)
- 291 Social Basis of the Profession** 3 credits Either semester  
 A democratic philosophy for physical education, health education and recreation. An analysis of basic principles and objectives as related to the development of the individual and man's cultural heritage. (GREEN)
- 294 Workshop in Program Construction** 2 credits Summer school  
 Principles and techniques for the development of the physical education and health education curriculum and recreation programs. (STAFF)
- 296 Advanced Organization and Administration**  
 3 credits Second semester  
 Deals with the policies in the organization of the program, and the methods of administration to secure results in the public schools, high schools and elementary schools. Topics stressed: classification of children; the time schedule; teaching staff; training; load; office organization and administration; state laws and programs of physical administration; the plant; and the finances. (PARBERRY)

- 297 Seminar** 1-3 credits Either semester  
 Current trends in Physical Education, Health and Recreation.  
 (GREEN)

## Physical Sciences

Professor RENFREW (Head)

The Department of Physical Sciences includes two subject matter fields: Chemistry and Physics. A student may major in either of these fields.

For course offerings, see under:

**Chemistry**

**Physics**

## Physics

(Physics is one of the subject matter fields within the Department of Physical Sciences.)

Professor MILLER (Chairman); Associate Professor CURTIS;  
 Instructors HALLAND, SPIKER, ROBINSON; Acting Instructor BEYERS

- A Remedial Physics** No credit Second semester  
 A prerequisite to Physics 51 for students who have not had high school physics. Three lectures each week. (MILLER)
- †1 **Elementary Physics** 4 credits First semester  
 An introductory survey of the field of physics with emphasis on everyday applications. Three lectures and one two-hour laboratory period a week. (ROBINSON)
- †3-4 **General Physics** 4 credits Each semester  
 A general study of mechanics and heat the first semester, and magnetism, electricity, sound, and light the second semester. Three lectures, one two-hour laboratory period, and one recitation period a week. (Physics 3 is offered each semester. Physics 4 offered only second semester.) Prerequisite: Math. 1 or 11. (MILLER)
- †51-52 **Engineering Physics** 5 credits Each semester  
 This course is intended for students in the physical sciences and engineering. Two lectures, three one-hour recitations, and one two-hour laboratory a week. Must be preceded or accompanied by calculus. Prerequisite: High school physics. (SPIKER, CURTIS, ROBINSON)

*For Advanced Undergraduates and Graduates*

- 120 Twentieth Century Physics** 2 credits Summer school  
 A non-mathematical discussion of some of the modern phases of physics. (MILLER)

† Students may not take both Physics 1 and 3, or Physics 3 and 51, or Physics 1 and 51 for credit.

- 121-122 Analytical Mechanics** 3 credits  
Statistics, kinematics, and dynamics. Prerequisites: Phys. 4 or 52; Math. 52. (MILLER)
- 131-132 Electricity and Magnetism** 3 credits  
Prerequisites: Phys. 4 or 52; Math. 52. (CURTIS)
- 133 Sound Waves and Acoustics** 3 credits First semester  
Sources of sound, propagation of waves through elastic media and architectural acoustics. Prerequisites: Math. 52 and Physics 3 or 51. (MILLER)
- 141 Advanced Light** 4 credits First semester  
Prerequisites: Phys. 4 or 52; Math. 52. (MILLER)
- 152 Advanced Heat** 3 or 4 credits Second semester  
Prerequisites: Phys. 4 or 52; Math. 52.
- 154 Solid State Physics** 3 credits Second semester  
A study of the electrical, magnetic, elastic and thermal properties of solids. Prerequisites: Math. 101, Physics 4 or 52. (CURTIS)
- 161-162 Pro-Seminar** 1 credit  
A study of important topics in advanced physics. Prerequisites: Phys. 121-122 and 131. (MILLER)
- 171-172 Introduction to Atomic and Molecular Physics** 3 credits  
A treatment of the development of modern ideas regarding atomic and molecular structure, radiation, and quantum mechanics. The second semester will treat these same problems from the point of view of wave mechanics. Prerequisites: Math. 52 and Physics 52 or 4. (ROBINSON)
- 181 Nuclear Physics** 3 credits Either semester  
An introduction to the study of radio-activity, protons, deuterons, neutrons and other particles; nuclear fission. Prerequisites: Chem. 2; Phys. 52.
- 191-192 Thesis** 1 to 2 credits  
Prerequisite: Senior physics major. (STAFF)

*Primarily for Graduates*

- 201-202 Research and Thesis** Credits to be arranged Each semester  
Investigation of experimental or theoretical nature under supervision of an instructor. (STAFF)
- 211-212 Atomic and Molecular Physics** 3 credits  
Lectures and advanced topics in this field. Prerequisites: Phys. 171-172 and Math. 101 or 124.
- 221-222 Advanced Mechanics** 3 credits  
Advanced classical mechanics and statistical mechanics. Prerequisite: Physics 121-122.
- 251-252 Theoretical Physics** 3 credits  
Prerequisite: Phys. 122.
- 261-262 Seminar** 1 credit  
A study of topics from recent research. (STAFF)

## Plant Pathology

Professors FINLEY (Head) and RAEDER;  
Associate Professors WATSON and HELTON

**101 General Plant Pathology** 4 credits First semester

A study of plant diseases due to bacteria, fungi, viruses and non-parasitic causes. Includes a study of causes, symptoms, effects, means of dissemination and principles of control. Two lectures and two two-hour laboratory periods per week. Prerequisites: Bot. 1-2, or Bot. 3. (RAEDER)

†**104 Fruit Diseases** 2 credits Second semester

All types of diseases and disorders of fruit crops are dealt with, parasitic, nonparasitic and unknown, with emphasis being placed on those most commonly encountered. Specific and common symptoms are stressed. Use is made of specimens and visual aids. Two meetings weekly, each being devoted to combined lecture and laboratory examination of materials. One field trip of longer than class duration and local tours as circumstances permit. Prerequisite: P.P. 101. (HELTON)

**111 (Bot. 111) Mycology** 4 credits First semester

See Botany 111 for course description.

†**150 Disease of Food, Fiber, and Forage Crops** 4 credits Second semester

A detailed study of the host-parasite relationships and control measures of the diseases which affect the economy of crop production in Idaho. Emphasis will be placed upon soil-borne and virus pathogens. Two lectures and two two-hour laboratory periods per week. Prerequisite: Plant Path. 101 or equivalent. (FINLEY)

**164 (For. 164) Forest Pathology** 3 credits Second semester

See Forestry 164 for course description.

*Primarily for Graduates*

**201-202 Seminar** 1 credit Each semester  
(STAFF)

**203-204 Research and Thesis** Credits to be arranged Each semester  
(STAFF)

**\*207 Research Methods in Plant Pathology** 3 credits First semester

Emphasis will be placed upon isolation, purification and identification of pathogenic agents, host-pathogen interactions, experimental designs, analysis, interpretation and presentation of research data. Two four-hour laboratory periods per week. (WATSON)

**\*208 Ecology of Soil-Borne Plant Pathogenic Organisms** 3 credits Second semester

A study of the effects of climate, agronomic practices and microbiological associations upon the prevalence and pathogenic activity of soil-borne bacteria, fungi and nematodes. Three lectures per week. (FINLEY)

†**210 Plant Virology** 3 credits Second semester

A study of the structure and properties of plant viruses as related to pathogenic activity. Laboratory exercises will be conducted to demon-

† Offered in alternate years; given in 1960-61.

\* Offered in alternate years; given in 1959-60.

strate the techniques involved in the study of viruses and virus diseases. Three lectures per week. (WATSON, HELTON)

- \*212 (Bot. 212) **Advanced Mycology** 4 credits Second semester  
See Botany 212 for course description.
- \*214 (Bot. 214) **Physiology of the Fungi** 3 credits Second semester  
See Botany 214 for course description.

## Political Science

(Political Science is one of the subject matter fields within the Department of Social Sciences.)

Professors HOSACK (Chairman), KERR (Emeritus), MARTIN;  
Associate Professors BORNING, HAUSE; Assistant Professors DOBLER, WINKLER;  
and Instructor HUCKSHORN

*Primarily for Undergraduates*

These courses require no prerequisite. Students may enroll for a second semester course without having had the first semester course.

### 1-2 American Government 3 credits

An introduction to the general problems of government, Pol. Sci. 1 is taught each semester and emphasizes the basic concepts of American politics and the major structural elements of national government. Pol. Sci. 2 is taught the second semester and emphasizes the functions and procedures of the national government. (MARTIN, HOSACK, BORNING, DOBLER, HAUSE, WINKLER, HUCKSHORN)

### 5 Science of Law Enforcement Credits to be arranged

A practical and scientific course of instruction offered in cooperation with the Federal Bureau of Investigation.

### 75 State Government 3 credits First semester

An analysis of American state government. Emphasis upon executive budget, administrative consolidation, relations of the state and the federal government, problems of the executive, legislative, and judicial branches, and functions of state government. (HUCKSHORN)

### 76 City and County Government 3 credits Second semester

A study of the organization, functions and special problems of the local units of government in the United States. (HUCKSHORN)

### 85-86 Comparative Government 3 credits

The first semester concerns parliamentary democracies with attention given to the responsible ministry, relations between executive and legislature, and recent political developments. The second semester concerns authoritarian governments with attention to their origins, the roles of parties, the economic functions of the state, and the place of the individual. (BORNING)

\* Offered in alternate years; given in 1959-60.

*For Advanced Undergraduates and Graduates*

Ordinarily six credits in lower division courses in political science are required for registration in the following courses. Exceptions may be made in special cases with the consent of the instructor concerned.

**Business Law**

See Bus. 165-166      3 credits

See Bus. 167            3 credits

Second semester

**125-126 Political Theory      3 credits**

An analytical study of Western political thought from the ancient Greeks to the present. Attention to the classics of Aristotle, Locke, Marx, and other leading theorists; analysis of major tendencies such as communism and democracy. Prerequisite: Junior standing. (BORNING)

**128 American Political Thought      3 credits      Either semester**

A study of American political thought from Colonial times to the present with analysis of the writings of Paine, Jefferson, Wilson, and others. Attention also to conservatism, protest movements, modern liberalism, and other tendencies. Prerequisite: Junior standing. (BORNING)

**131 Political Parties      3 credits      Either semester**

Public opinion and the political process. Party machines, the spoils system, nominating methods, conduct of elections. (MARTIN)

**132 Legislation and Legislative Bodies      3 credits      Either semester**

Practical workings of legislative bodies. Special attention will be given to such problems as representation, committee activity, the lobby and the influence of the executive. (DOBLER)

**134 Basic Factors in American Politics      3 credits      Either semester**

An analysis of interest groups, of their organizational patterns, and pressure group activities in their relation to our political system and to the public interest. (MARTIN)

**135 Political Measurement      3 credits      Either semester**

An introduction to quantitative methods in the study of politics, especially in the analysis of public political participation and in developing administrative criteria.

**137 International Relations      3 credits      First semester**

A study of the basic principles of international politics. An analysis of such concepts as nationalism, imperialism, militarism, internationalism, and of the problems that result therefrom. (HOSACK)

**138 Conduct of American Foreign Policy      3 credits      Second semester**

Analysis of the formulation and execution of our foreign policy; the roles of pressure groups, the Congress, the President, the Department of State and its diplomatic service with reference to specific policies as the Monroe Doctrine, Isolation, etc. (HOSACK)

**140 Principles of International Law and Organization      3 credits      Second semester**

A survey of the chief agencies of international cooperation, past and present, and of the sources and uses of international law. Special emphasis will be given to the evolution of the general principles of international law and to the development of the United Nations. (HOSACK)

**141 World Politics      3 credits      Summer school**

Recent developments in international politics; the chief elements in the current foreign policies of the major world powers. (HOSACK)



- 143 Contemporary Far Eastern Politics** 3 credits Either semester  
An introduction to the problems of the area, their sources and proposed solutions, as presented by the Orientals; together with an analysis of the conflict of interest of the Powers in Eastern Asia. Special attention will be given to the situation of China and Japan. (HOSACK)
- 146 The Chinese Empire** 3 credits Either semester  
A study of the political connotations of various aspects of Chinese culture which contributed to the remarkable continuity of the oldest continuous political entity existing today. (HOSACK)
- 151 Introduction to Public Administration** 3 credits Either semester  
A study of basic principles of public administration including executive management; departmentalization; field organizations; administrative reorganization; budgeting, purchasing, and public relations. (HUCKSHORN)
- 152 Administrative Law** 3 credits Either semester  
The regulations that control the administrative authorities of government. The rights, duties, and liabilities of public officers; relief against administrative action; jurisdiction of and judicial control of public administration. (DOBLER)
- 153 Public Personnel Administration** 3 credits Either semester  
A survey of public personnel administration, including a history of civil service and studies of the personnel agency, recruitment, examination, appointment, training and promotion, discipline, employee organization, and retirement. (HUCKSHORN)
- 162 Government and Business** 3 credits Either semester  
The power of government, both national and state, over taxation, bankruptcy, money, conservation, housing, social welfare, etc. Special emphasis is given to governmental promotion and regulation of agriculture, business, and labor. (MARTIN)
- 167 Constitutional Law** 3 credits Either semester  
A study of the leading constitutional principles in their historic setting. Consideration will be given to federal and state relations, the power of Congress, due process, and civil liberties. (DOBLER)
- 191 Workshop in Local Government** 2 credits Summer school  
A two-week examination of selected problems in local government finance, budgeting, personnel administration, purchasing, and planning emphasizing the practical problems of actual day-to-day operation. One-day field trip at option of instructor. (HUCKSHORN)

*Primarily for Graduates*

- 206 Problems in Local Government** 3 credits Either semester  
Emphasis on new problems growing out of increasing complexity of our economic and social structure. Special consideration to county and state problems. (MARTIN)
- 207-208 Seminar** 2 to 4 credits One offered each semester
- a. Public Administration (One two-day field trip). (MARTIN)
  - b. American Foreign Policy. (HOSACK)
  - c. Contemporary American Politics. (MARTIN)
  - d. Comparative Government. (HOSACK, BORNING)

- e. Problems of Peace. (MARTIN, HOSACK)
  - f. The Classics of Politics. (BORNING)
  - g. Problems in American Democracy. (BORNING)
  - h. National Policy and Administration. (MARTIN, HUCKSHORN)
  - i. The Legislative Process. (HUCKSHORN)
  - j. State Government and Administration. (MARTIN, HUCKSHORN)
  - k. Municipal Government. (HUCKSHORN)
  - l. Constitutional Law Problems. (DOBLER)
  - m. Administrative Law Problems. (DOBLER)
  - n. International Law. (HOSACK)
- 209-210 Directed Reading** 3 credits
- a. Problems in International Relations. (HOSACK)
  - b. Problems in Political Theory. (BORNING)
- Directed study and research in the literature of the field. While concurrent mastery of a related undergraduate course may be required no separate undergraduate credit will be given. Prerequisite: Permission of the instructor.
- 211-212 Research and Thesis** Credits to be arranged
- This is thesis credit for students working toward a graduate degree. It is done under direction of the professor in whose subject the greater part of the work is offered. (STAFF)
- 228 Theory of Democracy** 3 credits Either semester
- An intensive examination of the democratic tradition in political thought and a critical theoretical analysis of the divergent interpretations of the concept. (BORNING)
- 231 American Political Institutions** 3 credits Either semester
- The history of social and economic bases in the development of American political institutions and government. (MARTIN)
- 285 The Practice of Government** 3 credits Either semester
- A comparative analysis of selected functions of government in varied governmental contexts. (HOSACK)
- 290 Scope and Methods of Political Science** 3 credits Either semester
- Study of political science among the social sciences with particular attention to its techniques, interrelationships, conceptual tools, and literature. Required of all candidates for a graduate degree.

## Poultry Husbandry

Professors LAMPMAN (Head), and PETERSEN

*Primarily for Undergraduates*

- 2 Poultry Production** 2 credits Second semester
- An introductory survey of present day production practices. A brief study of breeds, judging for egg production, feeding, housing, and the

marketing of poultry products. A course adapted for students majoring in one of the animal industries, agricultural education, or general agriculture. One lecture and one two-hour laboratory period per week. (LAMPMAN)

*For Advanced Undergraduates and Graduates*

- †101 **Grading, Processing, and Merchandising Poultry Products** 3 credits First semester  
 Factors influencing quality, classification, grading, and processing poultry products; marketing methods and agencies. Two lectures and one two-hour laboratory period per week. One one-day field trip. (LAMPMAN)
- 102 **Advanced Poultry Management** 3 credits First semester  
 An advanced study of poultry production and management practices; special emphasis on the application of up-to-date information on housing, equipment, labor-saving features and efficiency factors in poultry flock management, production costs and margins over cost applied to specialized poultry enterprises. Two lectures and one two-hour laboratory period per week. One one-day field trip. (LAMPMAN)
- \*103 **Poultry Feeds and Feeding** 2 credits Second semester  
 Practical aspects of poultry nutrition, ration formulation and mixing; feeding tests. Application of fundamental nutrition to poultry requirements. Two lectures per week. One one-day field trip. Prerequisite: A.H. 105 or approval of instructor. (PETERSEN)
- †105 **Poultry Breeding** 2 credits First semester  
 The inheritance of standard-bred and utility characteristics in poultry. The application of genetics in modern breeding systems and practices. Two lectures per week. (LAMPMAN)
- 106 **Poultry Judging and Selection** 1 credit First semester  
 Practice judging for breed characteristics and utility judging for poultry meat and egg production. A service course for students in the Agricultural Education and General Agriculture curricula and for poultry majors. One two-hour laboratory period per week. (LAMPMAN)
- †108 **Incubation, Brooding, and Hatchery Management** 3 credits Second semester  
 Principles involved in modern methods of incubation, brooding and hatchery management. The embryonic development of the chick during incubation, factors influencing hatchability, and the nutritional requirements of chicks receive special emphasis. Two lectures and one two-hour laboratory period per week. One one-day field trip. (LAMPMAN, PETERSEN)
- 121-122 **Special Problems** Credits to be arranged Each semester  
 (LAMPMAN, PETERSEN)

*Primarily for Graduates*

Graduate courses offered jointly by the Departments of Animal Husbandry, Dairy Science and Poultry Husbandry are listed under an Animal Science course section, see page 180.

Graduate students receive the degree of Master of Science in Agriculture with a major in Poultry Husbandry.

† Offered in alternate years; given in 1960-61.

\* Offered in alternate years; given in 1959-60.

## Psychology

Professors BOYER (Head) and GILES; Associate Professor OTNESS;  
Assistant Professors FURST, BURLINGAME

**\*1 General Psychology** 3 credits Each semester  
This introductory course is a survey of many areas of psychological activity with considerable emphasis on the application of psychology to every day life situations. (BOYER)

**55-56 Human Growth and Development** 3 credits Each semester  
The course offers the study of human growth in all of its phases—physical, intellectual, emotional and social. Psych. 55 emphasizes the period from conception to adolescence; Psych. 56 from adolescence through maturity. Either or both courses may be elected. Credit will not be given for either course and Psych. X103. (OTNESS, FURST)

**75-76 General Experimental Psychology** 4 credits  
This is a basic laboratory course, primarily for major and minor students, and for those with a more than casual interest in psychological problems. The course is based on the laboratory which consists of experimental and psychometric work in individual differences, personality, emotion, aptitudes and abilities, behavioral machinery, sensation, perception, learning, memory, thinking, and similar topics. Two three-hour laboratory periods and two lectures per week. (BURLINGAME)

### *For Advanced Undergraduates and Graduates*

**102 The Exceptional Individual** 3 credits Second semester  
The study of the extent and origin of individual differences with emphasis on the development and training of the extreme deviant. Prerequisite: Psych. 1 or 75 or 76.

**X103 Human Growth and Development** 3 credits Extension only  
A study of the psychological processes through which human beings reach maturity. Emphasis is on the organismic growth changes and factors in the cultural environment influencing these changes in physical, social, emotional and intellectual development of the child from birth through adolescence. Credit will not be given for this course and Psych. 55 or 56. Prerequisite: an introductory course in psychology.

**105 Comparative Psychology** 3 credits First semester  
The study of animal behavior to the end of better methods and understanding in human activity. Emphasis is on the behavior of sub-human mammals. Prerequisite: Psych. 1 or 75 or 76. (BURLINGAME)

**111 Elementary Abnormal Psychology** 3 credits First semester  
The study of the nature, causes, prevention and cure of abnormal behavior patterns, both mild and severe. One one-day field trip. Prerequisite: Psych. 1 or 75 or 76.

**115 Principles and Practices in Guidance** 3 credits First semester  
A course designed primarily to prepare the beginning teacher for personnel work among students. While principles, objectives and problems of guidance programs in general will be considered, major emphasis will be

\* Many undergraduate courses are offered by both Correspondence and Extension. Consult the catalogue of Non-Residence Instruction courses. Courses marked "C" are offered only by Correspondence, and courses marked "X" only by Extension.

placed on the work expected of classroom teachers. Prerequisites: 6 credits in education, and educational psychology or human growth and development. (GILES)

**116 Applied Psychology** 3 credits Either semester

A survey of the activity of psychologists in business, industry, medicine, the military, education, crime, and private practice. (OTNESS)

**117-118 Statistics for Psychology and Education** 3 credits

This is the basic statistical methods course for students of psychology, education and guidance. Emphasis is on the treatment of data from mental measurement and experiments on behavior. The first semester deals with theory of measurement and primarily with descriptive statistics, tables, graphs, centiles, averages, variability and correlation. The second semester deals more with experimental design, sampling statistics and statistical inference. (BOYER)

**120 Social Psychology** 3 credits Second semester

The study of the impact of social institutions on the development and behavior of the individual, and of the individual on the group. The field is intermediate between psychology and sociology. Prerequisite: Psych. 1 or 75 or 76. (OTNESS)

**121 Occupational Information and Guidance (I.A.Ed. 122)**

2 credits First semester

Study of methods and procedure involved in assisting individuals to choose, prepare for, enter and progress in the various vocations. Prerequisite: junior or senior standing. (GILES)

**X125 Mental Hygiene for Teachers** 3 credits Extension only

This course is designed to give teachers an understanding of the principles and processes involved in the development of a well balanced and integrated personality. The discovery and treatment of the emotionally and socially maladjusted child; also problems of the pre-school, elementary school and adolescent child as well as the adult teacher will be considered.

**141 Physiological Psychology** 3 credits First semester

The study of the biological foundations of behavior with emphasis on the role of the nervous system as the major agency in the organization and unity of the individual. Prerequisite: Psych. 1 or 75 or 76. (BOYER)

**144 Sensation and Perception** 3 credits Second semester

The study of the anatomy and physiology of the receptor processes and the correlated experiences. Perception, sensory organization and discrimination are stressed. Prerequisite: Psych. 75 or 76. (BURLINGAME)

**151 Educational Psychology** 3 credits Either semester

The application of psychological principles and methods to the public school situation. Particular attention is given to experimental studies of learning the elementary and secondary school materials, the measurement of learning and capacity to learn, and problems of mental health in the teacher-learner situation. Prerequisite: Psych. 1 or 75 or 76, and 6 credits in Education. (GILES)

**161 Psychology of Personality** 3 credits First semester

Problems in the borderline area between social and individual psychology are considered, including a discussion of theories of personality and personality organization. Prerequisite: Psych. 1 or 75 or 76. (OTNESS)

- 171 Mental and Aptitude Testing** 4 credits First semester  
The study of the theory and techniques in the measurement of psychological capacity with emphasis on intelligence and special aptitudes. Practice is given in the administration and interpretation of standard tests. Some proficiency in statistics needed. Three lectures and one three-hour laboratory period per week. Prerequisite: Psych. 1 or 75 or 76. (GILES)
- 198 Systems of Psychology** 3 credits Second semester  
Particularly for students with considerable work in psychology, the course deals historically with current viewpoints in psychological thinking. Behaviorism, Functionalism, Gestalt and Psychoanalysis are considered. Prerequisite: Senior standing and 15 credits in psychology or philosophy. (BOYER)
- Primarily for Graduates*
- 201 Advanced Educational Psychology** 3 credits First semester  
A more thorough course in the application of psychology to the educational process with particular emphasis on the implications of learning theory to the management and measurement of school learning. (FURST)
- 205 (X205) Mental Hygiene** 3 credits First semester  
An examination of the literature dealing with causes and prevention of the minor personality disorders. (OTNESS)
- 206 Psychology of Learning** 3 credits Second semester  
A thorough and systematic evaluation of current learning theories designed to serve mainly the psychology major or minor student. (FURST)
- 208 Individual Testing** 3 credits Second semester  
Special instruction and practice in the administration of individual tests, particularly Binet and Wechsler. One lecture and two two-hour laboratory periods per week. (GILES)
- 209-210 Special Problems** Credits to be arranged Each semester  
Designed to give mature students an opportunity to carry on independent study or to develop specific skills not provided for in regular course offerings. Limited to graduate students with strong preparation in psychology, with approval of the staff. Students working toward the master's degree are limited to a total of six credits. (STAFF)
- 211 Introduction to Clinical Psychology** 3 credits First semester  
A presentation of the basic concepts, principles and practices underlying modern clinical problems in psychology. Limited to majors and minors in psychology. (OTNESS)
- 215-216 Research and Thesis** Credits to be arranged Each semester  
Opportunity is given the student to do original work in some field of psychological investigation. Before registering the student should consult the instructor. Normally, no more than six credits should be taken in the master's degree program. (STAFF)
- 225 Guidance and Counseling** 3 credits Second semester  
A study of group guidance and individual counseling emphasizing the underlying theory of techniques of guidance and counseling and requiring actual supervised practice in the use of those techniques. Two field trips and other approved laboratory experiences will be required. Prerequisite: Psych. 115 or 15 semester hours in Psychology or permission of the instructor.

- 251 Assessment of the Individual** 3 credits Either semester  
 Designed to develop skill in the integration of basic personality data and in making differential diagnoses of personality problems. Prerequisite: Permission of instructors. (GILES, OTNESS, FURST)
- 261-262 Seminar** 3 credits Each semester  
 Reports on the current literature of selected topics. Opportunity is afforded to students to present their research projects for discussion. Primarily for students beyond the master's degree. (STAFF)
- 290 Supervised Counseling** 3-6 credits Either semester  
 A sequel to Psychology 251, Assessment of the Individual, designed to develop high skill in individual counseling with emphasis on adjustment. Students will counsel under observation and evaluate the work of other students. Prerequisite: Permission of instructors. (GILES, OTNESS, FURST)

## Radio-TV

(Radio-TV is one of the subject matter fields within the Department of Communications.)

Professor SNYDER; Associate Professor BELL (Chairman);  
 Assistant Professor LIND; Instructor SAWYER

*Primarily for Undergraduates*

- 01 Radio-TV Institute** 0 credits Summer school  
 For high school juniors and seniors interested in exploring Radio-TV as a profession. Includes announcing, newswriting, and music. (STAFF)
- 3-4 Radio-TV Lectures** 1 credit Each semester  
 An orientation and survey course. (BELL)
- 81 Radio Production** 2 credits First semester  
 Learning the tools and material used in producing local radio programming, the production spot, and interpretation of the script. (LIND)
- 82 Introduction to TV Production** 2 credits Second semester  
 Learning the basic tools and material used in television, live and film production, TV studio equipment, set design, picture composition, types and uses of lights, light meter, film types, and film editing. Practical experience will be realized in assisting in the production of University TV films. Two half-day field trips. (SAWYER)
- 85 Broadcast Speech-Training in Voice** 2 credits First semester  
 Voice control, pronunciation, enunciation, articulation for good microphone technique. Drill work in timing, phrasing, and pacing. (SAWYER)
- 91-92 Introduction to Radio-TV Broadcasting** 2 credits Each semester  
 A general course covering the organization, operation, and regulation of Radio and Television stations and networks. The second semester emphasizes the audience, sales and servicing of programs, and facilities. Two half-day field trips. (SNYDER)

**93-94 Recording and Broadcasting Techniques (Formerly Phys. 93-94 and Rad. 198)** 3 credits Each semester

A study of the procedure of broadcasting and the problem of recording and transmitting sound. Consideration is given to the uses and limitations of amplifiers, microphones, recorders, and broadcasting consoles. Practical demonstrations. Recommended preparation: Physics 3-4. (LIND)

**97 Station Writing** 3 credits First semester

Writing commercials for radio and television, including script format and terminology. Twenty-five scripts are required of each student. (BELL)

*For Advanced Undergraduates and Graduates*

**101 Radio-TV Workshop** 1-2 credits Summer school

An intensive course on the educational uses of Radio-TV. Lectures, demonstrations, and practical work covering the writing and production of Radio and Television programs. Use of music, staging, photography, graphics, and lighting. Informational and public relations aspects of Radio-TV will be stressed. (STAFF)

**111-112 Advanced Broadcasting Techniques** 2 credits Each semester

The theory, operation, and maintenance of broadcasting equipment with practical applications and pertinent F.C.C. regulations. Prerequisite: Radio-TV 93-94. (LIND)

**122 Educational Uses of Radio-Television** 2 credits Second semester

The broadcast media in educational, informational, and public relations applications. The course is designed for students majoring in fields other than Radio-Television, whose future vocation may require some familiarity with the broadcast media. It deals with the use of Radio and Television as means of communicating ideas and as sources of information. (SNYDER, SAWYER)

**188 Advanced Station Writing** 3 credits Second semester

Writing complete scripts of programs usually presented by local radio and television stations, continuity writing, integrated formal openings and closings. Prerequisite: Radio 97. (BELL)

**189 Professional Problems** 2 credits Each semester

Directed reading and study in professional problems of Radio and Television. This may require field work or library research and may be done on an individual or group basis. One two-hour lab per week. Two half-day field trips. (SNYDER)

**191 Announcing (Formerly Sp. 97)** 2 credits Second semester

The study of the various types of announcing duties and the execution of each. Practice is given at the audio control board. (LIND)

**192 Advanced TV Production** 3 credits Second semester

The planning and execution of complete TV programs, directing performers and technicians in the broadcast situation. Two half-day field trips. Prerequisite: Radio-TV 82. (SAWYER)

**193 Commercial Broadcasting (Formerly Journ. 195)** 2 credits First semester

The place of sales in broadcasting, duties of station representatives, advertising agencies, station coverage, the rate card, contracts, sales promotion, and ratings. Prerequisite: 10 hours of Radio-TV or consent of instructor. (SAWYER)



- 194 Radio-TV News (Formerly Journ. 196)** 2 credits First semester  
 Designed to acquaint students with all aspects of Radio-TV news broadcasting including the techniques involved in editing, writing, directing, and producing the news program. The use of wire copy from news services, news policies, application of censorship codes, the handling of bulletin or flash news reports, and directing and producing on-the-scene, eye-witness news and special features broadcasts. All written work is done on typewriters. Prerequisite: Jour. 81-82 or consent of the instructor. (SAWYER)
- 195 TV Performance** 2 credits Second semester  
 A workshop course in delivering various types of local television presentations before the camera. One two-hour lab per week. The student must consult with instructor before registration. Two half-day field trips. Prerequisites: Radio-TV 191 and consent of the instructor. (SNYDER)
- 196 Broadcasting Music** 2 credits First semester  
 The place of music in broadcasting, the structure and use of record libraries, copyright and clearance, musical continuity, the use of bridge and mood music. Prerequisite: 10 hours of Radio-TV. (BELL)
- 197 Program Planning** 3 credits First semester  
 A study of the structure and composition of the various types of radio and television format, the work of the program director, scheduling programs, source material, the mechanics of maintaining the board, and audience analysis and its interpretation. Prerequisite: 10 hours of Radio-TV. (BELL)
- 198 Broadcasting Codes and Regulations** 2 credits Second semester  
 A study of the written and unwritten codes and regulations of the industry, formal broadcast requirements of the F. C. C., and precedent setting court cases. Limited to Radio-TV majors with junior standing. (SNYDER, BELL)
- 199 Radio-TV Field Work** 2 credits Each semester  
 Directed practical experience for Radio-TV majors of senior standing. One two-hour lab per week. May be repeated for a total of 4 credits. (SNYDER, SAWYER)

## Religious Education

(For the plan of work see Religious Activities on Page ???)

(For the courses offered, see the separate announcement issued by the Religious Institutes.)

## Reserve Officers Training Corps

Dean STEFFENS (Coordinator)

The University Department of Reserve Officers Training Corps comprises three units: Air Force ROTC, Army ROTC, and Naval ROTC.

Four semesters of course work in any of these units are required during the freshman and sophomore years of all able-bodied male students who are citizens of the United States.

Compensation in lieu of subsistence is provided in the junior and senior years for regularly enrolled advanced students in the Air Force ROTC, Army ROTC, and Contract Naval ROTC programs.

Advanced students in Air Force ROTC, Army ROTC and Contract Naval ROTC programs are required to complete one summer training period at the time designated, normally between the junior and senior years. Compensation is provided.

When a student elects and is accepted for an advanced course in ROTC, he automatically adds such course to his requirements for graduation. Should he be disenrolled from the advanced course in ROTC, he automatically drops such course from his requirements for graduation.

Compensation and summer training for Regular Naval ROTC students are described under Naval ROTC.

Uniforms and textbooks for ROTC courses are provided, as determined by each service.

For course offerings and additional information, see under:

**Air Force ROTC**

**Army ROTC**

**Naval ROTC**

See page 294 for the specific requirements for the Bachelor of Naval Science degree.

## Russian

For general information concerning Languages see Page 266.

*Primarily for Undergraduates*

**1-2 Elementary Russian 4 credits**

Pronunciation, vocabulary study, reading practice, exercises in spoken Russian, functional grammar. (KAPPLER)

**13-14 Intermediate Russian 4 credits**

The aim of this course is the development of a sound reading knowledge of Russian. Systematic grammar review and practice in speaking and writing are included. Prerequisite: Russian 2 or the equivalent. (KAPPLER)

*For Advanced Undergraduates and Graduates*

**101-102 Advanced Russian 3 credits**

A language course flexible in content, designed to give students maximum practice in using contemporary Russian reading materials. Discussion, functional grammar, vocabulary study, and the technique of making accurate translations and precis of Soviet newspapers, magazines, and selected texts. (KAPPLER)

**121 Introduction to Russian Literature in Translation**

3 credits

First semester

A survey of the main currents of Russian literature, with emphasis on the classic poets and novelists of the nineteenth century, from Pushkin to Tolstoy. Knowledge of Russian is not required. (KAPPLER)

- 122 Modern Russian Literature in Translation** 3 credits Second semester  
 The background of contemporary Russian life as reflected in fiction, drama, and poetry from the period of Gorky and Chekov to the present. Russian 121 is desirable, but is not a prerequisite. Knowledge of Russian is not required. (KAPPLER)

## Social Sciences

Professor HOSACK (Head)

The Department of Social Sciences at the University of Idaho consists of four subject matter fields: History, Philosophy, Political Science, and Sociology. The student may major in any of these four fields in this department. Majors are also offered in Economics and Psychology in addition to the major in Law under the six-year combined program for the degrees B.S. and LL.B. Special curricula are also offered under Sociology in Anthropology and under Political Science in Public Administration. See pages ??? to ? for statement of degree requirements and description of majors.

**Economics**

**History**

**Philosophy**

**Political Science**

**Psychology**

**Social Science**

**Sociology**

## Social Science

Associate Professor ROLLAND

*Primarily for Undergraduates*

These courses require no prerequisites. Students may enroll for a second semester course without having had the first semester course.

- X85 The European Scene** Credits to be arranged Extension only

A study-tour conducted to observe on-the-scene selected aspects of European economics, political and social life. Each student enrolled will pay his own expenses. One credit will be arranged for each week of study, provided that the maximum shall not exceed that earned by normal registration in Summer School. Only high school graduates may receive credit.

- 175 Social Science for Teachers** 2 credits Either semester

Designed for prospective teachers of the social sciences. Bibliography, sources, and materials in the social sciences will be emphasized. This course is restricted to students majoring in a social science or to those preparing to teach in the social sciences. The student should have completed most of his major before registering for this course. (ROLLAND)

**X185 The European Scene** Credits to be arranged Extension only

To be taken on the same terms as So. Sci. X85. Each student will select a specific topic for study before departure and will submit a written report based upon observation and documented research after completion of the tour. Open to students with Junior standing or with approval of the instructor.

**197-198 Selected Readings in the Social Sciences** 2 credits

A reading course for advanced undergraduates. An examination and evaluation of selected writings which discuss significant ideas in the fields of the social sciences. Prerequisite: permission of the chairman of the course. (STAFF)

**199 Research Methodology** 3 credits Either semester

Devoted to the techniques and problems of scholarly investigation, research papers and theses, includes library research, use of sources, analysis and evaluation of data. Especially designed for majors in the social sciences. (STAFF)

## Sociology

(Sociology is one of the subject matter fields within the Department of Social Sciences.)

Professor HARMSWORTH (Chairman); Associate Professor BOWERS;  
Assistant Professor MINNIS

*Primarily for Undergraduates*

These courses require no prerequisites. Students may enroll for a second semester course without having had the first semester course.

**51 Introduction to Sociology** 3 credits First semester

The basic concepts, principles and processes in sociology. An introduction to material relating to culture, social interaction, institutions, and social change. (HARMSWORTH)

**52 Social Problems (152)** 3 credits Either semester

Rapid social change resulting from natural catastrophe, mobility, invention, or scientific discovery in relation to the breakdown of control in existing economic, social, and political institutions; current concepts of social problems. (MINNIS)

**72 Introduction to Anthropology** 3 credits Either semester

The nature and scope of anthropology. Relation to other social sciences. Man as a living organism. Biological evolution; human evolution, races. Culture, its meaning, development, organization. Not open to freshmen. (BOWERS)

**73 Comparative Social Systems** 3 credits Either semester

A survey of primitive social systems and the problems of present day primitives with special emphasis on our primitive heritage and on theories of cultural change. Not open to freshmen. (BOWERS)

*For Advanced Undergraduates and Graduates*

Ordinarily three credits in the lower division courses in sociology are required for registration in the following courses. Exceptions may be made in special cases with the consent of the instructor concerned.

- 101 Problems of Youth in American Communities** 3 credits Summer school  
A workshop on American communities; ecological patterns and characteristics. Adolescent and juvenile delinquent behavior; concepts, extent and problems. Planning specific community programs. (MINNIS)
- 117 Cultural Anthropology** 3 credits Either semester  
Nature of culture; forms and expressions as exemplified by contemporary societies in America, Africa, Asia and Oceania. (BOWERS)
- 118 Peoples of the World** 3 credits Either semester  
Ethnographical studies of the preliterate peoples of Eurasia, Africa, Australia, and the islands of the Pacific. Contemporary problems in these areas resulting from European and American cultural penetration. (BOWERS)
- 119 The American Indian** 3 credits Either semester  
The Indians of North, Central and South America in their primitive state. (BOWERS)
- 121 The Family** 3 credits First semester  
The historical and economic background of the modern family; the family as a social institution, its nature and functions; the family today; conditions affecting the family in America. (HARMSWORTH)
- 122 The Community** 3 credits Either semester  
The structural and functional aspects of community institutions. Demographic, ecological factors and welfare organizations. (MINNIS)
- 123 Old World Archeology** 3 credits Either semester  
A study of the rise of Old World civilization, relating to the paleolithic, mesolithic, neolithic, bronze and iron ages, and the methods of classification employed. (BOWERS)
- 124 New World Archeology** 3 credits Either semester  
The cultural development of American aborigines as indicated by archeological materials. (BOWERS)
- 125 Anthropological Field Methods** 1-6 credits Each semester  
Supervised field training in archeology and/or ethnology, to acquaint students with research methods in these fields. Course available only under authorized research projects. Students enrolled must carry on designated research projects under the instructor and make acceptable reports on their work. Individual expenses—transportation and living expenses—must be borne by the student. (BOWERS)
- 131 Social Institutions** 3 credits Second semester  
The nature and function of social institutions; their emergence and development; the causes of cultural lag and change. The relationship of institutions to social values and social ends. (MINNIS)
- 132 Criminology** 3 credits Second semester  
The problems of crime and criminals; the making of the criminal; the history of punishments, modern penal institutions and methods; present tendencies in crime prevention. One-day field trip (optional at the discretion of the instructor). Expense to be borne by the student. (MINNIS)

- 135 Population and Migration** 3 credits Either semester  
A treatment of problems involving distribution, theories, and trends of populations; migrations as related to problem areas; population composition. (HARMSWORTH)
- 145 Rural Sociology** 3 credits Either semester  
A study of rural and urban relationships; the role of an agricultural class in industrial society. The number, origin, distribution, composition of the rural population and social characteristics. Forms of settlement, land division, and land tenure. (HARMSWORTH)
- 146 Urban Sociology** 3 credits Either semester  
Population, spatial, and social patterns characteristic of modern urban communities. Trends and problems in urban communities. (HARMSWORTH)
- 157 Social Legislation and Public Welfare** 3 credits Either semester  
Historic and present study of social legislation and public welfare in different cultures and our own society. Particular emphasis upon the Social Security Act and its implementation in social welfare on federal, state and local levels. One-day field trip (optional at the discretion of the instructor). Expense to be borne by the student. (MINNIS)
- 158 Race Problems** 3 credits Second semester  
Consideration of the nature of racial and ethnic grouping, racial theories and their expressions; current world problems of race relations with special emphasis on those pertaining to the United States. (BOWERS)
- 159 Fields of Social Work** 3 credits First semester  
Introduction to the major fields of social work: case work, public welfare, child welfare, group social work, community planning. Analysis of the structure and functions of social agencies. Techniques in these fields. One-day field trip (optional at the discretion of the instructor). Expense to be borne by the student. (MINNIS)
- 160 Principles and Areas of Social Casework** 3-4 credits Second semester  
Introduction to the study of basic principles and techniques of case work; practice in interviewing, case recording and writing the social history. Thirty-four to fifty-one hours of observation in an agency, and one one-day field trip (option of instructor) at student expense. (MINNIS)
- 165 Public Opinion** 3 credits First semester  
Propaganda and other agencies supplying the public with information; the part played by the individual; the formation of public opinion, the role and function of public opinion in America. (HARMSWORTH)
- 168 Social Control** 3 credits Second semester  
The nature of social control; means employed by society for securing individual and group conformity. (BOWERS)
- 181 History of Social Thought** 3 credits First semester  
Development of social thought from ancient times through the nineteenth century. (HARMSWORTH)
- 191 Contemporary Sociology** 3 credits First semester  
Schools and trends of twentieth century sociological thought. (HARMSWORTH)
- 195 Aging People in Contemporary Society** 2 credits Summer school  
Workshop dealing with theories, research and methods relating to prob-

lems of older people. Two one-day field trips (option of instructor) at student expense. (HARMSWORTH)

*Primarily for Graduates*

- 207-208 Seminar**      2-4 credits      One each semester
- a. Methods in Sociological Research. (HARMSWORTH, MINNIS)
  - b. Sociological Theory. (HARMSWORTH, MINNIS)
  - c. Contemporary Social Problems. (HARMSWORTH, MINNIS)
  - d. Culture and the Individual. (BOWERS)
  - e. Folk Society. (BOWERS)
  - f. Anthropological Theory and Methods. (BOWERS)
- 209-210 Directed Reading**      3 credits
- a. Problems in Anthropology. (BOWERS)
  - b. Problems in Sociology. (HARMSWORTH, MINNIS)

Directed study and research in the literature of the field. In addition to acquiring proficiency on the graduate level of scholarship, the student must also demonstrate his acquisition of a broader background of concurrent mastery in the related upper division subject, as determined by the professor. No separate undergraduate credit is permitted in this instance. Prerequisite: Permission of the instructor.

- 211-212 Research and Thesis**      Credits to be arranged

This is thesis credit for students working toward a graduate degree. It is done under direction of the professor in whose subject the greater part of the work is offered. (STAFF)

- 225 Anthropological Field Methods**      1-8 credits      Each semester
- Individual field work in approved areas by qualified students. Students will plan projects, keep detailed records of work, and submit acceptable reports. Personal expenses in field work will be borne by the student. The course may be elected more than once up to a total of eight credits. (BOWERS)

## Spanish

For general information concerning Languages see Page 266

*Primarily for Undergraduates*

- 1-2 Elementary Spanish**      4 credits      Each semester
- Pronunciation, vocabulary study, reading practice, exercises in spoken Spanish, functional grammar. (HOWE, MURBACH, OGLES)
- 13-14 Intermediate Spanish**      4 credits
- The aim of this course is the development of a sound reading knowledge of Spanish. Systematic grammar review and practice in speaking and writing are included. Prerequisite: Span. 2 or the equivalent. (HOWE)

*For Advanced Undergraduates and Graduates*

- 101-102 Composition and Conversation (81-82)**      3 credits
- A thorough study of grammar and composition. Constant drill in conversation. Prerequisite: Spanish 13-14. (HOWE)

- 121-122 Survey of Spanish Literature** 3 credits  
Lectures, reading of selected texts, reports. Conducted so far as possible in Spanish. (OGLES)
- 135-136 The Nineteenth Century** 3 credits  
A study of the development of the Spanish lyric, novel, and drama of the nineteenth century. (HOWE)
- 141-142 The Golden Age** 3 credits  
A study of the development of the Spanish drama until the death of Calderon; the great types of the Spanish novel; the mystics; the rise and decadence of poetic taste in the sixteenth and seventeenth centuries. (HOWE)
- 147-148 Contemporary Literature** 3 credits  
Readings and discussions of contemporary writers of Spain and Spanish America.
- 161-162 Directed Reading** 1 to 3 credits  
Open by special permission to advanced students in Spanish.
- 183-184 Commercial Spanish** 2 credits  
The study of Spanish commercial correspondence techniques; the preparation in Spanish of export-import bills, documents, etc.; the acquiring of a special commercial vocabulary.
- 191-192 Spanish for Teachers** 2 credits  
A study of materials for the teaching of Spanish. Thorough review of such sections of grammar as the needs of the class require.
- Primarily for Graduates*
- 201-202 Old Spanish** 2 credits  
The elements of historical Spanish grammar, with an intensive study of selected texts. Students electing this course should have a fluent reading knowledge of Spanish, French, and Latin; a knowledge of German is highly desirable. (HOWE)
- 261-262 Seminar in Spanish Literature:** a) **The Novel**, b) **The Drama**, c) **Poetry**, d) **Literary Criticism** 3 credits  
Only one literary type will be considered in any one semester. (HOWE)
- 271-272 Research and Thesis** Credits to be arranged.

## Speech

(Speech is one of the subject matter fields within the Department of Humanities.)

Professor WHITEHEAD (Chairman); Assistant Professor CHAVEZ;  
Instructors HUNKER and MENDOZA

*Primarily for Undergraduates*

- 9 Intercollegiate Debating** 1 credit Each semester  
A study of the principles of argumentation and debate. University debaters are chosen primarily from this course. May be repeated for a total of four credits. Students registered in this course must meet eligibility requirements to participate in extracurricular activities. (WHITEHEAD)



**51-52 Fundamentals of Speech** 2 credits Each semester  
 An introduction to the skills and techniques of effective speaking with emphasis on preparation, delivery, and listening. Beginning course. Speech 51 is prerequisite to Speech 52 except by special permission. (STAFF)

**62 Parliamentary Law and Procedure** 2 credits Second semester  
 A study of parliamentary law and procedure through organization of the class as a parliamentary body and practice of speech under parliamentary conditions. (HUNKER)

*For Advanced Undergraduates and Graduates*

**151-152 Advanced Speaking** 2 credits  
 A study of oral style, the psychology of attention and suggestion, semantics, and other speech problems. Preparation and presentation of speeches. (WHITEHEAD)

**161 Discussion and Conference Methods** 2 credits First semester  
 A study of the responsibilities of chairmen and participants in discussion and conference. Opportunities are provided for participation in group discussion of current problems. Special attention is directed to evidence, fallacies, and types of reasoning. (WHITEHEAD)

**162 Speech and Social Control** 2 credits Second semester  
 A study of the psychology of persuasion, propaganda, and other aspects of speech as a means of social control. (WHITEHEAD)

**175 Speech for Teachers** 2 credits Summer school  
 Practice in fundamentals of speech with emphasis on situations that confront the teacher in classroom work and extracurricular activities. Satisfies the speech requirement in the College of Education. (WHITEHEAD)

**185 Voice and Speech Improvement** 2 credits First semester  
 The improvement of such vocal attributes as quality, force, time and pitch. Articulation is studied through the medium of the international phonetic alphabet. American pronunciation is investigated. (WHITEHEAD)

**186 Speech Correction** 2 credits Second semester  
 A study of the general functional cases, including delayed speech, halting speech, monotonous speech, nasality, lispings, voice defects. Especial attention will be given to stuttering, the diagnosis of the case and the therapy. The English sounds will be studied as to their formation by the organs of articulation. Especially intended for teachers. (WHITEHEAD)

**191 Propaganda and Public Opinion** 2 credits First semester  
 An analysis of the sources and psychology of propaganda and its relation to the formation of public opinion. (WHITEHEAD)

**192 American Public Address** 2 credits Second semester  
 A study of some outstanding speakers in the United States. Attention will be given to the preparation, style, and influence of these speakers. (MENDOZA)

## Veterinary Science

Professors SCRIVNER (Head), and ARDREY;  
Associate Professor BAILEY; Assistant Professor MILLER

### *For Advanced Undergraduates*

- 151 Poultry Diseases**      2 credits      First semester  
A study of the causes, transmission, symptoms, prevention and control of major poultry diseases. One lecture and one laboratory period per week. (BAILEY)
- 171 Comparative Anatomy and Physiology**      4 credits      First semester  
A comparison of the structures and functions of the systems of the domestic animal with special attention to the skeletal, digestive, reproductive, and circulatory systems and endocrine glands. Special problems permit students to study specific species. Three class periods and one two-hour laboratory period per week. (BAILEY)
- 174 Animal Diseases (Infectious)**      3 credits      Second semester  
A study of the causes, transmission, susceptibility, symptoms, diagnosis, prevention, and control of major infectious diseases and parasites of domestic animals. Three class periods per week. Prerequisites: Bact. 51 and junior standing. (BAILEY)
- 176 Animal Diseases (Non-Infectious)**      2 credits      Second semester  
A consideration of the general factors related to non-infectious diseases of farm animals; functional failures of various organ systems of the animal body; nutritional diseases; wounds and their treatment; common farm operations; plant and mineral poisons. One lecture and one two-hour laboratory period per week. Prerequisite: Junior standing. (MILLER)
- 177-178 Special Problems**      1-3 credits      Each semester  
Problems in livestock and poultry diseases or animal physiology and anatomy. Credit to be arranged. (STAFF)

### *Primarily for Graduates*

- 201-202 Research and Thesis**      Credits to be arranged      Each semester  
(STAFF)

## Zoology

(Zoology is one of the subject matter fields within the Department of Biological Sciences.)

Professors STOUGH (Emeritus) and WORTHAM;  
Associate Professors SCHELL (Chairman) and LARRISON;  
Instructors BUSCEMI, FORBES; Visiting Instructor LAUBER

### *Primarily for Undergraduates*

- General Biology**      4 credits  
See Biology 1-2.

- †1 **General Zoology** 4 credits Each semester  
 The principles of animal morphology, physiology, embryology, genetics, evolution, and ecology. Three lectures and two two-hour laboratory periods a week. General Chemistry is recommended. (BUSCEMI)
- 2 **General Zoology** 4 credits Each semester  
 A survey of the animal kingdom, emphasizing the fundamental characteristics of each phylum, with laboratory dissection of representative types. Designed to acquaint the student with the major kinds of animals. Three lectures and two two-hour laboratory periods a week. Prerequisite: Zool. 1 or Biol. 1 and 2. (LARRISON)
- 6 **Physiology** 3 credits Each semester  
 An introduction to the more important physiological problems as related to the functions of the human body. Two lectures and one three-hour laboratory period a week. Prerequisite: Zool. 1, or Biol. 1-2. (FORBES)
- 54 **Comparative Anatomy of Vertebrates** 4 credits Second semester  
 Dissection and study of types of vertebrates, together with lectures and discussions on general vertebrate anatomy with special reference to the evolution of the various organ systems. Two lectures and two three-hour laboratory periods per week. Prerequisite: Biol. 1-2 or Zool. 2. (DUMAS)
- 58 **Introduction to Genetics** 3-4 credits First semester  
 The study of inheritance in man, domestic animals and plants. Three lectures and one three-hour laboratory period a week. Prerequisites: One beginning course in Zoology or Botany or Biol. 2. (FORBES)

*For Advanced Undergraduates and Graduates*

- 102 **General Genetics** 3-4 credits Second semester  
 The study of genetic mechanisms in animals, plants and micro-organisms with particular emphasis on those forms important to biological research. Three lectures and one three-hour laboratory period a week. Prerequisite: Zoology 58 or equivalent or permission of the instructor. (FORBES)
- 103-104 **Human Anatomy** 2 credits  
 A study of the general structure of the human body through mammalian dissection, charts, models, dissectible mannikin and human skeletons. One lecture and one three-hour laboratory period a week. Prerequisite: Zool. 2 or 6. (WORTHAM)
- 105 **General Physiology** 4 credits First semester  
 The physiology of animal cells, tissues, and organ systems. Three lecture and one three-hour laboratory period a week. Prerequisites: Zool. 1 and Chem. 2. A course in Organic Chemistry is recommended. (LAUBER)
- 107 **Organic Evolution** 3 credits First semester  
 A critical discussion of the mechanisms of variation, adaptation, and inheritance. Special attention is given to the results of evolution as demonstrated by the history of the vertebrate animals. Three lectures a week. Prerequisite: Zool. 2, or Bot. 2, or Biol. 1-2. (LARRISON)
- 109 **Vertebrate Histology and Organology** 4 credits Second semester  
 A study of the various tissues, followed by the study of the minute structure of the chief mammalian organs. Two lectures and two three-hour laboratory periods a week. Prerequisite: Zool. 54. (WORTHAM)

† See footnote under Biology 1-2.

**110 Histological Technique** 2 credits Second semester

A laboratory course in the various techniques employed in histology, including methods of fixing, sectioning, staining, mounting, etc. Prerequisite: Zool. 2, or Biol. 1-2. (SCHELL)

**111 (For. 111) Ichthyology** 3 credits First semester

Taxonomy, anatomy, and physiology, distribution and ecological relationships of fishes. Two lectures, one three-hour laboratory per week; occasional field-laboratories; two all-day field trips. Prerequisite: Zool. 1. (BUSCEMI)

**113 Comparative Vertebrate Embryology** 4 credits First semester

Lectures on general topics; organogeny, ovulation, fertilization, cleavages, hormonal control, experimental methods, etc. Laboratory work includes a comparative study of frog, chick, and pig development. Two lectures and two three-hour laboratory periods a week. Prerequisite: Zool. 54 or consent of the instructor. (SCHELL)

**115 Cytology** 4 credits First semester

A study of the cell as the fundamental structural and functional unit of protoplasm, with particular reference to the techniques employed in cytological investigations. Two lectures and two three-hour laboratory periods a week. Prerequisites: Zool. 1 or Biol. 1 and 2. Courses in organic chemistry and genetics are recommended. (LAUBER)

**116 Protozoology** 3 credits Second semester

An introduction to the study of protozoa; lectures on classification, morphology, physiology, and ecology. Laboratory includes protozoan collection, culture, and taxonomy. Two lectures and one three-hour laboratory period a week. Prerequisite: Zool. 2. (SCHELL)

**117 Endocrinology** 3 credits First semester

A consideration of the physiological effects of hormones on the organism in health and disease, together with a study of the gross and microscopic morphology of the glands of internal secretion. Prerequisite: Zool. 1 or Biol. 1 and 2. (STAFF)

**118 Parasitology** 3 credits Second semester

A study of animal parasites with special emphasis on those of man. Laboratory includes identification of the important parasites of man; the collection and the preservation of the available local forms. Two lectures and one three-hour laboratory period a week. Prerequisite: Zool. 2 or permission of instructor. (SCHELL)

**119-120 Independent Study** 1 to 3 credits

- |  |                          |
|--|--------------------------|
| (a) Animal Ecology                     | (h) Human Anatomy        |
| (b) Comparative Anatomy of Vertebrates | (i) Human Physiology     |
| (c) Cytology                           | (j) Invertebrate Zoology |
| (d) Embryology                         | (k) Mammalogy            |
| (e) Genetics                           | (l) Organic Evolution    |
| (f) Herpetology                        | (m) Ornithology          |
| (g) Histology                          | (n) Parasitology         |
|  | (o) Physiology           |

Work is individually assigned and will require reading and/or research. The student may register for only one of the above sections per semester. Not over 6 credits may be earned in this course. Prerequisites: the appropriate basic course in the chosen field, a minimum grade point average of 3.0 in the major, and permission of the instructor. (STAFF)

- 124 Helminthology** 3 credits Second semester  
 A general study of parasitic worms. Laboratory work includes study of living larval and adult helminths. Lectures on epidemiology, life histories, physiology, etc. Two lectures and one three-hour laboratory period a week. Prerequisite: Zool. 2. (SCHELL)
- 125 (Ent. 101) General Entomology** 4 credits First semester  
 See Entomology 101 for course description.
- 126 (For. 116) Limnology** 3 credits Second semester  
 See Forestry 116 for course description.
- 129 Herpetology** 3 credits First semester  
 A study of the evolution, taxonomy, natural history, and biology of the amphibians and reptiles. Two lectures and one three-hour laboratory period a week. Prerequisites: Zool. 1, or Biol. 1-2, and permission of the instructor. (DUMAS)
- 130 Ornithology (68)** 3 credits Second semester  
 A study of the origin, evolution, structure, habits, adaptations, distribution, identification, classification, and economic value of birds. Special attention given to the birds of Idaho and the Pacific Northwest. Two lectures and one three-hour laboratory period a week; two one-day field trips. Prerequisite: Zool. 1 or Biol. 1-2. (LARRISON)
- 131 Mammalogy** 3 credits First semester  
 A study of the classification, distribution, ecology, food habits, and economic importance of mammals, with special attention being given to the native mammals of Idaho and the Pacific Northwest. Two lectures and one three-hour laboratory period a week. Prerequisite: Zool. 1. (LARRISON)
- 132 Animal Ecology** 3 credits Second semester  
 A study of animals in relation to their environment, with special emphasis on distribution, habitat preference, and population dynamics. Particular attention given to the fauna of Idaho. Two lectures and one three-hour laboratory period per week. Prerequisite: Zool. 1 or Biol. 1-2. (LARRISON)
- \*152 Field and Museum Techniques** 3 credits First semester  
 Procedures and techniques in field and museum studies of invertebrate and vertebrate animals. Two lectures and one three-hour laboratory period a week. Prerequisite: Permission of instructor. (DUMAS, LARRISON)
- 153 Invertebrate Zoology (53)** 5 credits First semester  
 A comprehensive treatment of fresh water, marine and terrestrial invertebrates with special reference to morphology, physiology, ecology, evolution, and economics of the major and minor taxonomic groups. The type-animal approach is employed. Three lectures and three two-hour laboratory periods a week. Prerequisite: Zool. 1, or Biol. 1 and 2. (BUSCEMI)

*Primarily for Graduates*

- 201-202 Research and Thesis** Credits to be arranged Each semester  
 Individual problems are assigned, and students who are prepared for independent investigation in any phase of zoology will be given all the opportunities available for carrying on their work. (STAFF)

\* Offered in alternate years; given in 1959-60.

- 209 Advanced Histology** 4 credits First semester  
Continuation of Zool. 109. A more detailed study of normal mammalian tissues together with modifications which occur in pathological tissues. Two lectures and two three-hour periods a week. Prerequisite: Zool. 109, or permission of the instructor. (WORTHAM)
- 210 Comparative Animal Physiology** 3 credits Second semester  
A study of the ways in which various kinds of animals meet their functional requirements, and the bearing of these physiological characteristics on morphology, evolution, and ecology. Two lectures and one three-hour laboratory period a week. Prerequisites: Zool. 105 and permission of the instructor. (BUSCEMI)
- †214 **Experimental Embryology** 4 credits Second semester  
An experimental approach to developmental mechanics and embryogenesis. Two lectures and two three-hour laboratory periods a week. Prerequisites: Zool. 113 and permission of the instructor. (STAFF)
- 216 Advanced Cytology** 4 credits Second semester  
Continuation of Zool. 115. Two lectures and two three-hour laboratory periods a week. (STAFF)
- \*218 **Zoogeography** 2 credits Second semester  
A study of the dynamics and causes of the distribution of animals in both time and space. Two lectures a week. Prerequisite: Permission of instructor. (DUMAS)
- 219-220 Independent Study** 1 to 3 credits Each semester
- |  |                          |
|--|--------------------------|
| (a) Animal Ecology                     | (h) Human Anatomy        |
| (b) Comparative Anatomy of Vertebrates | (i) Human Physiology     |
| (c) Cytology                           | (j) Invertebrate Zoology |
| (d) Embryology                         | (k) Mammalogy            |
| (e) Genetics                           | (l) Organic Evolution    |
| (f) Herpetology                        | (m) Ornithology          |
| (g) Histology                          | (n) Parasitology         |
|  | (o) Physiology           |
- Advanced work is individually assigned and will require reading and/or research. The student may register for only one of the above sections per semester. Not over 6 credits may be earned in this course. Prerequisite: the appropriate basic course in the chosen field, a minimum grade point average of 3.0 in the undergraduate major, and permission of the instructor. (STAFF)
- †226 **Hydrobiology** 4 credits First semester  
A fundamental treatment of lake and stream ecology. Three lectures and one three-hour afternoon laboratory or field trip a week. Prerequisites: A year of General Chemistry and Physics; Quantitative Analysis; Zool. 132 and 153. Enrollment is limited to a maximum of six graduate students. (BUSCEMI)
- \*230 **Advanced Ornithology** 2 credits Second semester  
An advanced course in ornithology, emphasizing the classification, ecology, distribution, and evolution of birds. Two lectures a week. Prerequisite: Zool. 130, or permission of instructor. (LARRISON)
- †231 **Advanced Mammalogy** 2 credits Second semester  
An advanced study of mammals, particularly their morphology, classification, ecology, reproduction, and evolution. Two lectures a week. Prerequisite: Zool. 131, or permission of instructor. (LARRISON)

† Offered in alternate years; given in 1960-61.

\* Offered in alternate years; given in 1959-60.

- †232 **Advanced Animal Ecology** 2 credits First semester  
An advanced consideration of animal ecology, emphasizing particularly problems in environmental analysis, populations, and communities. Two lectures a week. Prerequisite: Zool. 132, or permission of instructor. (LARRISON)
- \*233 **Comparative Invertebrate Zoology** 3 credits Second semester  
Students will select one major taxon or several minor taxa, exclusive of parasitic forms, as a basis for a detailed study of comparative morphology, taxonomy, ecology, embryology, or evolution within the group. Two lectures and one three-hour laboratory period a week. Prerequisite: Zool. 153. (BUSCEMI)
- †235 **Cytogenetics** 3 credits First semester  
Advanced material on chromosomes in relation to genetics. Two lectures and one three-hour laboratory periods a week. Prerequisites: an upper-division course in genetics or cytology and consent of the instructor. (FORBES)
- 261-262 **Seminar** 1 credit Each semester  
Reports on advanced literature in the various phases of zoology. (STAFF)

† Offered in alternate years; given in 1960-61.

\* Offered in alternate years; given in 1959-60.

# Part VI

## Administration Officers and Faculty of the University

### Administration

#### BOARD OF REGENTS

MARGUERITE A. CAMPBELL, <i>President</i> .....	New Meadows
Term expires 1961	
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Term expires 1962	
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Term expires 1960	
CLAUDE V. MARCUS .....	Boise
Term expires 1964	
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#### Executive Committee of the Board of Regents for the University

JOHN J. PEACOCK	MARGUERITE A. CAMPBELL, <i>Chairman</i>	CURTIS EATON
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#### ADMINISTRATIVE OFFICERS

DONALD RICHARD THEOPHILUS, Ph.D. ....	<i>President of the University</i>
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BOYD ARCHER MARTIN, Ph.D. ....	<i>Dean of the College of Letters and Science</i>
JAMES E. KRAUS, Ph.D. ....	<i>Dean of the College of Agriculture, Director of the Agricultural Experiment Station, and Director of the Agricultural Extension Service</i>
ALLEN S. JANSSEN, M.S.(C.E.) .....	<i>Dean of the College of Engineering and Director of the Engineering Experiment Station</i>
EDWARD S. STIMSON, S.J.D. ....	<i>Dean of the College of Law</i>
EARL FERGUSON COOK, Ph.D. ....	<i>Acting Dean of the College of Mines, and Director of Idaho Bureau of Mines and Geology</i>
ERNEST WOHLLETZ, M.S. ....	<i>Dean of the College of Forestry and Director, Forest, Wildlife and Range Experiment Station</i>
JOACHIM FREDERICK WELTZIN, Ph.D. ....	<i>Dean of the College of Education and Director of the Summer School</i>
DAVID D. KENDRICK, Ph.D. ....	<i>Dean of the College of Business Administration</i>
LOUIS CLYDE CADY, Ph.D. ....	<i>Dean of the Graduate School and Executive Secretary, Research Council</i>
CHARLES O. DECKER, M.A. ....	<i>Director of Student Affairs</i>
MARJORIE M. NEELY, M.S. ....	<i>Associate Director of Student Affairs for Women</i>
KENNETH ANDREW DICK, M.B.A., C.P.A. ....	<i>Comptroller, Business Manager and Bursar</i>
DONALD DUDLEY DU SAULT, M.S. ....	<i>Registrar</i>
LEE FRANKLIN ZIMMERMAN, M.A.(L.S.) .....	<i>Librarian</i>
RAPHAEL S. GIBBS, B.A. ....	<i>University Editor and Director of Information</i>
HARLOW HENRY CAMPBELL, M.S.(Ed.) .....	<i>Director of Educational Field Service</i>



# Faculty<sup>†</sup>

(Year after each listing denotes year individual entered service at the University of Idaho.)

## PROFESSORS, ASSOCIATE PROFESSORS AND ASSISTANT PROFESSORS

- ADAMS, ROBERT F., B.S.(M.E.), *Assistant Professor, Military Science and Tactics*  
B.S.(M.E.), University of Idaho. 1958
- AMOS, HAROLD C., M.S.(M.E.), *Assistant Professor, Mechanical Engineering*  
B.S.(M.E.), University of Nebraska; M.S.(M.E.), University of Idaho. 1954
- ANDERSON, GUY R., Ph.D., *Associate Professor, Bacteriology, and Associate Bacteriologist*  
B.S., M.S., University of Idaho; Ph.D., State College of Washington. 1946
- ANDERSON, RUTH, M.S.(Ed.), *Assistant Professor, Secretarial Studies*  
B.A., M.S., University of Idaho. 1946
- ANDREW, WADE H., Ph.D., *Associate Rural Sociologist, Highway Economics*  
B.S., M.S., Utah State University; Ph.D., Michigan State University. 1959
- ARDREY, WILLIAM B., Ph.D., *Professor and Pathologist, Veterinary Science*  
B.S., Monmouth College; M.S., Ph.D., Michigan State College. 1939
- ASHBY, CLAUDE W., M.A., *Assistant Professor, Languages, Emeritus*  
B.A., M.A., University of Idaho. 1925
- BAILEY, JAMES W., D.V.M., *Associate Professor, Veterinary Science, and Associate Veterinarian*  
B.Ed., Western Illinois State Teachers College; D.V.M., Texas A and M. 1953
- BAKER, GEORGE O., M.S., *Professor, Agronomy*  
B.S., M.S., State College of Washington. 1935
- BAKER, WILLIAM H., Ph.D., *Professor and Chairman of Botany; Head, Department of Biological Sciences*  
B.S., M.S., Ph.D., Oregon State College. 1948
- BANKS, WILLIAM C., M.A., *Professor, English*  
B.A., M.A., University of Washington. 1927
- BARNES, WILLIAM P., M.S.(M.E.), *Associate Professor, Mechanical Engineering*  
B.S.(M.E.), University of Idaho; M.S.(M.E.), Yale University. 1957
- BARNHART, JOHN L., Ph.D., *Associate Professor, Dairy Husbandry, and Dairy Husbandman*  
B.S., Pennsylvania State University; M.S., West Virginia University; Ph.D., Pennsylvania State University. 1956
- BARR, WILLIAM F., Ph.D., *Professor, Entomology, and Entomologist*  
B.S., M.S., Ph.D., University of California. 1947
- BARTELL, CHARLES G., M.S.(Arch.), *Assistant Professor, Architecture*  
B.Arch., University of Washington; M.S.(Arch.), Columbia University. 1950
- BAUER, LEROY O., M.M., *Associate Professor, Music*  
B.S.(Mus.Ed.), University of Wisconsin; M.M., Northwestern University. 1956
- BEATTIE, LYNN A., Ph.D., *Associate Professor, Electrical Engineering*  
B.S.(Elec.Engr.), B.S.(Math.), M.S.(E.E.), A.M.(Math.), Ph.D., University of Michigan. 1957
- BECK, SIDNEY M., Ph.D., *Assistant Professor, Bacteriology and Assistant Bacteriologist*  
A.B., M.A., Brigham Young University; Ph.D., Pennsylvania State University. 1951
- BELL, GEORGE M., J.D., *Professor, Law*  
B.S., Utah State Agricultural College; J.D., George Washington University. 1949
- BELL, KENNETH E., M.A., *Associate Professor and Chairman, Radio-TV Center*  
A.B., M.A., Ohio University. 1955
- BELL, ROY A., M.S., *Assistant Professor, Art*  
B.A., M.A., University of Idaho. 1950
- BELL, T. DONALD, Ph.D., *Professor and Head of Animal Husbandry, and Animal Husbandman*  
B.S.(Agr.), M.S.(Agr.), University of Idaho; Ph.D., University of Wisconsin. 1957
- BELLIS, WARREN T., M.M., *Assistant Professor, Music*  
B.M., M.M., University of Michigan. 1952
- BERMAN, HERBERT A., LL.B., *Professor, Law*  
A.B., LL.B., Harvard University. 1952
- BERRY, RAY M., Ed.D., *Professor and Head, Department of Education*  
A.B., Illinois College; M.A., Teachers College, Columbia University; Ed.D., Stanford University. 1946
- BETTS, ALLEN W., M.A., *Assistant Professor, Education*  
B.S., University of Maryland; M.A., Colorado State College. 1956
- BETTS, EDITH, M.S., *Assistant Professor, Physical Education (Women)*  
B.S., University of Wisconsin; M.S., Smith College. 1951
- BEVAN, ROLAND C., M.S., *Associate Professor, Agricultural Economics, and Associate Agricultural Economist*  
B.S., (Ag.), M.S.(Ag.Econ.), University of Minnesota. 1946

<sup>†</sup> Faculty List compiled as of March 1, 1959.

- BORNING, BERNARD C., Ph.D., *Associate Professor, Political Science*  
B.A., Ph.D., University of Minnesota. 1949
- BOTSFORD, JAMES L., Ph.D., *Associate Professor, Mathematics*  
A.B., University of Washington; Ph.D., California Institute of Technology. 1949
- BOWERS, ALFRED W., Ph.D., *Associate Professor, Anthropology and Sociology*  
B.S., Beloit College; M.A., Ph.D., University of Chicago. 1949
- BOWMAN, CLAIR F., E.E., *Associate Professor, Electrical Engineering*  
A.B., B.S.(E.E.), University of Nebraska; M.S.(E.E.), Purdue University; E.E., Montana State University. 1957
- BOYER, W. H., Ph.D., *Professor and Head, Department of Psychology*  
B.S., M.S., University of Idaho; Ph.D., George Peabody College. 1930
- BROCKELBANK, WILLIAM J., Docteur en Droit, *Professor, Law*  
B.A., Haverford College; LL.B., Harvard University; LL.M., University of Montpellier; Docteur en Droit, University of Paris. 1943
- BROSNAW, CORNELIUS J., Ph.D., *Professor, American History, Emeritus*  
A.B., University of Michigan; M.A., Harvard University; Ph.D., University of California. 1921
- BURLINGAME, E. MILDRED, Ph.D., *Assistant Professor, Psychology*  
A.B., M.A., Stanford University; Ph.D., University of Minnesota. 1942
- BUSH, KENNETH A., Ph.D., *Professor and Head, Department of Mathematics*  
B.A., M.A., Columbia University; Ph.D., University of North Carolina. 1954
- BYERS, ROLAND O., M.S., *Associate Professor and Chairman, Department of Freshman Engineering*  
B.S., M.S., Ohio University. 1954
- CADY, LOUIS C., Ph.D., *Dean of Graduate School and Executive Secretary of Research Council*  
B.S.(Chem.E.), M.S., University of Idaho; Ph.D., University of Wisconsin. 1922
- CALDWELL, HARRY H., Ph.D., *Associate Professor, Geography*  
A.B., Clark University; M.A., University of Nebraska; Ph.D., Clark University. 1948
- CAMPBELL, HARLOW H., M.S.(Ed.), *Associate Professor and Director of Educational Field Service*  
B.S.(Ed.), M.S.(Ed.), University of Idaho. 1945
- CARNS, DONALD L., B.S.(C.E.), *Assistant Professor, Air Science*  
B.S.(C.E.), University of Idaho. 1957
- CHAVEZ, EDMUND M., M.F.A., *Assistant Professor, Dramatics*  
B.A., Southwest Texas State College; M.F.A., University of Texas. 1951
- \*CHERRINGTON, VIRGIL A., Ph.D., *Professor and Head, Department of Bacteriology, and Bacteriologist*  
B.S., Iowa State College; M.S., University of Idaho; Ph.D., Iowa State College. 1928
- CHEVES, CHARLES J., JR., 1st Lt., B.S., *Assistant Professor, Military Science and Tactics*  
B.S., United States Military Academy. 1958
- CHRISTIAN, ROSS E., Ph.D., *Assistant Professor, Animal Husbandry*  
B.S., Pennsylvania State University; M.S., Ph.D., University of Wisconsin. 1956
- CHRISTIANSON, OSCAR O., M.D., *Associate Professor, (St. Lukes Hospital) Spokane, Washington*  
A.B., St. Olaf College; M.D., Rush Medical College. 1949
- CHURCH, FREDERIC C., Ph.D., *Professor of History, Emeritus*  
A.B., Ph.D., Cornell University. 1921
- CLARK, EDMOND C. Ph.D., *Assistant Professor, Entomology*  
B.S., Ph.D., University of California. 1956
- CLIFTON, DONALD F., Ph.D., *Assistant Professor, Metallurgy*  
B.S., Michigan College of Mining and Technology; Ph.D., University of Utah. 1957
- COE, CHARLES N., Ph.D., *Professor, English, and Head, Department of Humanities*  
B.A., Amherst College; M.A., Trinity College; Ph.D., Yale University. 1948
- COFFEY, MARGARET A., M.A., *Associate Professor, Physical Education (Women)*  
B.A., De Pauw University; M.A., State University of Iowa. 1949
- COLLETTE, JEAN, M.A., *Professor and Chairman, Department of Dramatics*  
B.A., M.A., University of Idaho. 1931
- \*CONE, WILLIAM H., Ph.D., *Professor, Chemistry*  
B.S., M.S., University of Idaho; Ph.D., University of Washington. 1924
- CONITZ, MERRILL W., B.S.(C.E.), *Assistant Professor, Civil Engineering*  
B.S.(C.E.), North Dakota State College. 1953
- COOK, EARL F., Ph.D., *Dean, College of Mines; Director, Idaho Bureau of Mines and Geology; Head, Department of Geology and Geography; Professor, Geology*  
B.S.(Min.E.), M.S., Ph.D., University of Washington. 1951
- COOLEY, JAMES H., Ph.D., *Assistant Professor, Chemistry*  
A.B., M.S., Middlebury College; Ph.D., University of Minnesota. 1957
- COREY, GILBERT L. M.S., *Associate Professor, Agricultural Engineering, and Associate Agricultural Engineer*  
B.S., M.S., Colorado State University. 1949
- CROWLEY, H. WARD, Sc.M., *Assistant Professor, Mathematics*  
B.A., M.A., State College of Washington; Sc.M., Brown University. 1956
- CURTIS, WALDO, Ph.D., *Associate Professor, Physics*  
A.B., Fresno State College; Ph.D., University of Washington. 1958

\* On sabbatical leave, 2nd semester, 1958-1959.

- CUSHMAN, JOHN H., M.A., *Professor and Chairman, Department of English*  
B.A., Brown University; M.A., Harvard University. 1919
- DALKE, PAUL D., Ph.D., *Professor, Wildlife Management, and Leader, Idaho Cooperative Wildlife Research Unit*  
B.S.F., M.S.F., Ph.D., University of Michigan. 1947
- DENFELD, RICHARD E., B.S., *Assistant Professor, Air Science*  
B.S., U. S. Naval Academy. 1956
- DETERS, MERRILL E., Ph.D., *Professor, Forestry*  
B.S. (For.), M.S., Ph.D., University of Minnesota. 1940
- DICK, KENNETH A., C.P.A., *Comptroller, Business Manager, Bursar, and Professor*  
B.S. (Bus.), M.S. (Bus.), University of Idaho; M.B.A., Stanford University. 1931
- DIXON, JOHN E., M.S., *Assistant Professor, Agricultural Engineering and Assistant Agricultural Engineering Technologist*  
B.S., Oregon State College; M.S., University of Idaho. 1954
- DOBLER, CLIFFORD I., M.A., *Assistant Professor, Political Science*  
B.S. (Bus.), LL.B., M.A., University of Idaho. 1941
- DUMAS, PHILIP C., Ph.D., *Assistant Professor, Biological Sciences*  
B.S., M.A., Ph.D., Oregon State College. 1953
- DUNN, ALFRED C., M.F.A., *Professor, Art*  
B.A., University of Idaho; M.F.A., California College of Arts and Crafts. 1941
- EDWARDS, JOHN A., M.A., *Assistant Professor, Agricultural Economics, and Assistant Agricultural Economist*  
B.S. (Ag.), University of Wisconsin; M.A., University of Nebraska. 1958
- ELDRIDGE, JAY GLOVER, Ph.D., Litt.D., *Dean of the University Faculty, Emeritus*  
B.A., M.A., Ph.D., Yale University; Litt.D., College of Idaho. 1901
- ERICKSON, LAMBERT C., M.S., *Associate Professor, Agronomy, and Associate Agronomist*  
B.S., University of Minnesota; M.S., University of Wyoming. 1945
- FAHRENWALD, ARTHUR W., E.M., *Research Professor, Metallurgy; Dean, Emeritus*  
B.S. (Met.E.), Met.E., South Dakota School of Mines; E.M., New Mexico School of Mines 1919
- FARLEY, MELVIN W., Ph.D., *Associate Professor, Education*  
A.B., Westmar College; A.M., University of South Dakota; Ph.D., University of Nebraska 1953
- FARMER, RALPH H., A.B., *Professor, Finance, College of Business Administration, Dean Emeritus*  
A.B., Oberlin College. 1927
- FEATHERSTONE, MARION, A.M. (Ed.), *Associate Professor, Home Economics*  
B.S. (Ed.), University of Idaho; A.M. (Ed.), University of Southern California. 1931-46; 1943
- FINLEY, ARTHUR M., Ph.D., *Professor, Plant Pathology; Plant Pathologist, and Head, Department of Plant Pathology*  
B.S. (Ag.), M.A., Ph.D., University of Missouri. 1950
- FITZGERALD, OREN A., M.A., *Professor and Staff Editor, College of Agriculture*  
B.A., M.A., University of Idaho. 1927
- FLETCHER, MAX E., Ph.D., *Assistant Professor, Economics*  
B.A., University of Washington; M.A., University of Idaho; Ph.D., University of Wisconsin. 1958
- FOLZ, WILLIAM E., Ph.D., *Professor and Head, Department of Agricultural Economics, and Agricultural Economist*  
B.S., Evansville College; M.S., Ph.D., University of Illinois. 1935
- FOOTE, BENJAMIN A., Ph.D., *Acting Assistant Professor, Entomology*  
B.A., Ohio Wesleyan University; M.S., Ohio State University; Ph.D., Cornell University. 1958
- \*FOSBERG, MAYNARD A., M.S., *Associate Professor, Agronomy*  
B.S., M.S., University of Wisconsin. 1949
- FOURT, DAVID L., M.S. (Ag.), *Professor and Head, Department of Dairy Husbandry*  
B.S. (Ag.), M.S. (Ag.), University of Idaho. 1922
- FOY, JOHN V., M.A., *Assistant Professor, English*  
B.A., M.A., Cornell University. 1952
- FRYKMAN, MARION I., M.A., *Assistant Professor, Music*  
B.S. (Mus. Ed.), M.A., University of Minnesota. 1947
- FURST, EDWARD J. Ph.D., *Assistant Professor, Psychology*  
A.B., A.M., Ph.D., University of Chicago. 1956
- GARRARD, VERL G., M.S., *Assistant Professor, Chemistry*  
B.S. (Chem. E.), M.S., University of Idaho. 1946
- GAUSS, HENRY, M.E., P.E., *Research Professor, Civil Engineering, Emeritus*  
B.S. (M.E.), M.E., Washington University. 1925
- GIBBS, RAPHAEL S., B.A., *Professor, Director of Information, and Editor of Publications*  
B.A., University of Idaho. 1934-36; 1946
- GILBERTSON, ROBERT L., Ph.D., *Assistant Professor, Forestry*  
B.A., Montana State University; M.S., University of Washington; Ph.D., State University of New York College of Forestry. 1954

\* On sabbatical leave, October 1, 1958 to June 20, 1959.

- GILES, EUGENE, Ph.D., *Professor, Psychology*  
B.A., M.A., State College of Washington; Ph.D., University of Washington. 1948.
- \*GITTINS, ARTHUR R., M.S., *Assistant Professor, Entomology, and Assistant Entomologist*  
B.S., University of Alberta; M.S., University of Idaho. 1955
- GLANDER, JOSEPH H., M.A., *Associate Professor, Physical Education, and Track Coach*  
B.S.(Ed.), Ohio University; M.A., Bowling Green State University. 1955
- GRAHN, EDGAR H., Ph.D., *Associate Professor, Chemistry*  
B.S., College of Puget Sound; M.S., University of Idaho; Ph.D., University of Illinois.  
1940-43; 1946
- GRAUE, ERWIN, Ph.D., *Professor, Economics*  
B.S., Ph.D., Cornell University. 1928
- GREEN, JOHN A., Ed.D., *Assistant Professor, Education*  
B.A., Colorado State College of Education; M.Ed., Ed.D., University of Colorado. 1953
- GREEN, LEON G., Ed.D., *Professor and Head, Department of Physical Education*  
B.S., M.S.(Ed.), University of Idaho; Ed.D., New York University. 1940
- \*GREEVEYER, WILLIAM S., Ph.D., *Associate Professor and Chairman, Department of History*  
A.B., Pomona College; A.M., Ph.D., Harvard University. 1949
- GRIEB, MERLAND W. Ph.D., *Assistant Professor, Chemistry*  
B.S., M.S., University of Idaho; Ph.D., University of Illinois. 1956
- GRIMM, KENNETH E., M.A., *Assistant Professor, Geology*  
B.S., University of Arizona; M.A., Stanford University. 1954
- GROKE, PAUL O., M.B.A., *Assistant Professor, Business and Economics*  
B.A., M.B.A., University of Washington. 1956
- GUSTAFSON, DONALD A., Ph.D., *Associate Professor, Chemistry*  
B.S., Ph.D., University of Washington. 1944
- HALL, FOREST H., M.S.(C.E.), *Associate Professor, Civil Engineering*  
B.S.(Civil & Irrig. E.), Colorado State University; M.S.(C.E.), California Institute of Technology. 1945
- HALL, FREDERICK C., M.S., *Visiting Assistant Professor, Range Management*  
B.S.(For.), Purdue University; M.S., Oregon State College. 1958
- HANSEN, RICHARD O., Captain, B.S.(For.), *Assistant Professor, Air Science*  
B.S.(For.), Utah State Agricultural University. 1955
- HANTO, DONALD C., B.S.(C.E.), *Assistant Professor, Air Science*  
B.S.(C.E.), Montana State College. 1957
- HARDER, ROGER W., M.S., *Assistant Professor, Agronomy; and Agronomist*  
B.A., M.S., University of Wisconsin. 1947
- HARMSWORTH, HARRY C., Ph.D., *Professor and Chairman, Department of Sociology*  
A.B., M.A., Colorado State College of Education; Ph.D., University of Southern California.  
1944
- HARRISON, EDWIN S., Major, M.Ed., *Assistant Professor, Military Science and Tactics*  
B.S.(Ed.), University of Wyoming; M.Ed., University of Idaho. 1955
- HARVEY, MORRIS E., Ed.E., *Assistant Professor, Education Extension*  
B.S., M.S., Oregon State College; Ed.D., University of Oregon. 1957
- HASSMAN, RALPH P. M.S., *Acting Assistant Professor, Physical Education*  
B.S.(Ed.), Oregon State College; M.S., University of Oregon. 1958
- HATTRUP, HUBERT E., P.E., *Professor and Head, Department of Electrical Engineering*  
B.S.(E.E.), E.E., University of Idaho; P.E., New York University. 1941
- HAUSE, EARL M., Ph.D., *Associate Professor, History and Political Science*  
B.A., Union College; M.A., University of Nebraska; Ph.D., Northwestern University. 1948
- HAYNES, ROBERT C., M.S.(Ag.), *Assistant Professor, Agricultural Education and Agricultural Engineering*  
B.S.(Ag.), M.S.(Ag.), University of Idaho. 1955
- HELTON, AUDUS W., Ph.D., *Associate Professor, Plant Pathology and Associate Plant Pathologist*  
B.A., M.S., Ohio Wesleyan University; Ph.D., Oregon State College. 1951
- HESPELT, GEORGE G., B.S.(E.E.), *Assistant Professor, Electrical Engineering*  
B.S.(E.E.), University of Idaho. 1957
- HIBBS, ROBERT A., Ph.D., *Assistant Professor, Dairy Science*  
B.S.(Ag.), M.S.(Ag.), University of Florida; Ph.D., State College of Washington. 1954
- HICKMAN, FRANK HAYES, M.A., *Assistant Professor, Business Administration*  
B.A., M.A., Cambridge University; M.A., University of Miami. 1954
- HINDLE, NORMAN F., Met.E., *Professor and Head, Department of Mechanical Engineering*  
B.S.(Ch.E.), Purdue University; B.S.(M.E.), University of Idaho; Met.E., Purdue University.  
1947. (deceased)
- HOAG, KENNETH, M.A., *Professor, English*  
B.A., M.A., University of Michigan. 1935
- HODGSON, CHARLES W. Ph.D., *Associate Professor, Animal Husbandry, and Associate Animal Husbandman*  
B.S.(Ag.), University of Idaho; M.S., University of Arizona; Ph.D., Michigan State College.  
1945

\* One Leave of Absence without pay; Sept. 15, 1958 to Sept. 14, 1959.

\* On leave of absence without pay for academic year, 1958-1959.

- HOFFMAN, DWIGHT S., M.S.(Ch.E.), *Associate Professor, Chemical Engineering*  
B.S.(Ch.E.), M.S., University of Idaho. 1944
- HOSACK, ROBERT E., Ph.D., *Professor and Chairman of Political Science, and Head, Department of Social Sciences*  
A.B., College of Wooster; A.M., University of Chicago; Ph.D., Duke University. 1943
- HOWE, ARTHUR S., M.A., *Associate Professor, Languages*  
B.A., William and Mary College; M.A., University of Idaho. 1922
- HOWE, JOHN P., M.S., *Assistant Professor, Wood Utilization*  
A.B., Amherst College; M.S., Yale University. 1956
- HUME, GEORGE A., Lt., B.S., *Assistant Professor, Naval Science*  
B.S., Oregon State College. 1957
- HUNGERFORD, CHARLES W., Ph.D., *Dean of Graduate School, Emeritus*  
B.S., Upper Iowa University; M.S., Ph.D., University of Wisconsin. 1919
- HUNGERFORD, KENNETH E., Ph.D., *Associate Professor, Wildlife*  
B.S.(For.), University of Idaho; M.S., University of Connecticut; Ph.D., University of Michigan. 1942
- INMAN, LAWRENCE L., Ph.D., *Assistant Professor, Forestry*  
B.S.(For.), Iowa State College; Ph.D., University of Minnesota. 1957
- JACKSON, MELBOURNE L., Ph.D., *Professor and Head, Department of Chemical Engineering*  
B.S.(Ch.E.), Montana State College; Ph.D., University of Minnesota. 1953
- JANSEN, ALLEN S., M.S.(C.E.), *Dean, College of Engineering; Professor, Civil Engineering, and Director, Engineering Experiment Station*  
B.Arch., B.S.(C.E.), M.S.(C.E.), University of Idaho. 1931
- JEFFERS, DWIGHT S., Ph.D., *Dean of College of Forestry, Emeritus*  
A.B., Illinois Wesleyan University; M.F., Ph.D., Yale University. 1935
- JOBE, LOWELL A., M.S.(Ch.E.), *Associate Professor, Chemical Engineering*  
B.S.(Ch.E.), South Dakota School of Mines and Technology; M.S.(Ch.E.), State University of Iowa. 1947
- JOHNSON, J. HUGO, E.E., *Professor and Head, Department of Electrical Engineering, Emeritus*  
A.B., E.E., University of Wisconsin. 1918
- JOHNSON, KENNETH R. Ph.D., *Professor, Dairy Husbandry, and Dairy Husbandman*  
B.S.(Ag.), M.S.(Ag.), West Virginia University; Ph.D., Purdue University. 1954
- JOHNSTON, PAUL E., M.A., *Assistant Professor, Political Science, and Executive Secretary, Borah Committee*  
B.S., University of Oregon; M.A., University of California. 1956
- JOLLEY J. IRVING, Ph.D., *Professor, Chemistry, and Chairman, PerMedical and PreDental Studies*  
B.S., Ph.D., University of Washington. 1937-1946; 1947
- \*JORDAN, JAMES V., Ph.D., *Associate Professor, Agricultural Chemistry, and Associate Agricultural*  
B.Sc., University of British Columbia; M.S., Ph.D., Oregon State College. 1948
- JUNK, FRANK S., P.E., *Associate Professor, Civil Engineering*  
B.S.(C.E.), University of Iowa; M.S.(C.E.), P.E., University of Idaho. 1949
- KAPPLER, RICHARD G., M.A., *Assistant Professor, Languages*  
B.A., Cornell University; M.A., Columbia University. 1952
- KEITH, THOMAS B., Ph.D., *Professor, Animal Husbandry*  
B.S.(Ag.), University of Idaho; M.S., University of Illinois; Ph.D., Pennsylvania State University. 1947
- KEMPTON, MERRILL A., Colonel. U.S.A.F., M.S.(Ed.), *Professor, Air Science*  
A.B., University of Utah; M.S.(Ed.), University of Idaho. 1956
- KENDRICK, DAVID D., Ph.D., *Dean, College of Business Administration*  
B.S.(Bus.), University of Idaho; M.A., Ph.D., University of California. 1946-1947; 1957
- KERR, THOMAS S., LL.B., *Dean, College of Letters and Science, Emeritus*  
A.B., Indiana University; LL.B., University of Michigan. 1924
- KESSEL, ROBERT M., Ph.D., *Assistant Professor and Head, Department of Secretarial Studies and Business Education*  
B.E., Wisconsin State College; M.S., Ph.D., University of Wisconsin. 1957
- KINDSCHY, DWIGHT L., M.S., *Associate Professor, Agricultural Education*  
B.S.(Ag.), Montana State College; M.S., Iowa State College. 1947
- \*\*KIRKLAND, ERIC B., M.Ed., *Assistant Professor, Physical Education*  
B.S., M.Ed., University of Washington. 1947
- KIRKWOOD, MARY B., M.F.A., *Professor, Art and Architecture*  
B.A., University of Montana; M.F.A., University of Oregon. 1930
- KLAGES, KARL H.W., Ph.D., *Professor and Head, Department of Agronomy*  
B.S., Oregon State College; M.S., Ph.D., University of Illinois. 1936
- KRAUS, JAMES E., Ph.D., *Dean, College of Agriculture; Director, Agricultural Extension Service, and Director, Agriculture Experiment Station*  
B.S., Colorado State University; M.S., University of Wisconsin; Ph.D., Cornell University. 1941-1944; 1945
- LABARRE, ANTHONY E., Ph.D., *Assistant Professor, Mathematics*  
B.E.(Ch.E.), M.S., Tulane University; Ph.D., University of Oklahoma. 1948-1950; 1956

\* Leave of Absence without pay, July 1, 1959 to January 31, 1960.

\*\*On sabbatical leave, September 1, 1958 to July 1, 1959.

- LAMPMAN, CLIFFORD E., B.S.(Ag.), *Professor and Head, Department of Poultry Husbandry, and Poultry Husbandman*  
B.S.,(Ag.), University of Wisconsin. 1928
- LARRISON, EARL J., M.S., *Associate Professor, Zoology*  
B.S., M.S., University of Washington. 1949
- LAUBER, JOHN F., Ph.D., *Assistant Professor, English*  
B.A., M.A., M.L., Ph.D., University of Washington. 1958
- LEGUIN, CHARLES A., Ph.D., *Assistant Professor, History*  
A.B., Mercer University; M.A., Northwestern University; Ph.D., Emory University. 1956
- LEHRER, WILLIAM P., JR., Ph.D., *Associate Professor, Animal Husbandry, and Associate Animal Husbandman*  
B.S.(An.Husb.), Pennsylvania State University; M.S.(Ag.), M.S.(For.), University of Idaho; Ph.D., State College of Washington. 1945
- LETOURNEAU, DUANE J., Ph.D., *Associate Professor, Agricultural Chemistry, and Associate Agricultural Chemist*  
B.S., M.S., Ph.D., University of Minnesota. 1953
- LEWIS, ADAH, M.S., *Associate Professor, Home Economics, Emeritus*  
B.S., M.S., Kansas State College. 1923
- \*LEWIS, GLENN C., M.S.(Ag.), *Assistant Professor, Agricultural Chemistry, and Assistant Agricultural Chemist*  
B.S.,(Ag.), M.S.(Ag.), University of Idaho. 1947
- LIND, LEON P., M.Ed., *Assistant Professor and Technician, Radio-Television Center*  
B.S., M.Ed., University of Idaho. 1951
- LITTLE, MIRIAM H., M.A., *Assistant Professor, Music, Emeritus*  
B.Mus., B.F.A., University of Nebraska; M.A., University of Idaho. 1930
- LOCKE, MABEL, M.S., *Professor and Chairman, Department of Physical Education*  
B.S., Northwestern University, M.S., University of Wisconsin. 1930-1936; 1947
- LOCKERY, GLEN R., M.A., *Professor, Music*  
B.A., B.M., Lawrence College; M.A., Columbia University. 1947
- LOEWENSTEIN, HOWARD, Ph.D., *Assistant Professor, Forestry*  
B.S., Colorado A and M College; Ph.D., University of Wisconsin. 1958
- LOGAN, NORMAN R., M.S.(Mus.Ed.), *Associate Professor, Music*  
B.S.(Ed.), M.S.(Mus.Ed.), University of Idaho. 1947
- LUDDEN, T. E., M.D., *Associate Professor, Bacteriology, Deaconess Hospital, Spokane, Washington*  
B.A., Willamette University; M.S., University of Minnesota; M.D., University of Oregon
- LUKE, GEORGE L., M.A., *Professor, Physics, Emeritus*  
B.A., M.A., University of Wisconsin. 1951
- MCCARTER, JOHN C., M.D., *Associate Professor, Bacteriology, St. Lukes Hospital, Boise, Idaho*  
B.A., M.D., University of Wisconsin. 1951
- MCGONAGLE, WILLIAM L., LCDR, U.S.N., B.A., *Assistant Professor, Naval Science*  
B.A., University of Southern California. 1959
- MCIFF, LYLE H., M.B.A., C.P.A., *Assistant Professor, Accounting*  
B.S., Brigham Young University; M.B.A., University of Texas. 1956-57; 1958
- MCILVAINE, HAROLD R., Ph.D., *Professor, Botany*  
B.A., M.Ed., Ph.D., Pennsylvania State University. 1947
- MCMULLEN, JOHN L., M.S., *Assistant Professor, Botany*  
B.Ed., Eastern Illinois State College; M.S., State College of Washington. 1951
- MABRY, BEVARS D., M.S., *Assistant Professor, Economics and Business*  
B.B.A., University of Chattanooga; M.S., University of Tennessee. 1957
- MACCARTHY, JOHN D., M.D., *Associate Professor, Bacteriology, Deaconess Hospital, Spokane, Washington*  
A.B., Washington and Jefferson College; M.D., Johns Hopkins University. 1953
- MACKLIN, HALL M., M.Mus. *Professor and Head, Department of Music*  
B.Mus., University of Illinois; M.Mus., University of Idaho. 1935
- MACPHEE, CRAIG, Ph.D., *Assistant Professor, Forestry*  
B.A., M.A., University of British Columbia; Ph.D., University of Washington. 1957
- MAIB, FRANCES B., Ed.D., *Associate Professor, Education*  
B.S., Central Washington College of Education; M.A., Ed.D., University of Washington. 1951
- MALIK, ANAND K., Ed.D., *Visiting Lecturer, Education*  
B.A., M.A., Panjab University, D.Ed., University of London; Ed.D., Columbia University. 1957
- MANIS, HUBERT C., Ph.D., *Professor and Head, Department of Entomology, and Entomologist*  
B.S., Montana State College; M.S., Kansas State College; Ph.D., Iowa State College. 1940
- MANN, PAUL, M.S.(E.E.), *Associate Professor, Electrical Engineering*  
B.S.(E.E.), M.S.(E.E.), University of Idaho. 1948
- MARSHALL, DON A., Ph.D., *Associate Dean, College of Agriculture, and Professor, Agricultural Economics, and Agricultural Economist, Agricultural Experiment Station*  
B.S., M.S., Oklahoma State University; Ph.D., Cornell University. 1950
- MARTIN, BOYD A., Ph.D., *Dean, College of Letters and Science, and Professor, Political Science*  
B.S., University of Idaho; A.M., Ph.D., Stanford University. 1938

\* On sabbatical leave, October 1, 1959 to June 30, 1960.

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B.Sc.(Chem.), University of Bombay; B.S.(Ch.E.), University of Idaho; M.S.(Ch.E.), Columbia University. 1956
- MARTIN, JAMES W., M.S.(Ag.E.), *Professor and Head, Department Agricultural Engineering*  
B.S.(E.E.), B.S.(Ag.E.), Kansas State College; M.S.(Ag.E.), Iowa State College. 1946
- MILLER, JOHN J., Ph.D., *Professor and Chairman, Department of Physics*  
B.A., M.A., Ph.D., University of Texas. 1952
- MILLER, LAURENCE D., D.V.M., *Assistant Professor, Veterinary Science, and Assistant Veterinarian, Agriculture Experiment Station*  
B.S., D.V.M., State College of Washington. 1958
- MINNIS, MHYRA S., Ph.D., *Assistant Professor, Sociology and Social Work*  
A.B., M.A., Oberlin College; Ph.D., Yale University. 1957
- MOORE, CHESTER A., P.E., *Professor and Head, Department of Civil Engineering*  
B.S., Massachusetts Institute of Technology. 1949
- MOORE, EDWARD C., Ph.D., *Professor and Chairman, Department of Philosophy*  
A.B., Western Michigan University; M.A.(Ed.Admin.), M.A.(Phil.), Ph.D., University of Michigan. 1950
- NABELL, EUGENE V., Lt. B.S.A., *Assistant Professor, Military Science and Tactics*  
B.S.A., University of Florida. 1957
- NEWCOMB, SHIRLEY A., M.S., *Assistant Professor, Home Economics*  
B.S.(H.Ec.), University of Nebraska; M.S., University of Idaho. 1949
- NEWTON, JOSEPH, M.S.(Met.E.), *Professor, Metallurgy, and Head, Department of Mining and Metallurgy*  
B.S.(Met.E.), Montana School of Mines; M.S.(Met.E.), University of Idaho. 1932
- NIELSEN, ELSINE, M.S., *Associate Professor, Home Economics*  
B.S., Utah State College; M.S., Iowa State College. 1942
- NORGORD, JOHN T., M.S.E.(M.E.), *Assistant Professor, Mechanical Engineering*  
B.S.(M.E.), University of Washington; M.S.E.(M.E.), University of Michigan, P.E., State College of Washington. 1948
- NYBROTEN, A. NORMAN, Ph.D., *Research Professor, Highway Economics*  
B.Ed., Wisconsin State College; Ph.D., University of Wisconsin. 1939-1948; 1958
- O'CONNELL, JESSIE E., Ph.D., *Assistant Professor, Biological Sciences*  
B.S., M.S., Wake Forest College; Ph.D., University of North Carolina. 1955
- O'REILLEY, MICHAEL J., LL.B., *Visiting Associate Professor, Law*  
A.B., Manhattan College; LL.B., St. John's University. 1957
- ORTON, GEORGE W., Captain, B.S., *Assistant Professor, Military Science and Tactics*  
B.S., United States Military Academy. 1958
- OTNESS, H. ROBERT, Ph.D., *Associate Professor, Psychology*  
B.S., M.S.(Ed.), University of Idaho; Ph.D., New York University. 1950
- OWEN, GLENN B., Colonel, M.B.A., *Professor, Military Science and Tactics*  
B.S.(Ed.), University of Idaho; M.B.A., University of Pennsylvania. 1957
- PACKENHAM, HOWARD E., M.A., *Associate Professor, English*  
B.A., College of Idaho; M.A., University of Idaho. 1931
- PARBERRY, CLEM H., M.S.(Ed.), *Assistant Professor, Physical Education and Intramural Sports Director*  
B.S.(Ed.), Pacific University; M.S.(Ed.), University of Idaho. 1953
- PARISH, WILLIAM R., M.S.(E.E.), *Associate Professor, Electrical Engineering*  
B.S.(E.E.), Iowa State College; M.S.(E.E.), University of Idaho. 1947
- PEARSON, THELMA H., M.S., *Visiting Assistant Professor, Home Economics*  
B.S., M.S., Iowa State College. 1958
- PETERSEN, CHARLES F., M.S.(Ag.), *Professor, Poultry Husbandry, and Poultry Husbandman*  
B.S.(Ag.), M.S.(Ag.), University of Idaho. 1943
- PETERSON, PHILIP E., LL.M., *Associate Professor, Law*  
B.S., J.D., University of Illinois; LL.M., Harvard University. 1952
- POPE, WARREN, K. Ph.D., *Associate Professor, Agronomy, and Associate Agronomist, Agricultural Experiment Station*  
B.S.(Ag.), Ph.D., University of California. 1947
- POSTWEILER, RUDOLPH A., Ph.D., *Assistant Professor, Economics*  
B.S., M.S., Ph.D., University of Wisconsin. 1955
- PRICE, GRANVILLE, Ph.D., *Professor and Chairman, Department of Journalism*  
B.A., M.A., University of Texas; Ph.D., University of Missouri. 1954
- PRICHARD, THEODORE J., M.Arch., *Professor, Art and Architecture*  
B.A., University of Minnesota; M.Arch., Harvard University. 1926
- RAEDER, JOHN M., M.S.(Ag.), *Professor, Plant Pathology, and Plant Pathologist*  
B.S.(Ag.), M.S.(Ag.), Iowa State College. 1921
- RAUNIO, ELMER K., Ph.D., *Associate Professor, Chemistry*  
B.A., University of Wyoming; M.S., North Dakota State College; Ph.D., University of Michigan. 1949
- RAY, ELIZABETH M., M.Ed., *Assistant Professor, Home Economics Education*  
B.S., M.Ed., University of Maine. 1956

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- \*REID, ROLLAND R., M.S., *Assistant Professor, Geology*  
B.S., M.S., University of Washington. 1955
- RENFREW, MALCOLM M., Ph.D., *Professor, Chemistry, and Head, Department of Physical Sciences*  
B.S., M.S., University of Idaho; Ph.D., University of Minnesota. 1959
- RENTFRO, MABEL W., M.A., *Associate Professor, Languages*  
B.A., University of Idaho; M.A., Radcliffe College. 1925
- RICHARDSON, GEORGE F., Captain, B.S., *Professor, Naval Science*  
B.S., United States Naval Academy. 1958
- RITCHIE, MARGARET, M.A., *Professor and Head, Department of Home Economics*  
B.S., M.A., Columbia University. 1938
- ROBERTS, LORIN W., Ph.D., *Assistant Professor, Botany*  
B.A., M.A., Ph.D., University of Missouri. 1957
- ROLLAND, SIEGFRIED B., Ph.D., *Associate Professor, Social Sciences and History*  
A.B., M.A., Wayne University; Ph.D., University of Wisconsin. 1952
- ROORDA, ETHEL, M.S., *Assistant Professor, Mathematics*  
B.S., Central College; M.S., State University of Iowa. 1957
- ROSS, PAUL F., B.S., *Assistant Professor, Air Science*  
B.S.(M.E.), University of Missouri School of Mines. 1956
- ROSS, RICHARD H., Ph.D., *Professor, Dairy Husbandry, and Dairy Husbandman*  
B.S., Pennsylvania State University; M.S., West Virginia University; Ph.D., Pennsylvania State University. 1947
- ROWE, PATRICIA A., M.S., *Assistant Professor, Physical Education (Women)*  
B.S.(Ed.), Bouve Boston School of Physical Education; M.S., University of Oregon. 1951
- RUSSELL, GEORGE R., B.S.(C.E.), P.E., *Assistant Professor, Civil Engineering*  
B.S.(C.E.), University of Idaho; P.E., Idaho. 1947-1951; 1956
- SAGAN, HANS, Ph.D., *Associate Professor, Mathematics*  
Ph.D., University of Vienna. 1957
- SAYRE, EDWARD C., B.A., *Assistant Professor, Air Science*  
B.A., College of Great Falls. 1958
- SHELL, STEWART C. Ph.D., *Associate Professor and Chairman, Department of Zoology*  
B.S., Kansas State College; M.S., North Carolina State College; Ph.D., University of Illinois. 1949
- SCHULDT, AGNES C., M.Mus., *Associate Professor, Music*  
B.Mus., M.Mus., Syracuse University. 1927-1930; 1946
- SCHWARTZ, ELWYN S., M.Mus.Ed., *Associate Professor, Music*  
B.A., San Jose State College; M.Mus.Ed., University of Idaho. 1951
- SCRIVNER, LLOYD H., D.V.M., *Professor and Head, Department of Veterinary Science, and Veterinarian*  
M.S., Cornell University; D.V.M., Colorado A and M College. 1948
- SEABECK, FRANK E., Major, B.A., *Assistant Professor, Naval Science*  
B.A., College of Puget Sound. 1956
- SEALE, ROBERT H., M.S.(For.), *Associate Professor, Forestry, and Assistant to the Dean*  
B.S., University of California; M.S.(For.), University of Idaho. 1949-1950; 1951
- SEAMAN, FRANCIS, Ph.D., *Assistant Professor, Philosophy*  
B.S., M.S., Ph.D., University of Michigan. 1949
- SEELY, CLARENCE I., M.S., *Professor, Agronomy, and Agronomist*  
M.S., B.S., State College of Washington. 1947
- SHABE, GERARD P., Lt., B.A., *Assistant Professor, Naval Science*  
B.A., College of the Holy Cross. 1957
- \*SHARP, LEE A., M.S., *Associate Professor, Range Management*  
B.S., M.S., Utah State Agricultural College. 1949
- SHERMAN, THEODORE A., M.A., *Professor, English*  
A.B., Stanford University; M.A., University of Idaho. 1931
- SILHA, HENRY W., (M.S.(M.E.)), *Associate Professor, Mechanical Engineering*  
B.S.(M.E.), Montana State College; M.S.(M.E.), University of Idaho. 1941
- SLINKARD, ALFRED E., Ph.D., *Assistant Professor, Agronomy, and Assistant Agronomist*  
B.S., M.S., State College of Washington; Ph.D., University of Minnesota. 1957
- SLIPP, ALBERT W., M.S.(For.), *Assistant Professor, Forestry*  
B.Sc.For., University of New Brunswick; M.S.(For.), University of Idaho. 1945
- SLOAN, WILLIAM P., B.Arch., *Assistant Professor, Architecture*  
B.Arch., Rensselaer Polytechnic Institute. 1955
- SMITH, WALTER W., LL.D., *Associate Professor, Education, Emeritus*  
A.B., Christian College; M.S.(Ed.), University of Idaho; LL.D., College of Puget Sound. 1928
- SNIDER, HERVON L., Ph.D., *Professor, Education, and Director of Student Teaching*  
B.S.(Ed.), M.A., Ph.D., University of Nebraska. 1949
- SNIDER, JOHN A., Ed.D., *Professor, Education*  
B.S.(Ed.), M.S.(Ed.), University of Oklahoma; Ed.D., University of Colorado. 1949
- SNYDER, WILLIAM H., M.S., *Assistant Professor, Horticulture*  
B.S., South Dakota State College; M.S., University of Illinois. 1956

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A.B., Baldwin-Wallace College; M.A., Western Reserve University; Ph.D., University of Denver. 1958
- STALEY, WILLIAM W., E.M., *Professor, Mining*  
B.S. (Min.E.), New Mexico School of Mines; M.S. (Met.), University of Idaho; E.M., New Mexico School of Mines. 1928
- STEFFENS, H. WALTER, Ph.D., *Executive Dean*  
B.S. (Pre-Med.), M.S., University of Idaho; Ph.D., Harvard University. 1929
- STIMSON, EDWARD S., S.J.D., *Dean, College of Law, and Professor, Law*  
A.B., B.S., A.M., Ohio State University; J.D., S.J.D., University of Michigan Law School. 1947
- STOUGH, HOWARD B., Ph.D., *Professor of Zoology, Emeritus*  
A.B., Midland College; M.A., Kansas University; Ph.D., Harvard University. 1925
- SUN PING-TSOONG, M.S., *Assistant Professor, Civil Engineering*  
B.S., Chiao-Tung University; M.S., University of Tennessee. 1957
- SUTTNER, WERNER K., Ph.D., *Assistant Professor, Languages*  
Ph.D., German Charles University. 1957
- TAYLOR, CLIFFORD A., B.S. (C.E.), *Assistant Professor, Civil Engineering, and Testing Engineer*  
B.S. (C.E.), University of Idaho. 1955
- TAYLOR, EUGENE, M.A., *Professor of Mathematics, Emeritus*  
A.B., M.A., DePauw University, 1920.
- TAYLOR, DARRACH G., Lt., B.A., *Assistant Professor, Naval Science*  
B.A., University of Southern California. 1957
- TENNEY, WILLIAM H., Ph.D., *Associate Professor, English*  
A.B., A.M., Oberlin College; Ph.D., University of Michigan. 1949
- THEOPHILUS, DONALD R., Ph.D., *President*  
B.S., M.S., Ph.D., Iowa State College; LL.D., College of Idaho. 1927
- THIELKE, RUBEN C., Ph.D., *Professor, Chemistry*  
B.S. (Ch.E.), M.S., Oregon State College; Ph.D., University of Michigan. 1946
- \*TISDALE, EDWIN W., Ph.D., *Professor, Range Management, and Assistant Director, Forest, Wildlife and Range Experiment Station*  
B.S., University of Manitoba; M.S., Ph.D., University of Minnesota. 1947
- TOLLESON, FLOYD C., JR., Ph.D., *Assistant Professor, English*  
B.A., M.A., Ph.D., University of Washington. 1955
- TYLUTKI, EDMUND E., Ph.D., *Assistant Professor, Botany*  
B.S., M.S., University of Illinois; Ph.D., Michigan State University. 1956
- VERNER, LEIF, Ph.D., *Professor, Horticulture*  
B.S., M.S., Pennsylvania State University; Ph.D., Johns Hopkins University. 1927
- WAGNER, REUBEN R., M.A., C.P.A., *Assistant Professor, Accounting*  
B.A., Nebraska State College; M.A., University of Nebraska; C.P.A., Nebraska. 1957
- \*WALENTA, THOMAS R., LL.M., *Professor, Law*  
B.S., University of Idaho; LL.B., University of Minnesota; LL.M., University of Illinois. 1947
- WALKER, DELBERT J., M.A., *Assistant Professor, Mathematics*  
A.B., Pennsylvania Teachers College; M.A., University of Nebraska. 1950
- WALKER, SCOTT A., M.S., *Assistant Professor, Agricultural Economics, and Agricultural Economist, Agricultural Experiment Station*  
B.S., M.S., Iowa State College. 1950
- WARNICK, CALVIN C., M.S. (C.E.), *Professor, Civil Engineering, and Associate Director, Engineering Experiment Station*  
B.S. (C.E.), Utah State Agricultural College; M.S. (C.E.), University of Wisconsin 1947
- WATSON, ROSCOE D., Ph.D., *Associate Professor, Plant Pathology, and Associate Plant Pathologist*  
B.S., M.S., Utah State University; Ph.D., Cornell University. 1946
- WEBER, JOHN H., M.S., *Assistant Professor, Agricultural Economics, and Assistant Agricultural Economist*  
B.A., University of Minnesota; M.S., University of Oregon. 1955
- WEEKS, OWEN B., Ph.D., *Associate Professor, Bacteriology, and Associate Bacteriologist*  
B.S., Iowa State College; M.S., Oregon State College; Ph.D., Ohio State University. 1949
- WELTZIN, J. FREDERICK, Ph.D., *Dean, College of Education; Professor, Education, and Director, Summer School*  
B.A., B.S. (Ed.), M.S. (Ed.), Ph.D., D.Hum., University of North Dakota. 1944
- WESTERLUND, ARNOLD S., M.A., *Assistant Professor, Art and Architecture*  
B.A., M.A., University of Idaho. 1949
- WHITEHEAD, ALBERT E., Ph.D., *Professor and Chairman, Department of Speech*  
B.A., University of Colorado; M.A., University of Wisconsin; Ph.D., University of Wisconsin. 1930
- WIESE, ALVIN C., Ph.D., *Professor and Head, Department of Agricultural Chemistry, and Agricultural Chemist*  
B.S., M.S., Ph.D., University of Wisconsin. 1946
- WILDE, WILLARD J., M.S., C.P.A., *Professor, Accounting*  
B.S., University of Utah; M.S., University of California; C.P.A. 1924

\* On Leave of Absence without pay, September 24, 1958 to June 15, 1959.

\* On sabbatical leave, second semester, 1958-59.

- WILLIAMS, GEORGE A., Ph.D., *Associate Professor, Geology*  
B.S. (Min. Engr.), Texas Western College; Ph.D., University of Arizona. 1957
- WINKLER, FRED H., Ph.D., *Assistant Professor, History and Political Science*  
A.B., M.A., University of Florida; Ph.D., Northwestern University. 1955
- WINNER, HERBERT A., M.S. (Ag.), *Professor and Head, Department of Agricultural Education*  
B.S. (Ag.), Montana State College; M.S. (Ag.), Iowa State College. 1939
- WOHLETZ, ERNEST W., M.S. (For.), *Dean, College of Forestry, and Director, Forest Wildlife and Range Experiment Station*  
B.S. (For.), M.S. (For.), University of California. 1937
- WOLFE, WARREN J., Ph.D., *Associate Professor and Chairman, Department of Languages*  
B.A., DePauw University; M.A., Ph.D., Indiana University. 1953
- WOODBURY, GEORGE W., Ph.D., *Professor and Head, Department of Horticulture, and Horticulturist*  
B.S., M.S., Michigan State University; Ph.D., Cornell University. 1935-1943; 1948
- WORMAN, CLYDE P., Cdr., B.S., *Associate Professor, Naval Science*  
B.S., University of Utah. 1955
- \*WORTHAM, RUBY, Ph.D., *Professor of Zoology*  
A.B., Oklahoma City University; M.A., University of Michigan; Ph.D., State College of Washington. 1947
- YOUNG, FRANK, M.S., *Associate Professor, Physical Education; Assistant Director of Athletics, and Personnel Officer*  
B.S., Jamestown College; M.S., University of Oregon. 1947

### INSTRUCTORS AND ASSISTANT INSTRUCTORS

- ABBASI, ALI D., B.S. (C.E.), *Instructor, Mechanical Engineering*  
B.S. (C.E.), State University of Iowa. 1957
- ALDRICH, WALTER D., B.S. (Ed.), *Instructor, Civil Engineering (half-time)*  
B.S. (Ed.), University of Idaho. 1957
- ANDERSON, THOMAS L., B.S. (C.E.), *Instructor, Freshman Engineering*  
B.S. (C.E.), University of Idaho. 1958
- BAHRENBURG, FELICE J., M.T. (A.S.C.P.), *Instructor, Bacteriology, St. Luke's Hospital, Spokane, Washington*  
B.S., State College of Washington; M.T. (A.S.C.P.), St. Luke's School of Medical Technology. 1949
- BARRUS, JAMES L. M.S., *Instructor, Chemistry*  
B.S., University of Wyoming; M.S., University of Idaho. 1949
- BEYERS, LEROY A., B.S., *Acting Instructor, Physics*  
B.S., University of Idaho. 1958
- BILLINGSLEY, WILLIAM A., M.M., *Instructor, Music*  
B. (Mus. Ed.), M.M., Drake University. 1954
- BLACKETTER, DENNIS O., B.S. (M.E.), *Instructor, Mechanical Engineering*  
B.S. (M.E.), Fresno State College. 1958
- BLANTON, PAUL L., B.S. (Arch.), *Visiting Instructor, Architecture*  
B.S. (Arch.), University of Idaho. 1958
- BOAS, RUTH H., (Mrs. LOUIS A.), *Instructor, English*  
B.A., M.A., University of Idaho. 1958
- BRIESMEISTER, ROBERT F., M.A., *Instructor, English*  
B.A., M.A., Colgate University. 1958
- BUSCEMI, PHILIP A., Ph.D., *Instructor, Zoology*  
B.A., M.A., Ph.D., University of Colorado. 1956
- CHOATE, RAOUL, M.S. (Geol.), *Instructor, Geology*  
B.S. (C.E.), M.S. (Geol.), University of Michigan. 1958
- CLARK, CALMAR W., *Assistant in Instruction and Shop Mechanician, Mechanical Engineering.*  
1959
- CLARK, ROBERT WILLIAM, M.S. (Bus.), *Instructor, Accounting*  
B.S. (Bus.), M.S. (Bus.), University of Idaho. 1956
- COPOCK, DALE X. M/Sgt., *Assistant Instructor, Naval Science.* 1958
- COWIN, CLEON C., M.S. (Ed.), *Instructor, Chemistry, and Technical Supplyman*  
B.A., William Jewell College; M.S. (Ed.), University of Idaho. 1943
- COX, ALBERT B., S/Sgt., *Assistant Instructor, Air Science.* 1957
- EVANOFF, ALEXANDER, M.A., *Instructor, English*  
B.A., M.A., Washington University. 1954
- FORBES, OLIVER C., Ph.D., *Instructor, Zoology*  
A.B., Humboldt State College; M.A., Ph.D., University of California. 1957
- FORD, CAROL, M.Ed., *Instructor, Physical Education (Women)*  
B.A., Mount Holyoke College; M.Ed., University of North Carolina. 1958
- FURGASON, ROBERT R., M.S. (Ch.E.), *Instructor, Chemical Engineering*  
B.S. (Ch.E.), M.S. (Ch.E.), University of Idaho. 1956

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- GLECKMAN, ERNEST M.A., *Instructor, English*  
B.A., Brown University; M.A., University of Connecticut. 1958
- GRAHN, ELNA H., M.S., *Instructor, Mathematics*  
B.S., M.S., University of Wisconsin. 1947-49: 1954
- GUILLORY, TERRELL A., M.A., *Instructor, English*  
B.A., M.A., University of Texas. 1957
- HALLAND, LEONARD, M.S.(M.E.), *Instructor, Physics, and Technician*  
B.S.(M.E.), M.S.(M.E.), University of Idaho. 1921
- HENDRICKS, DAVID W., B.S., *Instructor, Civil Engineering, and Assistant Civil Engineering Technician, Jr.*  
B.S., University of California. 1958
- HOLDER, ROBERT W., B.S.(Chem.), *Acting Instructor, Chemistry*  
B.S.(Chem.), University of Idaho. 1956
- HOLZ, FREDERICK A., B.S.(Ed.), *Instructor, Engineering Drawing*  
B.S.(Ed.), University of Idaho. 1957
- HUCKSHORN, ROBERT J., PhD., *Instructor, Political Science*  
B.S., Southwest Missouri State College; M.A., Ph.D., State University of Iowa. 1957
- HUNKER, HAROLD Y., M.A., *Instructor, Speech*  
B.A., William Jewell College; M.A., Denver University. 1956
- JACKLE, ERMA J., M.S.(H.Ec.), *Instructor, Home Economics*  
B.S.(H.Ec.), M.S.(H.Ec.), University of Idaho. 1953
- JOHNSON, FREDERIC D., M.S., *Instructor, Forest Management*  
B.S., Oregon State College; M.S., University of Idaho. 1950
- JONES, ROBERT W., M.S.(Geol.), *Instructor, Geology*  
B.S.(Geol.), M.S.(Geol.), University of Washington. 1958
- KAKONIS, TOM E., M.S., *Instructor, English*  
B.A., University of Minnesota; M.S., South Dakota State College. 1958
- KAUS, PAUL F., M.Ed., *Instructor, Education*  
B.A., Northern Idaho College of Education; M.Ed., State College of Washington. 1955
- KAWULA, LEONARD E., B.S., *Acting Instructor, Chemistry*  
B.S., Loyola University. 1956
- KESTER, ROBERT V., B.A., *Acting Instructor (half-time), Mathematics*  
B.A., Whittier College. 1957
- KNOWLTON, LEO L., M.S.(Bus.), *Instructor, Marketing*  
B.S.(Bus.), M.S.(Bus.), University of Idaho. 1958
- LUTHER, ERNEL L., B.A., *Acting Instructor (half-time), Mathematics*  
B.A., Whittier College. 1957
- LYNCH, HAROLD P., M/Sgt., *Assistant Instructor, Military Science and Tactics* 1956
- MCCARTHY, PAUL E., M.F.A., *Instructor, English*  
B.A., M.F.A., University of Iowa. 1958
- MCCLABAN, KIRK M., T/Sgt., *Assistant Instructor, Air Science.* 1956
- MCLEROY, PAUL J., SFC, *Instructor, Military Science and Tactics.* 1957
- MCKEAN, GEORGE A., B.S.(E.E.), *Instructor, Electrical Engineering*  
B.S.(E.E.), University of Idaho. 1958
- MCKIE, MARYANN E., (Mrs. GLENN W.), M.A., *Instructor, English*  
B.A., Southern Idaho College of Education; M.A., University of Idaho. 1955
- McMINN, JOHN M., B.S., *Acting Instructor, Accounting*  
B.S., Oregon State College. 1957
- MATHIS, HARRY L., GMC, *Assistant Instructor, Naval Science.* 1956
- MACINKO, GEORGE, M.A., *Instructor, Geology and Geography*  
B.A., University of Idaho; M.A., University of Michigan. 1958
- MACPHEE, KEITH D., M.(Bus.Ed.), *Instructor, Secretarial Studies*  
B.S.(Bus.Ed.), M.(Bus.Ed.), University of Idaho. 1956
- MALIK, ANNE C., (Mrs. ANAND), M.F.A., *Instructor, English*  
B.A., Michigan State College; M.F.A., Western Reserve University. 1957
- MAXWELL, LEE M., B.S.(E.E.), *Instructor, Electrical Engineering*  
B.S.(E.E.), University of Oklahoma. 1957
- MAY, DONALD S., B.S., *Acting Instructor, Bacteriology*  
B.S., University of Idaho. 1959
- MEINERS, GERALDINE H., M.Ed., *Instructor, Secretarial Studies*  
B.A.(Sec. Studies), B.A.(Phil.), Washington State College; M.Ed., University of Idaho. 1955
- MENDOZA, NANCY L., (Mrs. G. R.), M.S., *Instructor, Speech*  
B.A., Lake Forest College; M.S., University of Wisconsin. 1957
- MESSERSMITH, LEWIS M., *Shop Instructor and Assistant Shop Technologist, Jr.* 1946
- MITCHELL, CLARKE E., B.S., *Instructor, Physical Education, and Swimming Coach*  
B.S., University of Oklahoma. 1958
- MURBACH, VERNON S., M.A., *Instructor, Languages*  
B.A., M.A., State College of Washington. 1958
- NANCE, JAMES W., B.S., *Acting Instructor (part-time), Mathematics*  
B.S., Montana State College. 1958

- NATHAN, P. K. R., M.Sc., *Acting Instructor (part-time), Mathematics*  
M.Sc., University of Trivandrum, India. 1958
- NEAL, LEWIS G., M.S.(Ch.E.), *Instructor, Chemical Engineering*  
B.S.(Ch.E.), M.S.(Ch.E.), University of Idaho. 1957
- NEFF, PHILIP R., QMC, *Assistant Instructor, Naval Science.* 1957
- NELSON, MARLAN D., M.A. *Instructor, Journalism*  
B.A., Oklahoma State University; M.A., Leland Stanford University. 1957
- OGLES, MARIANNA M., (Mrs. R. H.), M.A., *Instructor, Languages*  
B.A., University of Montana; M.A., State College of Washington. 1957
- PATTERSON, HAROLD S. M/Sgt., *Assistant Instructor, Air Science.* 1953
- PERRY, ALLAN, M.S.(Ed.), *Instructor and Supervisor, Audio-Visual Service*  
B.S.(Chem.), Whitman College; M.S.(Ed.), University of Idaho. 1942-47: 1949
- PITKIN, FRANKLIN H., M.F., *Nursery Superintendent and Instructor*  
B.S.(For.), M.F., University of Idaho. 1945
- POTRATZ, CLARENCE J., B.A., *Acting Instructor (half-time), Mathematics*  
B.A., Pacific Lutheran College. 1957
- REMUS, GERD A., SFC, *Assistant Instructor, Military Science and Tactics.* 1957
- RICKEY, RICHARD C., Ski., *Assistant Instructor, Naval Science.* 1958
- ROBERTS, GEORGE H., M.S., *Instructor, Art and Architecture*  
B.S., M.S., University of Wisconsin. 1957
- ROBERTSON, TEDDIE E., FTL, *Assistant Instructor, Naval Science.* 1957
- ROBINSON, ALLEN D., M.S., *Instructor, Physics*  
B.S., M.S., University of Idaho. 1952
- ROHLFS, ROGER J., M.A., *Instructor, Mathematics*  
B.S., Morningside College; M.A., University of South Dakota. 1953
- ROMANO, STEVEN A., M.M., *Instructor, Music*  
B.M., M.M., Eastman School of Music. 1957
- ROTHBARD, LORRAINE, B.A., *Acting Instructor, English*  
B.A., Russell Sage College. 1959
- SAWYER, JAMES W., M.S., *Instructor, Communication*  
A.B., Bates College; M.S., Syracuse University. 1957
- SHUTE, SHIRLEY A., M.Ed., *Instructor, Physical Education (Women)*  
B.S., Memphis State University; M.Ed., University of North Carolina. 1958
- SNELSON, RICHARD E., YNL, *Assistant Instructor, Naval Science.* 1958
- SPIKER, EMMET, E., B.S., *Instructor, Physics, and Electron Microscopist*  
B.S., University of Idaho. 1946
- STALLCUP, BILLY M. M.A., *Instructor, English*  
B.S., State Teachers College; M.A., New York University. 1957
- SWANN, EPHRAIM J., SFC, B.S., *Assistant Instructor, Military Science and Tactics*  
B.S., Utah State Agricultural College. 1958
- TUMBLESON, JOHN R., JR., M.A., *Instructor, Music*  
B.A., University of Southern California; M.A., Teachers College-Columbia University. 1958
- TURNER, ROBERT L., B.S.(Ed.), *Instructor, Freshman Engineering*  
B.S.(Ed.), University of Idaho. 1957
- TUTTY, ROGER H., B.S.(C.E.), *Instructor, Civil Engineering*  
B.S.(C.E.), Oregon State College. 1958
- VAN DE WETERING, JOHN E., M.A., *Visiting Instructor, History*  
B.A., M.A., University of Washington. 1959
- VAN SANT, JAMES H., JR., B.S.(M.E.), *Instructor, Mechanical Engineering*  
B.S.(M.E.), University of Idaho. 1957
- WEGLARZ, BENJAMIN B., M/Sgt., *Assistant Instructor, Air Science.* 1951
- WEISKOPF, DONALD C., M.S., *Instructor, Physical Education*  
B.S., M.S., University of Illinois. 1956
- WHISNER, DAVID R., M.M., *Instructor, Music*  
B.M., M.M., Louisiana State University. 1957
- WILLEMSSEN, JOHN T., B.S., *Instructor, Dairy Husbandry, and Assistant Dairy Husbandman, Jr.*  
B.S., State College of Washington. 1958
- WILLIAMS, LARRY G., B.S.(Ag.E.), *Instructor, Agricultural Engineering, and Assistant Agricultural Engineer, Jr.*  
B.S.(Ag.E.), University of Idaho. 1956
- WOLFF, JAMES E., S/Sgt., *Assistant Instructor, Military Science and Tactics.* 1956

### SERVICE AND TEACHING ASSISTANTS

- CHRISTIAN, MILDRED L., B.A., *Service Assistant, Education*  
B.A., Pennsylvania State University. 1958
- CROW, CHARLES M., B.S., *Service Assistant, Psychology*  
B.S., University of Idaho. 1958
- DODDS, JAMES A., B.S., *Teaching Assistant, Physical Sciences*  
B.S., University of Idaho. 1957

- GLERUP, MELVIN O., B.S.(Ed.), *Teaching Assistant, Geology and Geography*  
B.S.(Ed.), Northern State Teachers College; B.S.(Geol. Engr.), South Dakota School of  
Mines and Technology. 1958
- HABIB, HELMI SHAFIK, B.S., *Teaching Assistant, Physical Sciences*  
B.S., Walla Walla College. 1957
- HINDMAN, FOREST D., B.S., *Teaching Assistant, Physical Sciences*  
B.S., University of Idaho. 1958
- HUMPHREY, RICHARD D., B.A., *Service Assistant, Social Sciences*  
B.A., University of Idaho. 1957
- KERN, BILLY F., B.S., *Teaching Assistant, Geology and Geography*  
B.S., University of New Mexico. 1958
- KLINGENSMITH, RICHARD A., B.S.(Mus.Ed.), *Teaching Assistant, Music*  
B.S.(Mus.Ed.), University of Idaho. 1958
- LEE, JAE NUM, B.A., *Service Assistant in English*  
B.A., Brown University. 1958
- LEMOINE, DENIS, B.S., *Teaching Assistant, Geology and Geography*  
B.S., College of Puget Sound. 1957
- NOLWALK, ANDREW JEROME, B.A., *Teaching Assistant, Geology and Geography*  
B.A., University of Connecticut. 1957
- NIU, GOANG-YIH, B.S., *Teaching Assistant, Electrical Engineering*  
B.S., Taiwan College of Engineering, China. 1957
- OPPE, JOSEPH W., B.S., *Teaching Assistant, Biological Sciences*  
B.S., Marietta College. 1957
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B.S., University of Idaho. 1957
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B.S., University of Idaho. 1958
- ROSIN, BRUCE R., B.S., *Teaching Assistant, Physical Sciences*  
B.S., University of Idaho. 1958
- SAIFI, MANSOOR A., B.E.(Mech.), *Teaching Assistant, Electrical Engineering*  
B.E.(Elect.), B.E.(Mech.), Osmania University, India. 1958
- SCHWARZE, DAVID M., B.S., *Teaching Assistant, Geology and Geography*  
B.S.(Geol.), Idaho State College. 1958
- THROCKMORTON, JAMES R., B.S., *Teaching Assistant, Physical Sciences*  
B.S., University of Idaho. 1958
- WAITZ, JAY A., B.S., *Teaching Assistant, Biological Sciences*  
B.S., University of Idaho. 1957

**COOPERATIVE GRADUATE STUDY WITH THE  
UNIVERSITY OF WASHINGTON CENTER  
FOR GRADUATE STUDY AT HANFORD  
RICHLAND, WASHINGTON**

The following are serving as Professors in this program:

- ALLEN, C. WESLEY, Ph.D.  
B.S.(M.E.), M.S.(M.E.), Ph.D., Purdue University. 1959
- BENTON, BRUCE M., B.S.(E.E.)  
B.S.(E.E.), University of Washington. 1958
- BERBERET, JOHN A., Ph.D.  
B.S., Cartoll College; M.A., University of Nebraska; Ph.D., University of Washington. 1958
- BUSH, SPENCER H., Ph.D.  
B.S.(Ch.E.), B.S.(Met.E.), M.S.(Met.E.), Ph.D., University of Michigan. 1954
- DEAN, ROBERT Y., Ph.D.  
B.A., Willamette University; M.S., Ph.D., California Institute of Technology. 1953
- DEHOLLANDER, WILLIAM R., Ph.D.  
A.S., Spokane Junior College; B.S.(Chem.), Ph.D., University of Washington. 1959
- FOSTER, GRAHAM D., Ph.D.  
B.A., Swarthmore College; Ph.D., Cornell University. 1957
- FRYAR, ROBERT M., Ph.D.  
B.S.(M.E.), University of Idaho; M.S.(M.E.), Ph.D., Purdue University. 1950
- GILBERT, RAYMOND D., M.B.A.  
B.S., Oregon State College; M.B.A., Stanford University. 1959
- HARVEY, ROLAND A., B.S.(E.E.)  
B.S.(E.E.), Oregon State College. 1954
- JAECH, JOHN, M.S.  
B.A., M.S., University of Washington. 1959
- LOCKE, GARDNER L., M.E.  
A.B., M.E., Stanford University. 1955

- MERCKX, KENNETH R., Ph.D.  
B.S.(M.E.), Northwestern; Ph.D., Stanford University. 1957
- NICHOLSON, WESLEY L., Ph.D.  
B.A., M.A., University of Oregon; Ph.D., University of Illinois. 1956
- NIELSEN, JULIAN M., Ph.D.  
B.S., University of Wyoming; M.S., Stanford University; Ph.D., University of Southern California. 1955
- PAUL, RONALD S., Ph.D.  
B.S., M.S., Ph.D., University of Oregon. 1953
- PESSL, HUBERT J., D.Sc.  
B.S., M.S., D.Sc., Austria College of Mining and Metallurgy. 1958
- PLATT, ALLISON M., M.S.  
B.S., Carnegie Institute of Technology; M.S., Agriculture and Mechanical College of Texas. 1954
- TRIPLETT, JOHN R., M.S.  
B.S., M.S., University of Kansas. 1954
- WIGGINS, ALVIN D., Ph.D.  
A.B., M.A., Ph.D., University of California. 1958
- WILSON, ARCHIE S., Ph.D.  
B.S., Iowa State College; S.M., Ph.D., University of Chicago. 1954
- WOOD, DONALD E., Ph.D.  
B.S., University of Nevada; M.S., Ph.D., Northwestern University. 1959

### COOPERATIVE GRADUATE STUDY WITH NATIONAL REACTOR TESTING STATION AT IDAHO FALLS, IDAHO

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B.S.(Ch.E.), M.S.(Ch.E.), Ph.D., University of Washington. 1955
- BURGUS, WARREN H., Ph.D.  
B.S., State University of Iowa; Ph.D., Washington University. 1958
- CLINE, JAMES E., Ph.D.  
B.S.E., M.S., Ph.D., University of Michigan. 1958
- FLUHARTY, REX G., Ph.D.  
B.S., University of Idaho; Ph.D., Massachusetts Institute of Technology. 1955
- GRIFFING, GEORGE W., Ph.D.  
B.S., A.B., Fort Hays Kansas State College; M.A., Kansas University; Ph.D., Queen's University at Belfast. 1957
- KIRN, FREDERICK S., M.A.  
B.A., North Central College; M.A., University of Illinois. 1958
- MC COLLOM, KENNETH A., M.S.(E.E.)  
B.S.(E.E.), Oklahoma State University; M.S.(E.E.), University of Illinois. 1957
- MORRIS, HERBERT A., M.A.  
B.A., Southeastern State College; M.A., University of Texas. 1958
- PETREE, FRANK L., S.M.(E.E.)  
S.B.(E.E.), S.M.(E.E.), Massachusetts Institute of Technology. 1955
- SCHMITTROTH, LOUIS A., Ph.D.  
B.S., M.S., Ph.D., Stanford University. 1958
- SCHROEDER, FRANK, JR., M.S.  
B.S., M.S., University of Illinois. 1956
- TINGEY, FRED H., Ph.D.  
B.S., Utah State University; M.S., Ph.D., University of Washington. 1954
- WILKES, CHARLES W., M.S.(M.E.)  
B.S.(M.E.), University of Utah; M.S.(M.E.), University of Southern California. 1958
- WOOD, RICHARD E., Ph.D.  
B.S., Ph.D., University of Utah. 1955

### RESEARCH FELLOWS

- BERGESON, FREDERICK W., B.S.(Ag.), *Research Fellow, Agricultural Economics*  
B.S.(Ag.), University of Idaho. 1958
- BOVEY, RODNEY W., B.S.(Ag.), *Research Fellow, Agronomy*  
B.S.(Ag.), University of Idaho. 1956
- BRAUN, RONALD W., B.S.(Ag.), *Research Fellow, Horticulture*  
B.S.(Ag.), University of Idaho. 1957
- CAMPBELL, CHARLES M., B.S., *Research Fellow, Animal Husbandry*  
B.S., Texas A and M. 1958

- CHADWICK, HOWARD W., B.S.(For.), *Research Fellow, Forestry*  
B.S.(For.), University of Idaho. 1958
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B.S., National Taiwan University, China. 1957
- DAVIS, JOHN, B.S., *Research Fellow, Range Management*  
B.S., University of Nebraska. 1957
- DUREN, EDWARD P., B.S., *Research Fellow, Animal Husbandry*  
B.S., Kansas State College. 1958
- EDWARDS, PHILIP O., B.S.(Ag.), *Research Fellow, Dairy Husbandry*  
B.S.(Ag.), University of Idaho. 1958
- EVANS, DENNIS R., B.S.(Ch.E.), *Research Fellow, Chemical Engineering*  
B.S.(Ch.E.), University of Idaho. 1958
- FRENCH, WILLIAM J., B.S., *Research Fellow, Plant Pathology*  
B.S., University of Miami. 1957
- GOTSCH, CARL H., B.S., *Research Fellow, Agricultural Economics*  
B.S., University of Idaho. 1958
- HARRIS, GARY M., B.S.(Ch.E.), *Research Fellow, Chemical Engineering*  
B.S.(Ch.E.), Seattle University. 1958
- HAUXWELL, GERALD D., B.S., *Research Fellow, Chemical Engineering*  
B.S., University of Colorado. 1958
- HELLE, JOE T., B.S.(For.), *Research Fellow, Range Management and Animal Husbandry*  
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- HOMAN, HUGH W., B.S., *Research Fellow, Entomology*  
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- LARSON, DONALD K., B.S.(Ag.), *Research Fellow, Agricultural Economics*  
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- LOE, EMIL M., B.S.(Ag.), *Research Fellow, Agricultural Economics*  
B.S.(Ag.), University of Idaho. 1958
- LYDUM, NEIL F., B.S.(Ag.), *Research Fellow, Plant Pathology*  
B.S.(Ag.), University of Idaho. 1958
- MORRISON, FRANK D., B.S., *Research Fellow, Horticulture*  
B.S., University of Idaho. 1952
- MCANINCH, JACK W., B.S.(An.Hus.), *Research Fellow, Animal Husbandry*  
B.S.(An.Hus.), Texas Technological College. 1958
- MCDONALD, WILLIAM K., B.S.(Ag.), *Research Fellow, Plant Pathology*  
B.S.(Ag.), University of Idaho. 1959
- NASSAR, RAJA FARID, B.Sc.(Ag.), *Research Fellow, Horticulture*  
B.Sc.(Ag.), American University of Beirut. 1958
- NATH, PYATI S., M.S.(E.E.), *Research Assistant, Electrical Engineering*  
B.E., Osmania University, India; M.S.(E.E.), University of Idaho. 1957
- PADEN, JOHN W., B.S., *Research Fellow, Plant Pathology*  
B.S., University of California. 1958
- ROBERTSON, ALAN C., B.S.(Ag.Engr.), *Research Fellow, Agricultural Engineering*  
B.S.(Ag.Engr.), University of Idaho. 1958
- SCHLATTERER, EDWARD F., B.S., *Research Fellow, Forestry*  
B.S., University of Michigan. 1958
- SHIVELY, JOHN A., B.S.(Met.E.), *Research Fellow, Idaho Bureau of Mines and Geology*  
B.S.(Met.E.), University of Idaho. 1958
- SUMMERS, LARRY V., B.S.(Ag.), *Cooperative Agent, A.M.S.*  
B.S.(Ag.), University of Idaho. 1958
- THILENIUS, JOHN F., B.S.(Range Mgt.), *Research Fellow, Forestry*  
B.S.(Range Mgt.), Oregon State College. 1958
- TIPPLE, NICOLAS E., B.S., *Research Fellow, Wood Utilization, Forestry*  
B.S., New York State College of Forestry. 1958
- WEBER, DARRELL J., B.S.(Ag.), *Research Fellow, Agricultural Chemistry*  
B.S.(Ag.), University of Idaho. 1958
- WEN PU RUNG, B.S.(Engr.), *Research Fellow, Mechanical Engineering*  
B.S.(Engr.), College of Ordnance, China. 1958
- WILLIAMS, THOMAS R., B.S.(Game Mgt.), *Research Fellow, Forestry*  
B.S.(Game Mgt.), Colorado State University. 1958
- WINDLE, LEAFORD C., B.A., *Research Fellow, Range Management*  
B.A., Fort Hays Kansas State College. 1958

# Staff†

## PRESIDENT'S OFFICE

- THEOPHILUS, DONALD RICHARD, Ph.D., *President*  
B.S., B.S., M.S., Ph.D., Iowa State College; LL.D., College of Idaho. 1927
- STEFFENS, WALTER H., Ph.D., *Executive Dean*  
B.S. (Pre-Med.), M.S., University of Idaho; Ph.D., Harvard University. 1929
- MACRAE, CHRISTIE CATHERINE, *Administrative Assistant*. 1956
- ALLAN, JOAN (Mrs. RUSSELL D.), B.A., *Secretary*  
B.A., State College of Washington. 1958

## COLLEGE OF AGRICULTURE

### Office Staff:

#### CAMPUS:

- BARRETT, MARILYN JOAN, *Secretary, Agricultural Economics*. 1958
- BLAIR, LEANNE C., *Secretary, Entomology*. 1955
- BOWEN, BEVERLY RAE, *Secretary, Dairy Husbandry*. 1958
- BREDE, THELMA L., *Secretary, Poultry Husbandry*. 1958
- BROOD, MARY ELLEN, *Secretary, Animal Husbandry*. 1927
- BROWN, PEGGY ANN, *Secretary, Agronomy*. 1957
- DAVIS, MARY LOUISE, *Clerk-Typist*
- DAY, EUNICE N., *Secretary, Agricultural Economics*. 1958
- GROSS, LAVINIA ADELINE, *Secretary, Agricultural Chemistry and Bacteriology*. 1926
- HARRINGTON, ELIZABETH (Mrs. ANDREW M.), *Administrative Assistant*. 1957
- KRANTZ, HELEN G., *Secretary, Dairy Husbandry*. 1957
- STARR, MARY LYNN, *Secretary, Horticulture*. 1958
- VAN HOUTEN, MARILYN S., *Secretary, Veterinary Science*. 1956
- WAYMIRE, JULIE ANNE, *Secretary, Administration and Agricultural Education*. 1959
- WELKER, JUANITA MARIE, *Secretary, Plant Pathology*. 1958
- WILSON, JOAN CLAIRE, *Secretary, Administration, Experiment Station*. 1958
- WURTH, JOY A., *Secretary, Agricultural Engineering*. 1958

#### FIELD:

- BECKER, ESTHER, *Secretary, Aberdeen Branch Station*. 1955
- GIESBRECHT, CAROLYN ANN, *Secretary, Aberdeen Branch Station*. 1956
- JOHNSON, MAE C., *Secretary and Bookkeeper, Parma Branch Station*. 1949
- LEHMAN, ALICE E., *Secretary and Bookkeeper, Aberdeen Branch Station*. 1952
- REMINGTON, HELEN S., *Secretary, Plant Pathology and Twin Falls Branch Station*. 1957
- SCHULTZ, ROSALIE J., *Clerk-Typist, Sheep Experiment Station, Dubois*. 1958
- TINDALL, CAROLYN JOY, *Clerk, Caldwell Branch Station*. 1956

### Farm Help:

#### CAMPUS:

- BOCKMIER, CHARLES F., *Helper, Poultry Husbandry, University Farm*. 1948
- BUGH, RALPH L., *Dairy Worker, Dairy Husbandry*. 1956
- COLE, E. A., *Farm Helper*. 1948
- COLE, MAC J., *Farm Foreman*. 1951
- ERICKSON, EMIL, *Gardner, Horticulture*. 1958
- HANDLIN, ROY L., *Foreman, University Poultry Farm*. 1930
- HOLMES, HERBERT N., *Swine Herdsman, Animal Husbandry*. 1951
- HYLTON, GOLDEN, *Tractor Operator*. 1934
- KASPER, JEROME M., *Assistant Swine Herdsman*. 1958
- KIMBERLING, LESTER E., *Assistant Beef Herdsman*. 1942
- KIMBERLING, PAUL M., *Assistant Dairy Herdsman*. 1952
- KIMBERLING, ROY C., *Farm Helper*. 1951

† Staff List compiled as of March 1, 1959.



- KOSSMAN, FAY F., *Shepherd*. 1949  
 LEHMAN, STANLEY K., *Field Superintendent, Agronomy*. 1955  
 NORMINGTON, DEWAYNE L., *Milker*. 1958  
 ROBISON, BELLE S., *Trucker and Feeder*. 1955  
 SCHULTZ, FRANK H., *Assistant Herdsman, Dairy Husbandry*. 1959  
 SPITLER, LOREN O., *Farm Serviceman, University Farm*. 1947

## FIELD:

- BELL, VILAS CAR, *Farm Foreman, Tetonia Branch Station*. 1949  
 BOYD, E. L., *Irrigator, Caldwell Branch Station*. 1942  
 CALDWELL, A. CEDRIC, *Farm Helper, Parma Branch Station*. 1953  
 FANESTOCK, JOE, *Farm Helper, Aberdeen Branch Station*. 1957  
 FISHER, JOHN H., *Herdsman, Caldwell Dairy Research*. 1958  
 FRAZIER, HOWARD T., *Irrigator, Aberdeen Branch Station*. 1957  
 HAGGARD, EARL, *Farm Foreman, Aberdeen Branch Station*. 1951  
 HEER, EDWIN F., *Farm Helper, Aberdeen Branch Station*. 1951  
 HOLMES, WILLARD F., *Irrigator, Aberdeen Branch Station*. 1952  
 JOHNSTON, CHARLES D., *Farm Foreman, Sandpoint Branch Station*. 1929  
 KNEEDY, JAMES E., *Farm Helper, Tetonia Branch Station*. 1951  
 McCLELLAN, DAVID A., *Farm Helper, Aberdeen Branch Station*. 1957  
 McGOWEN, JESSIE R., *Feeder, Caldwell Dairy Research*. 1958  
 McEWEN, ORLO C., *Farm Foreman, Twin Falls Branch Station*. 1954  
 MILLER, HENRY W., *Farm Helper, Aberdeen Branch Station*. 1952  
 NEWBOLD, CLINTON B., *Feeder, Caldwell Branch Station*. 1958  
 PERECZ, JOE, JR., *Farm Foreman, Parma Branch Station*. 1951  
 PICKEL, LESLIE E., *Foreman, Bean Disease Research, Twin Falls*. 1954  
 SNEED, PAUL, *Farm Helper, Aberdeen Branch Station*. 1958  
 STANGER, ABRAM S., *Irrigationist, Twin Falls Branch Station*. 1953  
 TUCKER, CLEO C., *Farm Laborer, Caldwell Branch Station*. 1958  
 WATKINS, GLEN H., *Feeder, Caldwell Branch Station*. 1952

## ALUMNI SECRETARY

- LYLE, JAMES M., JR., M.S.(Ed.), *Alumni Secretary*  
 B.S.(Pre-Med.), M.S.(Ed.), University of Idaho. 1946

## DEPARTMENT OF ATHLETICS

- GIBB, ROBERT S., A.B., *Director of Athletics*  
 A.B., Nebraska Wesleyan University. 1954  
 ANDERSON, WAYNE DELBERT, M.S.(Ed.), *Baseball Coach*  
 B.S.(Ed.), M.S.(Ed.), University of Idaho. 1956  
 BOYLE, F. J. (PACKKEY), *Trainer*. 1955  
 GLANDER, JOSEPH H., M.A., *Associate Professor of Physical Education and Track Coach*  
 B.S.(Ed.), Ohio University; M.A., Bowling Green University. 1952  
 HODGES, HARLAN CREWS, M.A., *Basketball Coach*  
 A.B., Southern Illinois University; M.A., University of Michigan. 1954  
 HUNTER, KENNETH M., M.A., *Athletic News Editor*  
 B.A., M.A., University of Idaho. 1947  
 JOHNSON, R. V., M.A., *Assistant Football Coach*  
 A.B., St. Mary's College; M.A., San Francisco State College. 1957  
 KEANE, B. T., *Equipment Supervisor*. 1955  
 KNECHT, EDWARD, M.S., *Assistant Football Coach*  
 A.B., Toledo University; M.S., University of Michigan. 1957  
 MECKEL, MARGARET JUNE (Mrs. BRIAN D.), *Secretary*. 1958  
 PARBERRY, CLEM H., M.Ed., *Assistant Professor and Director of Intramural Sports*  
 B.S., Pacific University; M.Ed., University of Idaho. 1953  
 STAHLEY, J. NEIL (SKIP), M.A., *Football Coach*  
 A.B., Pennsylvania State University; M.A., Columbia University. 1954  
 SWARTZ, DONALD CHARLES, A.B., *Assistant Football Coach*  
 A.B., Ohio State University. 1956  
 THOMAS, JOHN C., *Administrative Assistant*. 1956  
 YOUNG, FRANK, M.S., *Assistant Athletic Director, Personnel Officer, and Associate Professor of Physical Education*  
 B.S., Jamestown College; M.S., University of Oregon. 1947

## BUSINESS OFFICE

DICK, KENNETH A., M.B.A., C.P.A., *Comptroller, Business Manager, Bursar and Professor*  
B.S.(Bus.), M.S.(Bus.), University of Idaho; M.B.A., Stanford University. 1931

## General Office

- WATTS, JOSEPH W., B.S.(Bus.), *Deputy Bursar and Budget Officer*  
B.S.(Bus.), University of Idaho. 1940
- SLADE, H. EUGENE, B.S.(Bus.), *Administrative Accountant, Non-Budgeted Funds*  
B.S.(Bus.), University of Idaho. 1942
- WARNER, LARON C., *Purchasing Agent*. 1946
- BLOOMSTER, PATRICIA ANN (Mrs. DONALD), *Clerk*. 1958
- COOLIDGE, JERROLD OLIVER, B.S., *Assistant to Purchasing Agent*  
B.S., University of Idaho. 1954
- DAVIS, GLENN EUGENE, B.S.(Bus.), *Accountant*  
B.S.(Bus.), University of Idaho. 1948
- GLIDDEN, KATHLEEN MARIE (Mrs. SAMMY), *Clerk-Typist*. 1956
- HAYASHI, FUDEKO ELAINE (Mrs. YASVO), *Payroll Clerk*. 1957
- HORGAN, CHARLES LEONARD, B.S.(Bus.), *Accountant - Payroll*  
B.S.(Bus.), University of Idaho. 1954
- IKEDA, JOHN I., B.S.(Bus.), *Accountant*  
B.S.(Bus.), University of Idaho. 1948
- KAUFMAN, BETTY MARIE (Mrs. MICHAEL W.), *Bookkeeping Machine Operator*. 1957
- LANPHEAR, LOIS ELAINE (Mrs. CARLTON), *Clerk, Purchasing Office*. 1957
- LINDQUIST, MARIE JANE (Mrs. BERNARD D.), *Cashier*. 1956
- LOWE, GLENNA DEE (Mrs. JAMES A.), *Clerk*. 1956
- MACKLIN, LOIS MELTON (Mrs. HALL M.), *Clerk*. 1950
- NELSON, GEORGE W., B.S.(Ed.), *Assistant Accountant*  
B.S.(Ed.), University of Idaho. 1957
- PAYNE, KAREN LUELLA (Mrs. ROBERT L.), *Clerk*. 1958
- RICHARDSON, DOROTHY MIRANDA, M.A., *Voucher Clerk*  
B.A., M.A., University of Idaho. 1944
- RIDNER, MARILYN LEE (Mrs. DONALD B.), *Clerk*. 1957
- SCHROEDER, ELLEN B. (Mrs. OTTO W.), *Administrative Assistant*. 1952
- SCHWARTZ, SARAH CLAIRE (Mrs. KENNETH A.), *Bookkeeping Machine Operator*. 1955
- SKOG, MARIE ELIZABETH (Mrs. FRED), *Invoice Clerk*. 1943
- SPENCER, JUANITA JEAN (Mrs. DAVID W.), *Bookkeeping Machine Operator*. 1956
- TORGERSON, LESTER J., B.S.(Bus.), *Accountant*  
B.S.(Bus.), University of Idaho. 1947
- TURNBOW, MARGARET M. (Mrs. ROBERT M.), *Clerk-Typist*. 1955

## Statistical Service Center

- ROBERTS, WILLIAM STANLEY, B.Ed., *Statistical Center Supervisor*  
B.B.A.(Statistics), University of Minnesota; B.A.(Music Ed.), B.Ed., State College of Wash-  
ington. 1955
- BREWER, REVA E. (Mrs. DONALD A.), *Tab Equipment Operator*. 1958
- GARDNER, LEOLA RAE (Mrs. MAX A.), *Key Punch Operator*. 1958

## Residence Halls

- GREENE, ROBERT F., M.S.(Ed.), *Director of Dormitories*  
B.S., M.S.(Ed.), University of Idaho. 1931
- REED, RICHARD W., B.S.(Bus.), *Assistant Director of Dormitories*  
B.S.(Bus.), University of Idaho. 1952
- MORIN, BERNICE M., B.S.(H.Ec.), *Director of Food Services, Residence Halls*  
B.S.(H.Ec.), University of Montana; Dietetic Certification, Michael Reese Hospital, Chicago,  
Illinois. 1944
- BAILEY, FRANCES C., *Receptionist, Residence Halls*. 1953
- BAXTER, JOANN, *Dietitian's Assistant, Residence Halls* 1958
- BIELENBERG, FERN C., B.S., *Dietitian, Gault Hall*  
B.S., University of Idaho; Dietetic Certificate, Barnes Hospital, St. Louis, Missouri. 1951-  
1952; 1954
- BURGESS, JESSE HUGH, B.S.(Ed.), *Proctor, Chrisman Hall*  
B.S.(Ed.), University of Idaho. 1958
- BURGESS, SARA A., M.Ed., *Hostess, Chrisman Hall*  
B.S.(Ed.), M.Ed., University of Idaho. 1958
- CASEY, MORVA M., *Assistant Hostess, Hays Hall*. 1958

- CUMMERFORD, HARRIET, H., *Hostess, Forney Hall.* 1955
- HOLLEN, DORTHEA M., *Food Service Manager (Non-Professional), Hays Hall.* 1956
- HUNKER, HAROLD Y., M.A., *Proctor, Gault Hall*  
A.B., William Jewell College; M.A., Denver University. 1956
- HUNKER, NANCY, B.A., *Hostess, Gault Hall*  
B.A., William Jewell College. 1956
- HUNTLEY, ELFRIEDE M., B.S.(Ed.), *Hostess, Willis Sweet Hall*  
B.S.(Ed.), University of Idaho. 1958
- HUNTLEY, ROBERT C., B.A., *Proctor, Willis Sweet Hall*  
B.A., University of Idaho. 1958
- LOE, EMIL M., B.S.(Ag.), *Proctor, McConnell Hall*  
B.S.(Ag.), University of Idaho. 1958
- LOE, JOY C., *Hostess, McConnell Hall.* 1958
- MCBRIDE, ALICE, *Food Service Manager (Non-Professional), Lindley Hall.* 1951
- MACK, MELBA F., B.S.(H.Ec.), *Dietitian, Willis Sweet Hall*  
B.S.(H.Ec.), Idaho State College; Dietetic Certificate, Ancker Hospital, St. Paul, Minnesota.  
1958
- MARRS, FLORENCE C., *Hostess, French House.* 1957
- O'NEILL, DONNELLY E., B.S.(Ed.), *Assistant Proctor, Willis Sweet Hall*  
B.S.(Ed.), University of Idaho. 1958
- PALMER, MYRNA K., *Assistant Hostess, Forney Hall.* 1958
- POSTERICK, MARY B., B.A., *Hostess, Hays Hall*  
B.A., University of Idaho. 1952
- ROY, NORMA D., *Hostess, Upham Hall.* 1958
- ROY, WILLIAM F., *Proctor, Upham Hall.* 1958
- SHANE, RUTH J., B.S.(H.Ec.), *Hostess Lindley Hall*  
B.S.(H.Ec.), University of Idaho. 1957
- SHANE, WILLIAM H., *Proctor, Lindley Hall.* 1957
- SPACH, HENRIETTA S., B.A., *Hostess, Ethel Steele House*  
B.A., University of Idaho. 1957
- THILENIUS, CAROL A., B.S., *Hostess, Campus Club*  
B.S., Oregon State College. 1959
- THILENIUS, JOHN F., B.S., *Proctor, Campus Club*  
B.S., Oregon State College. 1959
- COE, JOHN EDWARD, *Janitor, Upham Hall.* 1957
- DAHL, *Janitor, Upham Hall.* 1955
- HEADRICK, FRANK, *Janitor, Lindley Hall.* 1955
- JACK, INA, *Janitress, French House.* 1945
- JOHNSON, HENRY, *Janitor, Chrisman Hall.* 1956
- KOPF, ALBERT, *Janitor, Gault Hall.* 1955
- KOSSMAN, CLIFFORD, *Janitor, Shoup Hall.* 1952
- MILLION, DESSIE, *Janitress, Forney Hall.* 1950
- NICHOLS, OTIS, *Janitor, Willis Sweet Hall.* 1951
- OGDEN, RAY, *Janitor, Hays Hall.* 1952
- OGDEN, SYLVIA, *Janitress, Hays Hall.* 1952
- PETERSON, GUST, W., *Janitor, McConnell Hall.* 1939
- ROACH, WALTER, *Janitor, Gault Hall.* 1946
- SUTTON, CHARLES LESTER, *Janitor, McConnell Hall.* 1957
- SWANSON, ELMO L., *Janitor, Willis Sweet Hall.* 1955
- VEST, HAROLD, *Maintenance Man, Residence Halls.* 1958

### Family Housing

- CORNISH, WARNER H., *Director of Family Housing Operations.* 1946

### Physical Plant

- GAGON, GEORGE, B.S.(C.E.), *University Engineer*  
B.S.(C.E.), University of Idaho. 1947
- PARKER, JAMES A. (TED), B.S.(C.E.), *Staff Engineer*  
B.S.(C.E.), University of Idaho. 1946
- KIMBERLING, MARVIN SHERWOOD, B.S.(Bus.), *Office Manager and Central Store Supervisor*  
B.S.(Bus.), University of Idaho. 1951
- ANDERSON, NELLIE EVELYN, *Janitress.* 1956
- BULLINGTON, GALE CEDRIC, *Janitor.* 1957
- BURGESS, DAVID LEE, *Janitor.* 1957
- BURNS, BENNIE F., JR., *Gardener.* 1953

- BURTON, ALFRED E., *Janitor*. 1956  
 COWDEN, LLOYD D., *Grounds Superintendent*. 1945  
 CROOKS, ORVILLE L., *Power Plant Operator*. 1946  
 CRENSHAW, ROBERT O., *Janitor*. 1956  
 DUMIN, AUGUST, *Janitor*. 1956  
 FLIEGER, CLARENCE E., *Janitor*. 1951  
 FLIEGER, VELMA K., *Janitress*. 1952  
 FULLMER, PATSIE A. (Mrs. C. R.), B.A., *Secretary*  
 B.A., Doane College. 1959  
 GRIFFIN, ALICE MARY, *Janitress*. 1951  
 GRIFFIN, EDWARD G., *Janitor*. 1942  
 GROVOM, EDNA M., *Janitress*. 1957  
 GROVOM, TED N., *Janitor*. 1956  
 GUNTHER, HERTA M., *Janitress*. 1943  
 HADDEN, GEORGE M., *Mail Clerk*. 1952-55: 1957  
 HANSON, LEONARD OLIE, *Janitor*. 1958  
 HENDRIX, FREDDIE IRVIN, *Building Foreman*. 1952  
 HEPPNER, ALFRED H., *Janitor*. 1955  
 HICKS, CHESTER RAY, *Janitor*. 1955  
 HICKS, ELWOOD B., *Janitor*. 1952  
 HOLLEN, ROY H., *Janitor*. 1946  
 HORNEY, MERRILL, *Carpenter Shop Foreman*. 1958  
 HORTON, AMANDA O., *Janitress*. 1946  
 HOWERTON, RAY J., *Janitor Supervisor*. 1957  
 JOHNSON, ESTILL, *Janitor*. 1954  
 KAYLER, ROY ADAMS, *Machine Shop Foreman*. 1936  
 KENNEDY, RALPH G., *Electrician Foreman*. 1920  
 KIMBERLING, RAYMOND CECIL, *Janitor*. 1957  
 KING, GLENN CORWIN, *Night Watchman*. 1952  
 KIRKWOOD, EDWARD R., *Power Plant Operator*. 1955  
 KROUS, SAMUEL ARTHUR, *Night Watchman*. 1949  
 LENKE, EARL HERALD, *Janitor*. 1958  
 LITTLE, NEVA E., *Janitress*. 1954  
 LYNCH, EMMA VIOLA, *Janitress*. 1944  
 MCBRIDE, RALPH G., *Chief Operator Power Plant*. 1951  
 MCMASTERS, EARL E., *Janitor*. 1944  
 MARSHALL, JAMES RAY, *Janitor*. 1951  
 MILLER, ORA CLEONE, *Janitor*. 1957  
 MILLER, GENEVA, *Janitress*. 1946  
 MILLER, GEORGE B., *Building Foreman*. 1944  
 MILLION, DAVID JACK, *Janitor*. 1951  
 MULLINS, CHARLES, *Janitor*. 1950  
 MULLINS, ROSETTA, *Janitress*. 1950  
 NEEL, FRANK, *Janitor*. 1957  
 OGDEN, WALLACE FRANCIS, *Janitor*. 1956  
 PARKINS, LOYAL E., *Construction Foreman*. 1952  
 PEDERSEN, CHRIS P., *Plumbing Foreman*. 1957  
 PENNELL, FRED M., *Traffic Officer*. 1946  
 PETERSON, GLENN R., *Paint Shop Foreman*. 1952  
 RATHBUN, EDITH W., *Janitress*. 1956  
 ROGERS, WALLACE WILSON, *Chief, Plant Protection*. 1957  
 SCHAFER, LEWIS P., *Janitor*. 1957  
 SHIRE, BETTY LOU, *Janitress*. 1957  
 SIMMONS, ARTHUR H., *Janitor*. 1956  
 SKOG, FRED, *Head Janitor, Emeritus*. 1909  
 SODORFF, MELVIN A., *Building Foreman*. 1953  
 SORENSEN, RICHARD J., *Janitor*. 1956  
 SNELL, LYNFORD K., JR., B.A.(Arch.), *Construction Inspector*  
 B.A.(Arch.), State College of Washington. 1953  
 STEPHENSON, CLARENCE W., *Janitor*. 1958  
 STEPHENSON, GLENN A., *Janitor*. 1956  
 SUMMERTON, JAMES SAMUEL, *Janitor*. 1957  
 SWANSON, ANDREW E., *Janitor*. 1956

SWANSON, A. LEONA, *Janitress*. 1952  
 TODD, RALPH M., *Maintenanceman*. 1954  
 VANSCHLAACK, CLAIR D., *Janitor*. 1950  
 WHEATON, CHARLES O., *Power Plant Mechanic and Operator*. 1954  
 WEINMANN, CECIL A., *Building Foreman—Library*. 1954  
 WILSON, MARILYN MARIE, *Head PBX Operator*. 1958

### General Storeroom

BRADEN, RAYMOND L., *General Storeroom Manager*. 1956  
 CORNISH, HILDA MAUD, *Clerk*. 1948  
 FREEHAFFER, WILLIAM E., *Office Clerk*. 1953  
 LITTLE, IRA, *Stock Clerk*. 1947  
 MICKEY, JAMES MARTIN, *Shipping Clerk*. 1956  
 MORISSET, VIVIAN DORIS, *Posting Clerk*. 1959  
 RENFREW, PEARL ELIZABETH, *Stock Ledger Clerk*. 1958

### Student Union

MIX, GALE L., LL.B., *Manager*  
 LL.B., University of Idaho. 1939  
 BOWLBY, JAMES W., M.S. *Assistant Manager*  
 B.S., University of Washington; M.S., University of Idaho. 1946  
 BAKER, ANDREW T., *Building Foreman*. 1952  
 BIPPES, MARIE, *Cafe Manager*. 1955  
 CARVER, DEYON, *Fountain Manager*. 1955  
 DALBERG, HJALMER E., *Janitor*. 1950  
 HARDT, CLARENCE E., *Janitor*. 1958  
 LUNDQUIST, ALICE MABEL, *Cook*. 1950  
 SANDSTROM, HILMA O., *Cook*. 1942  
 STRONG, ARTHUR R., *Janitor*. 1956  
 STROHM, ALVA GEORGE, *Janitor*. 1957

### University Student Book Store

KERR, CHESTER R., *Manager*. 1942  
 KERR, MILDRED H. (Mrs. CHESTER R.), *Textbook Manager and Secretary*. 1953  
 LONG, RICHARD S., B.S.(Bus.), *Assistant Manager*  
 B.B.(Bus.), University of Idaho. 1953-56; 1958

## COLLEGE OF BUSINESS ADMINISTRATION

THOMAS, HELEN VIVIAN (Mrs. J. C.), *Secretary*. 1952

## COLLEGE OF EDUCATION

BURTON, HORACE G., *Equipment Manager, Department of Physical Education*. 1958  
 GOTT, CAROLYN B. (Mrs. RICHARD), *Secretary, Department of Education*. 1956  
 HAYNES, DIANE ANNETTE, *Secretary, Summer School*. 1958  
 NEAL, CATHERINE JANE, *Secretary, Department of Physical Education*. 1955  
 SCHUMACHER, MONA (Mrs. DALE), *Secretary, Department of Physical Education (Women)*. 1957  
 WALKER, MARGARET ANN, *Administrative Assistant*. 1945

## EDUCATIONAL FIELD SERVICE

HALE, HELEN MOUNT, *Assistant to Director, Placement Service*. 1949  
 LARSEN, JANICE CUTTING, *Secretary, Non-Resident Instruction*. 1958  
 POWELL, MARY ANN BROWN, *Secretary, Non-Resident Instruction*. 1957  
 WERRY, MARILYN RAMEY, *Secretary, Non-Resident Instruction*. 1958

## COLLEGE OF ENGINEERING

DHAMRAIT, JAGAT SINGH, B.S.(C.E.), *Assistant Testing Technician*  
 B.S.(C.E.), University of Idaho. 1957  
 DODDS, GLORIA F., *Secretary*. 1956

- FRASER, JOYCE JENNIE, *Secretary*. 1956  
 KOHL, MARY ANN, *Secretary, Department of Civil Engineering*. 1958  
 NESBIT, JAMES SMITH, *Shop Mechanician*. 1955  
 STEWART, MARGARET (Mrs. H. M.), *Secretary to Dean*. 1954  
 WURTH, JOY ANNETTE, *Secretary, Agricultural Engineering*. 1958

### COLLEGE OF FORESTRY

- BROCK, LINDA M., *Secretary Extension and Clarke-McNary Nursery*. 1958  
 SCHOEFFLER, FRANKLIN ANTHONY, B.S., *Assistant Nurseryman*  
 B.S., University of Idaho. 1954  
 SHIVELY, EDITH C., *Secretary*. 1955

### GRADUATE SCHOOL

- DORENDORF, SHIRLEY (Mrs. ROBERT), B.S.(Bus.), *Secretary, Graduate School and Research Council*  
 B.S.(Bus.), University of Idaho. 1958

### INFORMATION AND PUBLICATIONS

- HODSON, JANET R., B.F.A., *Clerk-Typist*  
 B.F.A., University of Illinois. 1958  
 NESBIT, JENNIE LOUISE (Mrs. JAMES), *Head of Stenographic Bureau*. 1952  
 WALKER, DONALD E., B.A., *Staff Editor*  
 B.A., Seattle University. 1953

### COLLEGE OF LAW

- CHADSEY, MARLYS GENTRY (Mrs. H. T.), *Secretary*. 1949  
 FOLZ, CAROLYN ATKINS (Mrs. W. E.), M.A., *Law Librarian*  
 A.B., Evansville College; B.S.(L.S.), University of Illinois; M.A., University of Idaho. 1945

### COLLEGE OF LETTERS AND SCIENCE

- BOBBITT, MARGARET LOUISE, *Secretary, Department of Communications*. 1958  
 HISEL, KENNETH FRANK, *Storekeeper, Physical Science*. 1949  
 HUDSON, ELIZABETH R. (Mrs. CHARLES F.), B.A., *Secretary, Humanities*  
 B.A., University of Idaho. 1952  
 JOHNS, PHYLLIS ANN, *Secretary, Department of Music*. 1958  
 KERN, JOAN L., *Secretary, Department of Art and Architecture*. 1958  
 MICKLE, NOLA WEBB (Mrs. DAVID G.), *Secretary, Department of Social Sciences*. 1957  
 OPPE, FRED A JANE, *Secretary, Department of Physical Sciences*. 1951  
 PAYNE, NANCY C. SHELTON, *Secretary, Department of Home Economics*. 1955  
 SPOUSE, GLENN E., *Technical Assistant, Photography*. 1951  
 THORP, PATRICIA M., *Administrative Assistant and Secretary, College of Letters and Science*.  
 1957  
 TREGO, BESSIE H., *Secretary, Audio-Visual Center*. 1958  
 WINTON, MARILYN B., *Secretary, National Science Foundation Summer Institute*. 1959

### LIBRARY

- ZIMMERMAN, LEE FRANKLIN, M.A., *Librarian*  
 B.A., University of Wisconsin; B.S.(L.S.), M.A., University of Illinois. 1948  
 ATKINSON, NANCY L., A.B.L.S., *Head Catalog Librarian*  
 A.B., A.B.L.S., University of Michigan. 1943  
 BECK, RICHARD JOSEPH, M.A., *Science Technology Librarian*  
 B.A., St. Thomas College; B.S.(L.S.), M.A., University of Minnesota. 1957  
 BENNETT, HAZEL R., *Book Processor*. 1952  
 BURNS, ROBERT WHITEHALL, JR., M.A., *Loan Librarian*  
 B.A., University of Colorado; M.A., University of Denver. 1957  
 DICK, MARJORIE PEARL, M.A.(L.S.), *Assistant Social Science Librarian*  
 B.S., M.A.(L.S.), University of Wisconsin. 1957  
 GLENS, RONALD V., M.S.(L.S.), *General Librarian*  
 B.S., Kansas State College; M.S.(L.S.), Kansas State Teachers College. 1957  
 JOHNSON, SALLY J., (Mrs. NORMAN L.), *Loan Assistant*. 1956

- KELLOGG, GEORGE ALEXIS, M.A., *Humanities Librarian*  
A.B., B.S.(L.S.), Columbia University; M.A., Yale University. 1957
- LANGER, FRANCIS A., M.A.(L.S.), *Assistant Librarian, Readers' Service*  
A.B., M.A., University of Miami; M.A.(L.S.), Florida State University. 1958
- LIAO, SAM, M.A., *Catalog Librarian*  
B.A., M.A., University of Chen-Chi, China; B.A.(L.S.), University of Washington; B.S.,  
University of Chicago. 1954-56; 1958
- PEDERSEN, ALPHA M., (Mrs. CHRIS), *Serials Assistant*. 1953
- PUNG, PATRICIA MARIE, M.A.(L.S.), *Catalog Librarian*  
B.A., College of St. Benedict; M.A.(L.S.), College of St. Catherine. 1956
- ROYCE, ROBERT HOWARD, M.A., *Acquisitions Librarian*  
B.A., Central Washington College of Education; M.A., University of Denver. 1957
- SANDEL, NOREEN MARY (Mrs. ANDREW), *Secretary*. 1955
- SEVERSON, INA, *Humanities Assistant*. 1957
- SHAFFER, GRACE R. (Mrs. N. A.), *Catalog Assistant*. 1956
- \*SLADE, LOUISE L. (Mrs. E. L.), B.S.(L.S.), *Serials Librarian*  
B.A., B.S.(L.S.), University of Denver. 1944
- SLAMA, MICHAEL M., Dr. Jur., *Assistant Librarian, Technical Services*  
M.A., University of Denver; Dr. Jur., Charles University, Prague. 1954
- TOWN, FONTELLA O., *Science Technology Assistant*. 1958
- TRACY, DALE C., *Social Science Assistant*. 1952
- WEBBERT, CHARLES A., M.S.(L.S.), *Social Science Librarian*  
B.A., University of Washington; B.S.(L.S.), George Peabody College; M.S.(L.S.), University  
of Illinois. 1948
- WILLIAMS, EDITH ANNA, *Acquisitions Assistant*. 1952

## COLLEGE OF MINES

- HANSON, LENORE S., *Secretary*. 1956
- MCDONALD, SUE A., *Secretary, Geology and Geography*. 1958

## REGISTRAR'S OFFICE

- DUSAULT, DONALD D., M.S., *Registrar*  
B.S., M.S., University of Idaho. 1923
- O'NEILL, FREDERICK L., M.Ed., *Assistant Registrar*  
B.S.(Commerce), Kansas State Teachers College; M.Ed., University of Idaho. 1954
- ARCHBOLD, SHIRLEY JOAN, (Mrs. V. T.), *Clerk-Typist*. 1957
- BAUER, E. MARGARETA (Mrs. R. E.), *Assistant Recorder*. 1950
- BOWLBY, VIRGINIA M., (Mrs. BERT W.), *Statistician*. 1956
- ERICKSON, HAZEL MARIE (Mrs. L. C.), *Assistant Recorder*. 1956
- FRISCH, MARLENE DELORES, *Transcript Clerk*. 1958
- HANSEN, ERMA O., *Veterans Clerk*. 1945
- MCGOUGH, FLORENCE W. (Mrs. JOHN), *Recorder*. 1944
- OLSON, JOYCE ANN, *Admission Clerk*. 1957
- RICHMOND, JOYCE B., *Secretary*. 1958
- STOUGH, RUTH SCHWARZ (Mrs. HOWARD B.), M.S., *Chief Clerk*  
A.B., University of Kansas; M.S., University of Idaho. 1943

## RESERVE OFFICERS TRAINING CORPS

## AIR SCIENCE

- QUINTIERI, LEA D., *Secretary*. 1958

## ARMY SCIENCE

- BEACHELL, WANDA LUCILLE (Mrs. W. A.), *Administrative Assistant*. 1956
- JAMES, CHARLES F., *Supply Sgt*. 1957
- STALCUP, LORRAINE E., *Secretary*. 1958

## NAVAL SCIENCE

- DUMAS, PAT (Mrs. P. C.), B.S., *Secretary*  
B.S., Oregon State College. 1957
- JAMES, EMMA, *Secretary*. 1958

\* On Leave of Absence without pay, July 1, 1959 to December 31, 1959.

## STUDENT AFFAIRS AND SERVICES

- DECKER, CHARLES OTIS, M.A., *Director of Student Affairs*  
B.A., Antioch College; M.A., Northwestern University. 1946
- HUDSON, CHARLES F., *Superintendent of Off-campus Housing.* 1953
- NEELY, MARJORIE MILLER, M.S., *Associate Director of Student Affairs (Women)*  
B.A.(Ed.), Eastern Washington College; M.S., Ohio University. 1957
- WICKS, GUY P., M.S.(Ed.), *Associate Director of Student Affairs (Men) and Field Agent*  
B.S.(Ed.), M.S.(Ed.), University of Idaho. 1941
- LAINE, SHIRLEY ANN, *Secretary.* 1958
- SHAVER, YVONNE CLARE, *Secretary.* 1958

## Associated Students of the University of Idaho

- MIX, GALE L., LL.B., *General Manager and Student Union Manager*  
B.S., LL.B., University of Idaho. 1939
- MACPHEE, DOROTHY M. (Mrs. CRAIG), *Secretary and Cashier.* 1957
- SNYDER, PATRICIA D. (Mrs. RICHARD L.), B.S., *Assistant Manager of Golf Course*  
B.S., University of Idaho. 1952
- SNYDER, RICHARD L., B.S., *Manager of Golf Course*  
B.S., University of Idaho. 1952
- WEEKS, DIXIE VERLENE, B.A.(Bus.), *Advertising Manager and Cashier*  
B.A.(Bus.), University of Idaho. 1957

## Counseling Center

- BOND, CHARLES HENRY, M.S.(Ed.), *Chief Student Counselor*  
B.S.(Ed.), University of Washington; M.S.(Ed.), University of Idaho. 1949
- KES, DONALD JOSEPH, M.S.(Ed.), *Student Counselor*  
B.S.(Ed.), M.S.(Ed.), University of Idaho. 1954
- ANDERSON, BETTY JEAN, *Secretary.* 1956

## Infirmary and Health Service

- FLEMING, JUSTUS MILLARD, M.D., *University Physician and Director, Student Health Service*  
B.S., Dartmouth College; M.D., University of Michigan; Fellow International College of Surgeons. 1955
- BROGAN, HORACE EDWARD, M.D., *Associate University Physician*  
B.S., Carroll College; M.D., St. Louis University. 1958
- BERGMAN, ESTHER S., *Cook.* 1955
- BOAG, VIOLET LUCILE, R.N., *Nurse*  
R.N., St. Lukes Hospital, Spokane, Washington. 1953
- BULLINGTON, JEWEL E., *Nurse.* 1956
- HILL, GEORGIA, R.N., *Nursing Supervisor*  
R.N., Toronto General Hospital, Toronto, Ontario, Canada. 1958
- JOHNSON, ANNA M., R.N., *Head Nurse*  
R.N., Deaconess Hospital, Spokane, Washington. 1935
- JOHNSON, VIRGINIA LEE, R.N., *Nurse*  
B.A., University of Idaho; R.N., St. Lukes Hospital, Spokane, Washington. 1946
- LOVELADY, JOHN ARTHUR, *Janitor.* 1958
- MECKEL, JANIS A., *Secretary.* 1957
- MILLER, CAROL LOREE, B.S., *Medical Technician*  
B.S., University of Idaho. 1958
- OSBERMEYER, ELIZABETH A., R.N., *Nurse*  
R.N., St. Lukes Hospital, Boise, Idaho. 1957
- OWENS, GUY E., M.D., *Associate University Physician, Emeritus*  
A.B., M.D., Kansas University. 1949
- TRESNIT, HELEN, *Maid.* 1955



## Research and Extension

### AGRICULTURAL CONSULTING COUNCIL

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Idaho Horticultural Society  
Emmett

W. G. HULL  
Idaho Poultry Industry Federation  
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Idaho Cattlemen's Association  
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Idaho Crop Improvement Association  
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Idaho Farm Bureau Federation  
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W. E. ADAMS  
Idaho State Grange  
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C. M. CARLSON  
Idaho Dairymen's Association  
Caldwell

ANDREW LITTLE  
Idaho Wool Growers' Association  
Emmett

JEROME EVANS  
National Farmer's Union  
Boise

### AGRICULTURAL EXPERIMENT STATION

NOTE—Since most members of the Agricultural Experiment Station also teach in the College of Agriculture and are listed in the general faculty, their names are not repeated here. The following list, therefore, represents Experiment Station members wholly in administration or research.

KRAUS, JAMES E., Ph.D., *Dean of the College of Agriculture, Director of the Agricultural Experiment Station, and Director of the Agricultural Extension Service*  
B.S., Colorado State University; M.S., University of Wisconsin; Ph.D., Cornell University.  
1941

ENSGN, RONALD D., Ph.D., *Associate Director of the Agricultural Experiment Station*  
B.S., Northwest Missouri State; M.S., Colorado State University; Ph.D., Cornell University.  
1952

BRING, SHIRLEY V., M.S., *Assistant Home Economist*  
B.S., M.S., Michigan State University. 1952

BUER, LAWRENCE OLIVER, B.S., *Technician, Agricultural Chemistry*  
B.S., North Dakota Agricultural College. 1958

CHUGG, JACK CLAUDE, B.S., *Technician, Soils and Agricultural Chemistry*  
B.S., University of Idaho. 1958

FRAZIER, GEORGE D., B.S., *Assistant Agricultural Economist, Jr., and Assistant Forest Economist, Jr.*  
B.S.(For.), University of Idaho. 1957

GEPHART, FLOYD C., B.S., *Herdsmen and Assistant Dairy Husbandman, Jr., Dairy Husbandry*  
B.S., University of Idaho. 1958

KEITH, RICHARD W., B.S., *Technician, Agricultural Chemistry and Animal Husbandman*  
B.S., Oregon State College. 1956

HALVERSON, MARIE M., *Lab Assistant, Agricultural Chemistry.* 1957

HINMAN, NORMAN HOWARD, B.S., *Technician, Agricultural Chemistry*  
B.S., California State Polytechnic College. 1957

LINDEBERG, CARL H., Ph.D., *Assistant Agricultural Economist*  
B.S., Veterinary and Agricultural College, Copenhagen, Denmark; M.S., Utah State University; Ph.D., Oregon State College. 1959

LUMIJARVI, DONALD H., B.S., *Technician, Poultry Husbandry*  
B.S., Oregon State College. 1958

MCMASTER, CALEN M., B.S.(Ag.E.), *Assistant Irrigationist*  
B.S.(Ag.E.), University of Idaho. 1955

MODEN, WALTER L., JR., B.S., *Assistant Agricultural Engineering Technologist, Jr.*  
B.S., Kansas State College. 1957

MUNETA, PAUL, Ph.D., *Assistant Agricultural Chemist*  
B.S., Montana State College; Ph.D., Cornell University. 1959

PETERSON, CLARENCE J., JR., B.S., *Technician, Plant Pathology*  
B.S., University of Idaho. 1958

RATHBUN, EVA ADELINE, *Lab Assistant in Bacteriology.* 1958

RICKARD, CECELIA A., B.S., *Assistant Home Economist, Jr.*  
B.S., Montana State College. 1955

SAUTER, ERWIN A., M.S., *Assistant Poultry Husbandman*  
B.S., M.S., State College of Washington. 1956

- SCHAEFFER, RALPH J., B.S., *Technician, Agronomy*  
B.S., University of Idaho. 1957
- SLYTER, STANLEY E., B.S., *Beef Cattle Herdsman and Assistant Animal Husbandman, Jr.*  
B.S., Kansas State College. 1956
- SMITH, HOWARD W., Ph.D., *Assistant Entomologist*  
B.S., M.S., University of New Hampshire; Ph.D., Ohio State University. 1954
- STAIB, CHARLES R., B.S., *Technician, Agricultural Chemistry*  
B.S., State College of Washington. 1956
- TAKAYAMA, KUNI K., B.S., *Technician, Agricultural Chemistry*  
B.S., Oregon State College. 1958
- THILENIUS, CAROL A., B.S., *Technician, Home Economics Research*  
B.S., Oregon State College. 1957
- TYLER, CARROL L., M.S., *Assistant Irrigationist (Rupert, Idaho)*  
B.S., M.S., University of Idaho. 1950-51: 1955-57: 1957
- WORKS, DOSSIE W., B.S., *Assistant Agricultural Engineer*  
B.S., Oregon State College. 1956
- WYER, GALE D., B.A., *Technician, Agricultural Chemistry*  
B.A., Eastern Washington College. 1957
- ZAEHRINGER, MARY V., Ph.D., *Home Economist and Head of Department of Home Economic Research*  
B.S., Temple University; M.S., Ph.D., Cornell University. 1953

### Representatives of Cooperating Agencies:

- BIENZ, DARREL R., Ph.D., *Assistant Horticulturist (Aberdeen)*  
B.S., University of Idaho; Ph.D., Cornell University. 1954
- BLACKWELL, ROBERT L., Ph.D., *Director of U. S. Sheep Experiment Station, Dubois, and Animal Husbandman, U.S.D.A.*  
B.S., New Mexico State University; M.S., Oregon State College; Ph.D., Cornell University. 1959
- BLOOMSBURG, GEORGE L., M.S.(Ag.E.), *Assistant Agricultural Engineering Technologist, Jr.*  
B.S.(Ag.E.), M.S.(Ag.E.), University of Idaho. 1957
- CRAWFORD, CLAY E., B.S., *District Agent, Bureau of Sport Fisheries and Wildlife, Department of the Interior*  
B.S., Utah State University. 1959
- DOUGLAS, DONALD S., B.S., *Plant Materials Technician, U.S.D.A., Soils Conservation Service (Aberdeen)*  
B.S., State College of Washington. 1935
- DOUGLASS, JOHN F., Ph.D., *State Soil Scientist, U.S.C.A., Soil Conservation Service, Boise*  
B.S., M.S., Oklahoma A and M; Ph.D., Oregon State College.
- ERCANBRACK, STERLING KEITH, Ph.D., *Animal Geneticist, U.S.D.A.-A.R.S., U.S. Sheep Experiment Station*  
A.B., Brigham Young University; M.S., Utah State University; Ph.D., Iowa State College. 1957
- ESMAY, JAMES L., M.S., *Assistant Agricultural Economist, Jr., A.R.S. Cooperative Agent*  
B.S., M.S., Montana State College. 1958
- EVANS, KEITH E., B.S., *Supervisor of Plant Pest Control Inspector, U.S.D.A., A.R.S., Twin Falls*  
B.S., University of Idaho. 1938
- FITZGERALD, PAUL J., Ph.D., *Agronomist, U.S.D.A., A.R.S., Aberdeen*  
B.S., University of Tennessee; M.S., Ph.D., Purdue University. 1954
- GIBSON, KENNETH E., M.S., *Research Entomologist, U.S.D.A., Twin Falls*  
B.S., Whitman College; M.S., Washington State College. 1927
- HAAS, ROBERT H., M.S., *Research Agronomist, U.S.D.A., A.R.S. Crops Research*  
B.S., Oklahoma A and M; M.S., University of Nebraska. 1958
- HARRIS, HAROLD L., B.S.(For.), *Plant Materials Specialist and P.M.C. Manager, U.S.D.A., S.C.S., Aberdeen*  
B.S.(For.), University of Idaho. 1943
- HULET, CLARENCE V., Ph.D., *Animal Geneticist, U.S.D.A., A.R.S., U.S. Sheep Experiment Station, Dubois*  
B.S., Brigham Young University; M.S., Ph.D., University of Wisconsin. 1957
- HUMPHREY, R. DEAN, M.S., *Animal Husbandman*  
B.S., Panhandle A and M College; M.S., Oklahoma State University. 1957
- LAAKONEN, WILLIAM B., *Technician, Agricultural Engineering.* 1958
- MCCOLLUM, GILBERT D., Ph.D., *Geneticist, U.S.D.A. Crops Research Division, Agricultural Research Service, Parma*  
B.S., M.S., State College of Washington, Ph.D.(Genetics), University of California. 1958
- MASSESE, TRUMAN W., M.S., *Soil Scientist, Tetonia Experiment Station*  
B.S., M.S., Oregon State College. 1958
- MURPHY, ALBERT M., M.S., *Agronomist, Crops Research (Sugar Plant), Twin Falls*  
B.S., University of Idaho; M.S., University of Wisconsin. 1928
- NEFF, EARL L., B.Sc.(C.E.), *Associate Agricultural Engineering Technologist*  
B.Sc.(C.E.), University of Nebraska. 1958

- PEAY, WALTER E., M.S., *Entomologist, U.S.D.A. Twin Falls*  
B.A., University of Utah; M.S., Utah State University. 1930
- PETR, FRANK C., Ph.D., *Associate Agronomist, U.S.D.A., Aberdeen*  
B.S., Montana State College; Ph.D., Iowa State College. 1954
- PRICE, DONALD A., Ph.D. (Genetics), *Animal Husbandman, U.S.D.A., A.R.S., U.S. Sheep Experiment Station, Dubois*  
B.S.(Agr.), Kansas State College; M.S.(Agr.), Colorado State University; Ph.D.(Genetics), Oregon State College. 1957
- STEVENS, HARLAND, B.S., *Senior Agronomist, U.S.D.A., Aberdeen*  
B.S., Kansas State College. 1931
- WILSON, LOWELL O., B.S.(An.Husb.), *Wool Technologist, A.R.S., U.S.D.A., U.S. Sheep Experiment Station, Dubois*  
B.S.(An.Husb.), University of Idaho. 1943
- WILSON, V. E., Ph.D., *Pathologist, U.S.D.A., Twin Falls*  
B.S., M.S., Colorado State University; Ph.D., Iowa State College. 1952
- VALCARCE, ARLAND C., M.S., *Entomologist, U.S.D.A., Twin Falls*  
B.S., M.S., University of Utah. 1952

### Branch Stations

#### Aberdeen—

- BISHOP, GUY W., Ph.D., *Assistant Entomologist*  
B.S., M.S., Ph.D., Oregon State College. 1957
- DALLIMORE, CLARENCE E., M.S., *Assistant Plant Pathologist*  
B.S., Utah State Agriculture College; M.S., University of Nebraska. 1955
- GUTHRIE, JAMES W., Ph.D., *Assistant Plant Pathologist*  
B.S., M.S., Utah State University; Ph.D., University of Wisconsin. 1952
- IRITANI, WILLY M., Ph.D., *Assistant Horticulturist*  
B.S., University of Minnesota; M.S., University of Idaho; Ph.D., University of Illinois. 1958
- KOLAR, JOHN J., Ph.D., *Assistant Agronomist*  
B.S., M.S., Montana State College; Ph.D., Iowa State College. 1956
- MCMASTER, GALEN M., B.S.(Ag.E.), *Assistant Irrigationist*  
B.S.(Ag.E.), University of Idaho. 1955
- OWENS, EDWARD W., Ph.D., *Superintendent*  
B.S., M.S., University of Idaho; Ph.D., Cornell University. 1955
- SPARKS, WALTER C., M.S., *Horticulturist*  
B.S., M.S., Colorado State University. 1947
- WALKER, JAMES G., M.S.(Agr.), *Assistant Agronomist, Jr.*  
B.S.(Agr.), M.S.(Agr.), University of Idaho. 1958

#### Caldwell—

- DAHMEN, JEROME J., M.S., *Superintendent*  
B.S., University of Idaho; M.S., Oregon State College. 1947
- FRANK, FLOYD W., DVM, *Associate Veterinarian*  
B.S., DVM, Washington State College. 1955
- MIENERSHAGEN, WILLIAM A., B.S., *Technician, Veterinary Science*  
B.S., University of Missouri. 1957
- THACKER, DAVID L., M.S.(Ag.), *Assistant Dairy Husbandman, Jr.*  
B.S.(Ag.), University of Idaho; M.S.(Ag.), Pennsylvania State University. 1954

#### Dubois—

- FREDERIKSEN, KENNETH R., B.S., *Assistant Animal Husbandman, Sheep Experiment Station*  
B.S.(Agr.), University of Idaho. 1951

#### Parma—

- FOLEY, RICHARD FRANCIS, Ph.D., *Assistant Horticulturist*  
B.S., M.S., University of New Hampshire; Ph.D., Cornell University. 1957
- FRANKLIN, DELANCE F., M.S.(Agr.), *Superintendent*  
B.S.(Agr.), M.S.(Agr.), University of Idaho. 1942
- KOCHAN, WALTER J., Ph.D., *Assistant Horticulturist*  
B.S., M.S., Utah State Agricultural College; Ph.D., Rutgers University. 1955
- ROMANKO, RICHARD R., Ph.D., *Assistant Plant Pathologist*  
B.S., University of New Hampshire; M.S., University of Delaware; Ph.D., Louisiana State University. 1957
- SCOTT, DONALD R., M.S., *Assistant Entomologist*  
B.S., M.S., University of Nebraska. 1956

- SIMPSON, WILLIAM R., M.S.(Agr.), *Assistant Plant Pathologist*  
B.S.(Agr.), M.S.(Agr.), University of Idaho. 1951
- WATERS, NORMAN D., Ph.D., *Assistant Entomologist*  
A.A., Sacramento College; B.S., Ph.D., University of California. 1957

## Sandpoint—

- BRACKNEY, CHARLES T., M.S., *Superintendent*  
B.S., M.S., Kansas State College. 1949

## Tetonia—

- AMES, GERALD DEAN, M.S.(Agr.), *Assistant Agronomist, Jr.*  
B.S.(Agr.), M.S.(Agr.), University of Idaho. 1955
- McKAY, HUGH C., M.S., *Superintendent*  
B.S., M.S., University of Idaho. 1951

## Twin Falls—

- DEAN, LESLIE L., Ph.D., *Assistant Plant Pathologist*  
B.S.(Agr.), M.S.(Agr.), University of Idaho; Ph.D., Purdue University. 1942
- LEBARON, MARSHALL J., M.S., *Superintendent*  
B.S., M.S., University of Idaho. 1947
- THORNTON, ROBERT E., M.S.(Agr.), *Assistant Plant Pathologist, Jr.*  
B.S.(Agr.), M.S.(Agr.), University of Idaho. 1957
- TORRELL, PAUL JAMES, M.S.(Agr.), *Assistant in Agronomy*  
B.S.(Agr.), M.S.(Agr.), University of Idaho. 1957

## ENGINEERING EXPERIMENT STATION

- JANSSEN, ALLEN S., M.S.(C.E.), P.E., *Professor of Civil Engineering, Dean of the College of Engineering and Director of the Engineering Experiment Station*  
B.Arch., B.S.(C.E.), M.S.(C.E.), University of Idaho. 1931
- WARNICK, CALVIN C., M.S.(C.E.), P.E., *Research Associate Professor of Civil Engineering and Associate Director of Engineering Experiment Station*  
B.S.(C.E.), Utah State Agricultural College; M.S.(C.E.), University of Wisconsin. 1947
- MURPHY, IRMA JEAN, *Secretary*. 1957

FOREST, WILDLIFE AND RANGE EXPERIMENT STATION AND  
IDAHO COOPERATIVE WILDLIFE RESEARCH UNIT

- WOHLETZ, ERNEST W., M.S., *Dean of College of Forestry and Director of Forest, Wildlife and Range Experiment Station*  
B.S., M.S., University of California. 1937
- CLARK, EDWIN C., Ph.D., *Assistant Professor, Forest, Wildlife and Range Experiment Station*  
B.S., Ph.D., University of California. 1956
- DALKE, PAUL D., Ph.D., *Professor of Wildlife Management and Leader, Idaho Cooperative Wildlife Research Unit*  
B.S.F., M.S.F., Ph.D., University of Michigan. 1948
- DETERS, MERRILL E., Ph.D., *Professor of Forestry*  
B.S.(For.), M.S.(For.), Ph.D., University of Minnesota. 1940
- FRAZIER, GEORGE D., B.S.(For.), *Assistant Forest Economist, Jr., and Assistant Agricultural Economist, Jr.*  
B.S.(For.), University of Idaho. 1957
- GILBERTSON, ROBERT L., Ph.D., *Assistant Professor of Forestry*  
B.A., Montana State University, M.S., University of Washington; Ph.D., New York State College of Forestry. 1954
- \*HIRONAKA, MINORU, M.S., *Assistant Range Ecologist, Jr., and Assistant Agronomist, Jr.*  
B.S., Utah State Agricultural College; M.S., University of Idaho. 1954
- HOWE, JOHN P., M.S., *Assistant Professor of Wood Utilization*  
A.B., Amherst College; M.S., Yale University. 1956
- HUNGERFORD, KENNETH E., Ph.D., *Associate Professor (Wildlife)*  
B.S.(For.), University of Idaho; M.S., University of Connecticut; Ph.D., University of Michigan. 1946
- INMAN, LAWRENCE L., Ph.D., *Assistant Professor of Forestry*  
B.S.(For.), Iowa State College; Ph.D., University of Minnesota. 1957
- JOHNSON, FREDERIC D., M.S., *Instructor in Forestry*  
B.S., Oregon State College; M.S., University of Idaho. 1950

\*Leave of Absence without pay, October 1, 1958 to June 30, 1959

- LOEWENSTEIN, HOWARD, Ph.D., *Assistant Professor of Forestry*  
B.S., Colorado A and M; Ph.D., University of Wisconsin. 1958
- MACPHEE, CRAIG, Ph.D., *Assistant Professor (Fisheries)*  
B.A., University of British Columbia; M.A., University of British Columbia; Ph.D., University of Washington. 1957
- OLSON, DAVID S., *Research Silviculturist*. 1949
- SEALE, ROBERT H., M.S.(For.), *Associate Professor of Forestry and Assistant to the Dean, College of Forestry*  
B.S., University of California; M.S.(For.), University of Idaho. 1949
- SHARP, LEE A., M.S., *Associate Professor of Range Management*  
B.S., M.S., Utah State Agricultural College. 1949
- SLIPP, ALBERT W., M.S.(For.), *Assistant Professor (Research)*  
B.S.F., University of New Brunswick; M.S.(For.), University of Idaho. 1945
- \*TISDALE, EDWIN, Ph.D., *Professor of Range Management and Associate Director of Forest, Wildlife and Range Management Experiment Station*  
B.S., University of Manitoba; M.S., Ph.D., University of Minnesota. 1947
- FAULKS, LILA E., *Secretary*. 1958
- FRTIZLEY, SANDRA T., *Secretary*. 1958

### IDAHO BUREAU OF MINES AND GEOLOGY

- COOK, EARL FERGUSON, Ph.D., *Dean of the College of Mines, and Director of the Idaho Bureau of Mines and Geology*  
B.S.(Min.E.), M.S.(Geol.), Ph.D., University of Washington. 1951
- KOPP, RICHARD SIGMUND, B.S., *Mineral-Analyst*  
B.S.(Geol.), Colorado College. 1957
- HOLLENBAUGH, KENNETH M., B.S., *Mining Geologist*  
B.S.(Geol.), Bowling Green State University. 1958
- PRATER, LEWIS S., B.S., *Metallurgist and Assistant Director*  
B.S.(Met.E.), Montana School of Mines. 1941
- SAVAGE, CARLETON NORMAN, *Economic Geologist*  
A.B., Colby College; M.S., Northwestern University. 1957
- SHIVELY, JOHN ALLEN, *Research Fellow*  
B.S.(Met.E.), University of Idaho. 1958
- BRADY, ALICE J., *Secretary*. 1957
- MAIZE, EVA L., *Secretary*. 1945

### UNIVERSITY OF IDAHO RESEARCH COUNCIL

- CADY, LOUIS CLYDE, Ph.D., *Dean of Graduate School and Executive Secretary of Research Council*  
B.S.(Chem.E.), M.S., University of Idaho; Ph.D., University of Wisconsin. 1922

### UNIVERSITY RESEARCH ADVISORY COUNCIL

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| JUDGE J. H. ANDERSEN<br>Blackfoot, Idaho  | MR. SETH BURSTEDT<br>Challis, Idaho   |
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| MR. R. J. BRIGGS<br>Briggs Engineering Co.<br>Boise, Idaho                      | MR. L. E. FULLER<br>Union Pacific R. R.<br>Boise, Idaho                         |

\*Leave of absence without pay, September 24, 1958 to June 15, 1959.

- |  |   |
|--|---|
| MR. A. C. GARBER<br>Garber Motor Company<br>Caldwell, Idaho                  | MR. L. R. PUGH<br>St. Maries Lumber Company<br>St. Maries, Idaho        |
| MR. ROGER GUERNSEY<br>State Forester<br>Boise, Idaho                         | MR. LES RANDALL<br>Hecla Mining Company<br>Wallace, Idaho               |
| MR. ROBERT HANSBERGER<br>Boise Cascade Corporation<br>Boise, Idaho           | MR. R. R. RUMER<br>Monsanto Chemical Company<br>Monsanto, Idaho         |
| MR. ROBERT HARDY<br>Sunshine Mining Company<br>Spokane 1, Washington         | MR. DON SAMUELSON<br>Pend Oreille Sport Shop<br>Sandpoint, Idaho        |
| MR. W. L. HENDRIX<br>Idaho Dairymen's Association<br>Boise, Idaho            | MR. JAMES H. SHIELDS, JR.<br>Shields Buyers and Shippers<br>Buhl, Idaho |
| MR. CHARLES HERNDORN<br>Salmon, Idaho  | MR. J. R. SIMPLOT<br>J. R. Simplot Company<br>Boise, Idaho              |
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| MR. CARL KRUEGER<br>U. S. Forest Service<br>Coeur d'Alene, Idaho             | MR. L. E. STALKER<br>Rogers Building<br>Idaho Falls, Idaho              |
| MR. WINDSOR LLOYD<br>Idaho Farm Chemurgic Council<br>Nampa, Idaho            | MR. E. T. TAYLOR<br>Grange Mutual Life Company<br>Nampa, Idaho          |
| MR. HARRY W. MARSH<br>Idaho Mining Association<br>Boise, Idaho               | MR. NICK TERTELING<br>J. A. Terteling & Sons<br>Boise, Idaho            |
| MR.* EARL W. MURPHY<br>Idaho State Chamber of Commerce<br>Boise, Idaho       | MR. L. E. TRAEGER<br>The Anaconda Company<br>Conda, Idaho               |
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| MR. HAROLD NELSON<br>U. S. Bureau of Reclamation<br>Boise, Idaho             | MR. J. F. WATSON<br>J. C. Watson Company<br>Parma, Idaho                |
| MR. ROBERT W. OLIN<br>Potlatch Forests, Inc.<br>Lewiston, Idaho              | MR. W. G. WOOLF<br>The Bunker Hill Company<br>Kellogg, Idaho            |

\* Deceased.

## UNIVERSITY OF IDAHO RESEARCH FOUNDATION

### Board of Directors

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Mr. Ambrose Adams  
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412 S. A St.  
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Real Estate & Investments  
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Potlatch Forests, Inc.  
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- Mr. Frank Bevington  
Husted Motor Company  
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District Judge  
Pocatello, Idaho
- Mr. James Brown, Jr.  
Pack River Lumber Company  
Sandpoint, Idaho
- Mr. Ronald Burke  
Recorder Herald  
Salmon, Idaho
- Mr. Wayne S. Evans  
Franklin County Grain Growers  
Assn.  
Preston, Idaho
- Mr. Thomas C. Frye  
Idaho First National Bank  
Boise, Idaho
- Mr. C. A. Garrett  
Garrett Freightlines, Inc.  
Pocatello, Idaho
- Mrs. Charles Graybill  
Graybill Wholesale Company  
Nampa, Idaho
- Mr. A. Lawrence Gridley  
Gridley Investment Company  
Coeur d'Alene, Idaho
- Mr. Burl C. Hagdone  
Publisher  
Coeur d'Alene, Idaho
- Mr. Clark Heiss  
Heiss Investment Company  
Jerome, Idaho
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Implement Dealer  
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- Mr. Joseph W. Herndon  
Lemhi Title and Abstract Co.  
Salmon, Idaho
- Dr. Spencer W. Hess  
Dentist  
Montpelier, Idaho
- Mr. Alden Hull  
Attorney at Law  
Wallace, Idaho
- Mr. Mitchell Hunt, Jr.  
Chamber of Commerce  
Twin Falls, Idaho
- Mr. Edward W. Jarboe  
Spokane and Eastern Bank  
Spokane, Washington
- Mr. James W. Kalbus  
Kalbus Office Equipment  
Nampa, Idaho
- Mr. William Knox  
Banker  
Glenns Ferry, Idaho
- Mr. E. W. Largilliere  
Largilliere Company Bankers  
Soda Springs, Idaho
- Mr. Jack H. Lee  
Lee's Men's Shop  
Lewiston, Idaho
- Mr. C. H. McBride  
Swift and Company  
Caldwell, Idaho
- Mr. George L. Crookham, Jr.  
Seed Growers  
Caldwell, Idaho
- Mr. Frank Dammarell  
First Security Bank of Idaho  
Moscow, Idaho
- Mr. Howard J. David  
David's, Inc.  
Moscow, Idaho
- Mr. Homer Davies  
Davies Hardware Company  
Nampa, Idaho
- Mr. George Donart  
Attorney at Law  
Weiser, Idaho
- Mr. W. D. Dunlap  
Monsanto Chemical Company  
Soda Springs, Idaho
- Mr. Harry Eaton  
Twin Falls Bank and Trust Co.  
Twin Falls, Idaho
- Mr. Roger Erickson  
Bunker Hill Mining Company  
Kellogg, Idaho
- Mr. David Evans  
Evans Coop.  
Malad, Idaho
- Mr. E. F. McDermott  
Publisher, Post Register  
Idaho Falls, Idaho
- Mr. H. F. Magnuson  
Certified Public Accountant  
Wallace, Idaho
- Mr. Beardsley Merrill  
Investments  
Spokane, Washington
- Mr. Ben Mottern  
Rogerson Hotel Coffee Shop  
Twin Falls, Idaho
- Mr. Robert Newhouse  
Farmer  
Boise, Idaho
- Mr. W. J. O'Bryant  
Utah-Idaho Sugar Company  
Idaho Falls, Idaho
- Mr. Hanley Payne  
Feed & Supply Center, Inc.  
Twin Falls, Idaho
- Mr. L. J. Randell  
Hecla Mining Co.  
Wallace, Idaho
- Mr. Vernon Riddle  
Certified Public Accountant  
Twin Falls, Idaho
- Mr. Larry Robinson  
Minidoka County News  
Rupert, Idaho
- Mr. James Roper  
Merchant  
Burley, Idaho
- Mr. Robert Sessions  
Idaho Power Co.  
Boise, Idaho
- Mr. Dean L. Sherfey  
Real Estate  
Spokane, Washington
- Mr. Robert J. Towne  
Towne Equipment Co.  
Spokane, Washington

## AGRICULTURAL EXTENSION SERVICE

## (Agriculture and Home Economics)

- KRAUS, JAMES E., Ph.D., *Dean of the College of Agriculture, Director of the Agricultural Experiment Station and Director of the Agricultural Extension Service*  
B.S., Colorado State College; M.S., University of Wisconsin; Ph.D., Cornell University. 1941
- YOUNGSTROM, C. O., M.S. (Ag.), *Associate Director of Extension Service*  
B.S. (Ag.), Oregon State College; M.S. (Ag.), Kansas State College. 1929 Boise

## Field Staff:

- ANDERSON, GEORGE C., M.S. (Ag.), *Extension Dairyman*  
B.S. (Ag.), Kansas State College; M.S. (Ag.), University of Idaho. 1922 Boise
- BLACK, ROBERT EDWARD, B.S.A., *Extension Poultryman*  
B.S.A., University of Arkansas. 1954 Boise
- BRANTHOVER, BARBARA J., M.S., *Extension Nutritionist*  
B.S., M.S., State College of Washington. 1956 Moscow
- BURLISON, VERNON H., M.S. (For.), *Extension Forester*  
B.S. (For.), M.S. (For.), University of Idaho. 1946 Moscow
- CHESTER, THOMAS J., B.S. (Ag.), *Southeast District Extension Agent Supervisor*  
B.S. (Ag.), University of Idaho. 1939 Pocatello
- DAVIS, EVERETT H., B.S., *Agricultural Engineering Specialist*  
B.S., Oregon State College. 1955 Moscow
- D'EASUM, CEDRIC G., B.A., *Assistant Extension Editor*  
B.A., University of Idaho. 1949 Boise
- FENWICK, HARRY S., Ph.D., *Extension Plant Pathologist*  
B.S., M.S., Montana State College; Ph.D., Oregon State College. 1956 Moscow
- FREDERICK, HILDA, M.A., *Home Management Specialist*  
B.S., Utah State College; M.A., University of California. 1953 Boise
- HABERLY, MILDRED, M.S., *State Home Demonstration Leader*  
B.S., Oregon State College; M.S., University of Washington. 1941 Moscow
- HARNEY, ARCHIE R., M.A., *Extension Editor*  
B.A., Northwestern State College; M.A., University of Wisconsin. 1945 Moscow
- \*HIGGINS, ROBERT E., B.S., *Extension Agronomist*  
B.S., University of Idaho. 1946 Boise
- HOLE, DOROTHY S., B.S., *Home Demonstration Agent-at-Large*  
B.S., Oregon State College. 1957 Pocatello
- HORN, ANTON STEPHEN, M.S., *Extension Horticulturist*  
B.S. (Ag.), Kansas State College; M.S., University of Illinois. 1946 Boise
- \*\*JOHANNESSEN, LILLIAN, B.S. (H.Ec.), *Assistant State 4-H Club Leader*  
B.S. (H.Ec.), University of Idaho. 1947 Moscow
- KENNEDY, VIRGIL DEAN, M.S. (Ag.), *Extension Farm Management Specialist*  
B.S. (Ag.), Oregon State College; M.S. (Ag.), Iowa State College. 1945 Boise
- LARSEN, DORRELL C., B.S., *Extension Irrigationist*  
B.S., University of Idaho. 1956 Boise
- MC ALEXANDER, G. T., B.S., *District Extension Agent Supervisor*  
B.S., Colorado A and M College. 1930 Moscow
- MC PROUD, G. ELBERT, M.S., *Extension Studies and Training Specialist (Leader)*  
B.S., M.S., University of Idaho. 1940 Moscow
- MITCHELL, DONALD R., B.S. (Ag.), *Assistant State 4-H Club Leader*  
B.S. (Ag.), University of Idaho. 1957 Moscow
- MODEN, WALTER L., JR., B.S., *Assistant Agricultural Engineering Technologist, Jr.*  
B.S., Kansas State College. 1957 Moscow
- NYSTROM, ESTHER A., B.A., *Extension Clothing Specialist*  
B.A., State College of Washington. 1944 Boise
- OHMS, RICHARD E., M.S. (Ag.), *Extension Potato Specialist*  
B.S. (Ag.), M.S. (Ag.), University of Idaho. 1957 Boise
- PAINTER, CHARLES G., M.S., *Extension Soils Specialist*  
B.S., Colorado A and M College; M.S., Michigan State University. 1954 Boise
- PORTMAN, ROLAND W., M.S., *Extension Entomologist*  
B.S., Colorado State A and M; M.S., Kansas State College. 1949 Moscow
- ROBINSON, RAYMOND W., Ph.D., *Extension Economist - Marketing Information*  
B.S., M.S., Oklahoma A and M College; Ph.D., University of Wisconsin. 1957 Boise
- ROYLANCE, HOWARD B., M.S. (Ag.), *Extension Agronomist*  
B.S. (Ag.), M.S. (Ag.), University of Idaho. 1950 Boise
- SHYRACK, WILLMA C., M.H.Ec., *Home Furnishings Specialist*  
B.A., Colorado College of Education; M.H.Ec., Oregon State College. 1950 Moscow

\* Sabbatical Leave, September 1, 1958 to June 30, 1959.

\*\* Sabbatical Leave, April 15, 1959 to September 15, 1959.



SPENCE, LITER E., M.S.(For.), <i>Extension Conservativist</i> B.S.(For.), University of Idaho; M.S.(For.), University of California. 1930	Boise
STEPHENS, DOROTHY N., M.S., <i>Assistant Home Demonstration Agent Leader</i> B.S.(H.Ec.), University of Idaho; M.S., New York University. 1939	Boise
TURNER, JOHN E., B.S., <i>State Seed Analyst</i> B.S., Iowa State College. 1956	Boise
WARREN, D. E., B.S.(Ag.), <i>State 4-H Club Leader</i> B.S.(Ag.), University of Idaho. 1929	Moscow
WELLS, WADE G., B.S., <i>Extension Animal Husbandman</i> B.S., University of Idaho. 1940	Boise
WILCOX, ROBERT W., Ph.D., <i>Extension Economist</i> B.S., Oregon State College; M.S., Ph.D., Iowa State College. 1947	Boise
WILLIAMS, LEWIS M., B.S., <i>Southwest District Extension Agent Supervisor</i> B.S., University of Idaho. 1934	Boise
WORKS, DOSSIE W., B.S.(Ag.E.), <i>Assistant Agricultural Engineer</i> B.S.(Ag.E.), Oregon State College. 1956	Moscow

### County Agricultural Agents:

ALLDAFFER, ROBERT C., B.S., <i>County Extension Agent, Caribou County</i> B.S., University of Idaho. 1955	Soda Springs
BECHTOLT, C. D., B.S.(Ag.), <i>County Extension Agent, Canyon County</i> B.S.(Ag.), Colorado A and M. 1944	Caldwell
BODILY, GLENN L., M.S.(Ag.), <i>County Extension Agent, Cassia County</i> B.S.(Ag.), M.S.(Ag.), University of Idaho. 1946	Burley
BROOKS, LEONARD D., M.S.(Ag.), <i>County Extension Agent, Benewah County</i> B.S., M.S.(Ag.), University of Idaho. 1955	St. Maries
BURNS, LEONARD A., M.S.(Ag.), <i>County Extension Agent, Latah County</i> B.S.(Ag.), California State Polytechnic College; M.S.(Ag.), University of Idaho. 1958	Moscow
CALNON, MARK B., B.S.(Ag.), <i>County Extension Agent, Ada County</i> B.S.(Ag.), University of Idaho. 1945	Boise
COLE, JOSEPH W. B.S.(Ag.), <i>County Extension Agent, Teton County</i> B.S.(Ag.), University of Idaho. 1957	Driggs
COOK, GEORGE E., B.S.(Ag.), <i>County Extension Agent, Idaho County</i> B.S.(Ag.), University of Idaho. 1946	Grangeville
CROSS, VIRGIL S., B.S.(Ag.), <i>County Extension Agent, Jerome County</i> B.S.(Ag.), University of Idaho. 1940	Jerome
DAIGH, CHARLES W., B.S., <i>County Extension Agent, Twin Falls County</i> B.S., Oregon State College. 1930	Twin Falls
DAILEY, GORDON H., B.S.(Ag.), <i>County Extension Agent, Lewis County</i> B.S.(Ag.), University of Idaho. 1946	Nezperce
DUNHAM, CHARLES S., B.S.(Ag.), <i>County Extension Agent, Fort Hall Indian Reservation</i> B.S.(Ag.), University of Idaho. 1959	Blackfoot
EAKIN, JAMES I., B.S., <i>County Extension Agent, Blaine County</i> B.S., Utah State Agricultural College. 1956	Hailey
EDWARDS, HERBERT M., B.A.(Ag.), <i>County Extension Agent, Elmore County</i> B.A.(Ag.), University of Idaho. 1947	Mountain Home
FITZSIMMONS, NORMAN D., B.S., <i>County Extension Agent, Clearwater County</i> B.S., University of Idaho. 1955	Orofino
FUTTER, HOMER I., B.S.(Ag.), <i>County Extension Agent, Latah County</i> B.S.(Ag.), University of Idaho. 1949	Moscow
GARNER, JAY G., B.S.(Ag.), <i>County Extension Agent, Fremont County</i> B.S.(Ag.), University of Idaho. 1946	St. Anthony
GOOCH, REX I., B.S.(Ag.), <i>County Extension Agent, Jefferson County</i> B.S.(Ag.), Utah State Agricultural College. 1946	Rigby
GRAVES, JAMES L., B.S.(Ag.), <i>County Extension Agent, Boundary County</i> B.S.(Ag.), University of Idaho. 1949	Bonnors Ferry
GREENWELL, DON A., B.S., <i>County Extension Agent, Valley County</i> B.S., University of Idaho. 1957	Donnelly
GROVER, MILTON C., M.S.(Ag.), <i>County Extension Agent, Oneida County</i> B.S.(Ag.), M.S.(Ag.), University of Idaho. 1942	Malad
HACKLER, FRANK E., B.S., <i>County Extension Agent, Washington County</i> B.S., Oregon State College. 1946	Weiser
HALE, LEONARD D., B.S.(Ag.), <i>County Extension Agent, Washington County</i> B.S.(Ag.), University of Idaho. 1957	Weiser
*HALL, GRANT B., B.S.(Ag.), <i>County Extension Agent, Canyon County</i> B.S.(Ag.), University of Idaho. 1950	Caldwell
HAMILTON, LEE WALTER, JR., B.S.(Ag.), <i>County Extension Agent, Adams County</i> B.S.(Ag.), University of Idaho. 1952	Council

\* Sabbatical Leave academic year 1959-60.

HART, RALPH D., B.S., <i>County Extension Agent, Canyon County</i> B.S., University of Idaho. 1957	Caldwell
HILFKEK, HERMAN G., B.S.(Ag.), <i>County Extension Agent, Ada County</i> B.S.(Ag.), University of Idaho. 1936	Boise
HILLMAN, RUSSELL G., B.S.(Ag.), <i>County Extension Agent, Lemhi County</i> B.S.(Ag.), University of Idaho. 1950	Salmon
HOPKINS, IVAN C., B.S.(Ag.), <i>County Extension Agent, Cassia County</i> B.S.(Ag.), University of Idaho. 1959	Burley
JACOBS, FRANK H., B.S.(Ag.), <i>County Extension Agent, Madison County</i> B.S.(Ag.), University of Idaho. 1954	Rexburg
JOHANNESEN, ERLING JOHAN, B.S., <i>County Extension Agent, Gem County</i> B.S., University of Idaho. 1944	Emmett
JOHNSON, HYRUM G., M.S.(Ag.), <i>County Extension Agent, Bear Lake County</i> B.S.(Ag.), M.S.(Ag.), University of Idaho. 1955	Paris
JOHNSON, MAURICE E., M.S.(Ag.), <i>County Extension Agent, Jefferson County</i> B.S.(Ag.), M.S.(Ag.), University of Idaho. 1958	Rigby
JOHNSTON, HAROLD B., B.S., <i>County Extension Agent, Kootenai County</i> B.S., University of Idaho. 1956	Coeur d'Alene
JUDD, HARRY L., B.S., <i>County Extension Agent, Bonner County</i> B.S., University of Idaho. 1955	Sandpoint
KAMBITSCH, R. LOREN, B.S.(Ag.), <i>County Extension Agent Nez Perce County</i> B.S.(Ag.), University of Idaho. 1946	Lewiston
KNUTSON, ALFRED K., M.S., <i>County Extension Agent, Clark County</i> B.S., Ricks College; M.S., University of Idaho. 1957	Dubois
KOESTER, EDWARD F., B.S., <i>County Extension Agent, Gooding County</i> B.S., University of Idaho. 1950	Gooding
KOHL, FRED E., B.S.(Ag.), <i>County Extension Agent, Bonneville County</i> B.S.(Ag.), University of Idaho. 1950	Idaho Falls
KUNKEL, GLENN R., B.S., <i>County Extension Agent, Fort Hall Indian Reservation</i> B.S., University of Idaho. 1956	Blackfoot
MANDERVILLE, GERALD V., B.S.(Ag.), <i>County Extension Agent, Idaho County</i> B.S.(Ag.), University of Idaho. 1957	Grangeville
MANNING, JOSEPH H., B.S., <i>County Extension Agent, Lincoln County</i> B.S., Utah State Agricultural College. 1955	Shoshone
MATSEN, GILBERT, B.S.(Ag.), <i>County Extension Agent, Payette County</i> B.S.(Ag.), University of Idaho. 1942	Payette
MCPHERSON, WALTER H., B.S.(Ag.), <i>County Extension Agent, Bonner County</i> B.S.(Ag.), University of Idaho. 1951	Sandpoint
MINK, EDWARD F., B.S.(Ag.), <i>County Extension Agent, Owyhee County</i> B.S.(Ag.), University of Idaho. 1957	Marsing
MOSS, RALPH J., JR., B.S., <i>County Extension Agent, Bonneville County</i> B.S., Utah State Agricultural College. 1954	Idaho Falls
MYLROIE, ALBERT, B.S.(Ag.), <i>County Extension Agent, Bannock County</i> B.S.(Ag.), University of Wyoming. 1940	Pocatello
PAULSEN, JOHN H., B.S.(Ag.), <i>County Extension Agent, Camas County</i> B.S.(Ag.), University of Idaho. 1955	Fairfield
PRIEST, WILMER G., B.S., <i>County Extension Agent, Minidoka County</i> B.S., University of Idaho. 1946	Rupert
RENBERG, CHARLES L., M.S.(Ag.), <i>County Extension Agent, Bingham County</i> B.S.(Ag.), M.S.(Ag.), University of Idaho. 1954	Blackfoot
ROBERTS, JOHN DANIEL, B.S.(Ag.), <i>County Extension Agent, Franklin County</i> B.S.(Ag.), University of Idaho. 1943	Preston
SAMSON, MERLE R., B.S.(Ag.), <i>County Extension Agent, Bannock County</i> B.S.(Ag.), University of Idaho. 1946	Pocatello
SAMSON, RALPH S., M.S., <i>County Extension Agent, Owyhee County</i> B.S., M.S., University of Idaho. 1955	Marsing
SCHOW, STERLING W., B.S.(Ag.), <i>County Extension Agent, Power County</i> B.S.(Ag.), Utah State Agricultural College. 1944	American Falls
SLADE, RUSSELL S., M.F., <i>County Extension Agent, Benewah County</i> B.S.(Ag.), Rutgers University; M.F., Duke University. 1957	St. Maries
SMITH, LAMONT, B.S., <i>County Extension Agent, Power County</i> B.S., University of Idaho. 1955	American Falls
SMITH, VANCE T., M.S., <i>County Extension Agent, Minidoka County</i> B.S., University of Idaho; M.S., State College of Washington. 1941	Rupert
STEVENSON, LYNN T., B.S.(Ag.), <i>County Extension Agent, Custer County</i> B.S.(Ag.), University of Idaho. 1953	Challis
STRANAHAN, CLYDE HENRY, B.S.(Ag.), <i>County Extension Agent, Kootenai County</i> B.S.(Ag.), University of Idaho. 1943	Coeur d'Alene
WESTON, MILTON B., B.S., <i>County Extension Agent, Bingham County</i> B.S., Utah State Agricultural College. 1944	Blackfoot

YORK, ROBERT AARON, B.S.(Ag.), <i>County Extension Agent, Butte County</i> B.S.(Ag.), University of Idaho. 1947	Arco
YOUTZ, DONALD F., B.S., <i>County Extension Agent, Twin Falls County</i> B.S., University of Wyoming. 1953	Twin Falls

**Home Demonstration Agents:**

BITHELL, NONDUS HOGE, B.S.(H.Ec.), <i>Home Demonstration Agent, Bingham County</i> B.S.(H.Ec.), University of Idaho. 1955	Blackfoot
BROOKS, ANNA BELLE, B.S., <i>Home Demonstration Agent, Gem County</i> B.S., University of Idaho. 1953	Emmett
DARLING, CHARLOTTE M., B.S.(H.Ec.), <i>Home Demonstration Agent, Bonner County</i> B.S.(H.Ec.), University of Idaho. 1958	Sandpoint
FARRAR, COLETTE W., B.S., <i>Home Demonstration Agent, Fort Hall Indian Reservation</i> B.S., Oregon State College. 1956	Blackfoot
GILLESPIE, MARJORIE E., B.S., <i>Home Demonstration Agent, Cassia County</i> B.S., Brigham Young University. 1951	Burley
GOODEY, PHYLLIS A., B.S., <i>Home Demonstration Agent, Bannock County</i> B.S., Utah State Agricultural College. 1954	Pocatello
GRAY, CHARLOTTE L., B.S.(H.Ec.), <i>Home Demonstration Agent, NezPerce County</i> B.S.(H.Ec.), University of Idaho. 1958	Lewiston
HURST, AGNES A., B.S.(H.Ec.), <i>Home Demonstration Agent, Jerome County</i> B.S.(H.Ec.), University of Idaho. 1957	Jerome
JOHNSON, GLORIA H., B.S., <i>Home Demonstration Agent, Boundary County</i> B.S., Oregon State College. 1958	Bonnors Ferry
LOOMIS, MARGARET, B.S.(H.Ec.), <i>Home Demonstration Agent, Gooding County</i> B.S.(H.Ec.), University of Idaho. 1957	Gooding
LOVELAND, KARLEEN, B.S.(H.Ec.), <i>Home Demonstration Agent, Caribou County</i> B.S.(H.Ec.), Idaho State College. 1957	Soda Springs
MASON, JOSEPHINE M., B.S., <i>Home Demonstration Agent, Minidoka County</i> B.S., University of Idaho. 1953	Rupert
MAUGHAN, LUCRETTA F., B.S., <i>Home Demonstration Agent, Franklin County</i> B.S., Utah State Agricultural College. 1947	Preston
MEAKIN, EUNICE A., B.H.Sc., <i>Home Demonstration Agent, Kootenai County</i> B.H.Sc., University of Saskatchewan. 1956	Coeur d'Alene
MONTOYA, CECELIA, B.S.(H.Ec.), <i>Home Demonstration Agent, Benewah County</i> B.S.(H.Ec.), University of Idaho. 1958	St. Maries
NELLSON, CAROL M., B.S., <i>Home Demonstration Agent, Jefferson County</i> B.S., Utah State Agricultural College. 1955	Rigby
NESBITT, VIRGINIA G., B.S.(H.Ec.), <i>Home Demonstration Agent, Owyhee County</i> B.S.(H.Ec.), University of Idaho. 1958	Marsing
NORDLUND, MARY N., B.S., <i>Home Demonstration Agent, Fremont County</i> B.S., Brigham Young University. 1955	St. Anthony
ROBERTSON, ISABEL T., B.S., <i>Home Demonstration Agent, Canyon County</i> B.S., University of Idaho. 1957	Caldwell
SCHULTZ, FLORENCE M., B.S., <i>Home Demonstration Agent, Twin Falls County</i> B.S., University of Wyoming. 1948	Twin Falls
SHANE, RUTH J., B.S., <i>Home Demonstration Agent, Latah County</i> B.S., University of Idaho. 1956	Moscow
SMITH, IVY L., B.S., <i>Home Demonstration Agent, Bonneville County</i> B.S., Utah State Agricultural College. 1947	Idaho Falls
STEGELMIER, MARLENE M., M.S., <i>Home Demonstration Agent, Bear Lake County</i> B.S., Ricks College; M.S., Utah State Agricultural College. 1957	Paris
STERNER, MARY J., B.S., <i>Home Demonstration Agent, Lewis County</i> B.S., University of Idaho. 1956	Nezperce
SWITZER, JANIS W., B.S., <i>Home Demonstration Agent, Ada County</i> B.S., Iowa State College. 1955	Boise
THOMPSON, MILLICENT S., B.S., <i>Home Demonstration Agent, Clearwater County</i> B.S., Kansas State College. 1958	Orofino
WALKER, DELPHINE, B.S.(H.Ec.), <i>Home Demonstration Agent, Canyon County</i> B.S.(H.Ec.), University of Idaho. 1958	Caldwell
WILSON, LUCIA L., B.S., <i>Home Demonstration Agent, Ada County</i> B.S., University of Idaho. 1950	Boise

# Part VII

## Degrees Conferred In 1958 And 1959

### Commissions And Certificates

### Honor Lists

### Enrollment Statistics

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## Sixty-third Commencement

June 8, 1958

### Degrees and Honors Conferred

(COMMENCEMENT-BACCALAUREATE ADDRESS, "Science and the Citizen"  
by Dwight J. Ingle, Ph.D., Ben May Laboratory for Cancer Research,  
University of Chicago.)

#### BACCALAUREATE DEGREES

##### College of Letters and Science

##### BACHELOR OF ARTS

David James Anderson  
Ronald Lewis Baker  
Patricia Jane Morgan Baughman  
    With High Honors  
Sally Frances Beattie  
    With High Honors  
Gerald Odale Bierwag  
    With High Honors  
Katja Catherine-Louise Bildt  
Sumner Tuttle Blake  
Beverly Jean Bolingbroke  
Bill Boyd Booth  
Betty Diantha Bovey  
    With High Honors  
John Howard Bradbury  
Robert Carl Carbon  
John Sherwood Chapman  
Peter Kent Church  
Steven Dale Clements  
John Frederick Cook  
Robert Dale Crawford  
William Matthew Currie  
William Anthony Dawson  
Richard Ralph Day  
Merritt Allyn Dingle, Jr.  
Lawrence Dougharty  
Marcia Gertrude Ellis  
    With High Honors  
Donald Keith Flint  
Donald Elston Fosket  
Roberta Wheeler Foy  
    With High Honors  
Mary Frances Grabner

Angela Marshall Guillory  
Anne Elizabeth Hamblin  
Kenneth William Hedglin  
William Trayner Holden  
Robert Dean Howells  
John Baird Hughes  
Richard Dee Humphrey  
    With High Honors  
Dean Hyrum Judd  
Phillip Lee Kleffner  
Graham Richard Knox  
Mildred Anne Kroetch  
Katherine Louise Pugh Lee  
John Francis Grant Longworth  
John Lawrence McMennamin  
Lowell Bayard Martin, Jr.  
Raymond John May  
Richard Lee Moore  
John Willard Nelson  
Donald Nevile Smith  
LaRene Louise Newberry  
    With High Honors  
Marilyn Kaye Nugent  
    With High Honors  
Mary Ellen Daly Olney  
Charles Eldred Orem  
William Anthony Park  
Rose-Marie Delphine Perrin  
Stanley Harter Pierce  
John Smith Platt  
Ethelyn Claire Poitevint  
Jeremiah Arthur Quane  
Ann Barron Reading

Carol Ann Renstrom  
 Georgia Anne Reynolds  
 Leonard Neal Roberts  
 Sharroll Lee Bartlett St. Marie  
 William Harold Salisbury  
 Paul Denison Schultz  
 Edward Albert Seielstad  
 William Hoyt Sherrill  
 Nepier Vrabel Smith  
     With High Honors  
 Charles Duane Tovey  
 Paul John Tracy  
     With High Honors  
 Shirley Jean True

Robert Mickey Turnbow  
 Ruth Eleanor Grush Turner  
     With High Honors  
 William Joseph Vermillion, Jr.  
 Charlotte LaVon Walker  
 Mary Karen Warner  
 Gary Smith Westergren  
     With High Honors  
 Richard Eli Weston  
 Janice Dee White  
 Myrtle Estill Williamson  
 Xanta Woodford  
 Barbara Jean Worst  
     With High Honors

## BACHELOR OF SCIENCE

James Warner Adolphson  
 Susan Bacharach Allison  
 Carroll Acle Anderson  
 Kenneth Dean Baker  
 Ray Grady Beasley  
 Verne Lee Becker  
 Leroy Andrew Beyers  
 William Douglas Bills  
 Alice Kaye Blickenstaff  
 Michael Eugene Boles  
 Fred Dale Brink  
 Max Eugene Burke  
 Ralph Arthur Cairns  
 David William Charlton  
 Brent C. Cummings  
     With High Honors  
 Paul Thomas Cunningham  
 Gary Ray Cuthbert  
 Lorenzo Dan Davis  
 Martha Sue Dempsey  
 Howard Leo Earl  
 David Wilson Esser  
 Greyson Howard Gilson  
 Patricia Ann Havemann  
 Forest Dean Hindman  
 Curtiss Bartshe Humphrey  
 Marlin Charles Jones  
 John Lloyd Kidd  
 Philip Walker Kidd, Jr.  
 Garry Nolan Knopf  
 Larry Louis Lake  
 Clarence Donald Lindseth  
 Kathleen Ruth Lipp

Frederic Paig Loseth  
 William Bruce Lunstrum  
 Gerald Gilbert Matsen  
 Marian Evelyn Midkiff  
 Mary Jane Milbreth  
 Aloysius Rudolph Miller  
 Carol Loree Reichert Miller  
     With High Honors  
 Donald Alan Miller  
 Frederick Addison Morse  
 Lavon Dean Muncey  
 Patsy Ruth Nance  
 Lorin John Nelson  
 Thomas Paul O'Reilly  
 Charles Lee Pfeiffer  
 Kermit Norman Pierson  
 Ronald Darryl Purviance  
 Barbara Jean Reideman  
 Bruce Rollin Rosin  
 John Richard Shern  
 Gary Glenn Simmons  
 Robert Gene Stewart  
 Colleen Marie Sullivan  
     With High Honors  
 James Rodney Throckmorton  
 Donald Avila Villeneuve  
 Robert Gordon Wahler  
     With High Honors  
 Larry Jim Welch  
     With High Honors  
 Norman Bruce White  
 Seth William Yerrington

## BACHELOR OF SCIENCE IN PRE-MEDICAL STUDIES

Albert Rudolph Andrews  
 James Wellington Asaph  
 James Jackson Cole  
 Leland Forest Haney

John Henry Payne  
 Richard Treffle Roberge  
 James Albert Seeley  
 Boyd Earl Terrey

## BACHELOR OF SCIENCE IN HOME ECONOMICS

Elinor Cecile Johnson Betts  
     With High Honors  
 Carlotta Ann Brandt  
 Greta Louise Eldred Cornell  
 Barbara Ruth Jensen Crosby  
 Faith Elaine Newcomb Foltz  
 Donna Yvonne Goldsmith  
 Ann Sheila Hamilton  
 Sylvia Marguerite Herman  
 Kay Sandra LaBarge  
 Josephine Berneta Lamson  
 Colleen Mary McDewitt  
 Marilyn Delores Matthews

Cecelia Marie Montoya  
 Mary Alice Owl  
     With High Honors  
 Wilma Darlene Packard  
 Katherine Deldee Prestwich  
 Mary Nadine Stanley Renfro  
 Hilda Rieken  
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Abb Henry Taylor  
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Larry Dean Wing  
Nathan Leonard Yost  
Mouine Fahed Zoghet  
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Edward Leon Berreth  
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Alice Joan Billman

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Connie Mae Brookins  
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Barbara Ellen Walker Burnett  
Virginia Lester Burns  
Charlotte Allene Carlson  
Moire Clayne Charters  
Patricia Anne Friend Cooke  
LaVonne Jean Kallusky Crisp



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Karen Evoryl Crozier	Nancy Joan Moen
Kristin Damm	Marvel Violet Grasser Muhonen
Vernie Ray Davis	Thomas Scott Nagel
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Robert John Dodson	May Leeper Nesbitt
Margaret Alice DuPuis	Susanne Dolphin Newby
Bonnie Lou Tower Eddy	Larry Neil Norby
Ronald Samuel Edwards	Michael James Patton
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Warren Gordon Hawley	Jo Ann Shriver
Ellen Myers Heaney	Wilma Jean Hodge Smith
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Margaret Marie Deckard Hellinger	William Eugene Snook
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Carl Clayne Hendricks	Charlotte Joanne Sodorff
With High Honors	James Henry Southwick
Billie Kay Jones Hendrickson	Wayne Stevens
With High Honors	Wanda Delap Streeter
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Dwane Whitney Hodgson	Margaret Joanne Sullivan
Clair Jess Hopkins	Charles Lester Sutton, Jr.
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Doris Kathryn Hover	Gordon Bennett Taylor
Marjorie Eleanor Hughes	With High Honors
Velda Lucas Hunt	Janene Ann Taylor
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Jolene Rae Williams Kidd	Ralph Hayes Watson
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Larry Paul McDonald	Richard Dean Wisdom
Etheline Mary McGee	Betty Erma Wiswall
Douglas R. McGinty	Leonard Arthur Wunderlich
Dawn Anna Maib	Jack Wyant
Edward Lee Manley	Eloise Rose Young
Joyce Bowen Maughan	Shahin Dowlatshahi Zirakzadeh

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Elizabeth Brooks Campbell	Sylvia Sue Hertz
Anna Marie Dixon	Jane Marjory Lange
With High Honors	Shirley Lee Poff
Judith Ann Folkins	
With High Honors	

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 Marilyn Marguerite Stewart Blanton  
     With High Honors  
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 Patsy Jean Garrison  
 Mary Elizabeth Gilderoy  
 Thomas Rutherford Glass, Jr.  
 Carolyn Ann Knowles Griffith

Guy Henry Hafer  
 Janice Darlene Melcum Mahlum  
 Felix John Marcolin  
 Judith Ellen Purkhiser  
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 June Kraemer Sleeman  
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 Russell Doral Campbell  
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 Laurence Norman Hulett  
 Ralph Edward Hull  
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 Robert Truesdall Jones  
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 Tore Henning Kristoffersen  
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Jack Brett Little  
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 David Roy Maxey  
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 Roy Wayne Griffith  
 Elwood Crawford Jones  
 Verne Edward Mendel  
 Donald Jerry Rydrych

Darrel Marshall Stuart  
 Richard Milton Turk  
 Donald Lee Walker  
 James Gilbert Walker  
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 Charles Ellis Huck

Albert Alexander Maupin, Jr.

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 Albert Stanley Daniels  
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 Robert Roy Furgason

Waldemar Forsel Hendrickson  
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 Larry Eugene Bessey

Gurcharan Singh Sidhu

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 David Allan Holmes

Aubrey Gene Sidler

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 Algirdas Greichus

William Robert Nickle

## MASTER OF FORESTRY

George Henry Berscheid

Franklin Harry Pitkin

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 Paul Robert Drake

Donald John Isaacson  
 Walter Vannard Olds

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 Wayne Delbert Anderson  
 Ruth Elizabeth Andrews  
 Arthur Eymann Bergthold  
 James Walter Bieker  
 Opal Sheaffer Brown  
 Roy Ernest Brown  
 Sara Ann Landers Burgess  
 Billie Rosalyn Caine  
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 Richard Hardy Colson  
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 Jerry Jacobson  
 Warren Alex Johanson  
 Henry King Jones  
 Oswald Kanikkeberg  
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 Willard Vern Kimerling  
 Joseph Emil Komen  
 Joseph Lindbergh Larkin  
 Lula Myrtle Alexander Leef  
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 Leo Erwin Miller  
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 Ellis LaMarr Pritchett  
 Harry Edward Ray, Jr.  
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 James Edward Roupe

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 Ronald Kenneth Tisdall  
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Wilbur Jasper Aldridge  
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Neil Bennett Frandsen  
 Keith Douglas MacPhee

Marina Dochios Plastino

## MASTER OF SCIENCE IN BUSINESS

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Robert William Clark

## PROFESSIONAL DEGREE

Roman Bolompo Ramos

## HONORARY DEGREES

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Dario L. Toffenetti

Chicago, Ill.

## DOCTOR OF SCIENCE

Alfred M. Ghormley  
 Dr. Clayton G. Loosli

Los Angeles, Calif.  
 Chicago, Ill.

## CITATION OF MERIT UPON RETIREMENT

Howard B. Stough, Professor and Chairman of Zoology  
 Adah Lewis, Associate Professor of Home Economics  
 Louise S. Carter, Associate Director of Student Affairs for Women and Dean of Women

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 Larry P. McDonald

Gary N. McEwen

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 George A. Anderson  
 George C. Anderson

Terry D. Anderson  
 Leland G. Bailey  
 Jerry D. Ballard

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 Bill B. Booth  
 LeRoy F. Clausen  
 Kenneth L. Colvin  
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TO BE COMMISSIONED ENSIGN IN THE UNITED STATES NAVY UPON  
 COMPLETION OF SUMMER TRAINING OR SUMMER SCHOOL

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TO BE COMMISSIONED AS ENSIGN IN THE UNITED STATES NAVAL RESERVE  
 UPON COMPLETION OF SUMMER TRAINING OR SUMMER SCHOOL

Vernie R. Davis

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 Ray B. Long

Lorin J. Nelson  
 Charles L. Pfeiffer  
 Stanley H. Pierce  
 Wilton E. Riggers

## Sixty-fourth Commencement

June 7, 1959

(BACCALAUREATE-COMMENCEMENT ADDRESS by Inez Callaway Robb,  
Syndicated Newspaper Columnist, New York, N. Y.)

### Degree and Honors Conferred

#### BACCALAUREATE DEGREES

##### College of Letters and Science

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Paul Lewis Barnes  
Harold Oliver Bates  
Mary Ellen Bennett  
John Frederick Blair  
Curtis Richard Bohlscheid  
Reed J Bowen  
Marjie Molloy Bradbury  
James Earl Burt  
Alice May Clarke  
William Bruce Colvin  
Clifford Joseph Cook  
Harold Lee Davis  
Joan Helen Ferris Deal  
With High Honors  
Sulakhan Singh Dhillon  
Jay Norman Eacker  
With High Honors  
Carolyn Anne Edwards  
With High Honors  
Joan Marie Fisher  
With High Honors  
George Melvin Fowler  
Douglas Alexander Fraser  
Richard Lonnie Fray  
William Joseph Gaboury  
With High Honors  
Mollie Jane Godbold  
With High Honors  
James Robert Golden  
Kay Esther Haberlach  
With High Honors  
Donald Martin Harris  
Lana Paule Hoch  
Donna Marie Hoobing  
Richard D. Hughes  
Alvie McRae Johnson  
Harold Elmer Johnson  
Irene Diane Kail  
John Charles Kerrick

Craig Charles Kosonen  
Marybel Ethel Lill  
With High Honors  
Carolyn Beth Lunstrum  
With High Honors  
Paul David McCabe  
James Douglas Mercer  
Robin Neupert Merrell  
Hallie Ann Miller  
With High Honors  
Patricia Anne Nasmyth  
With High Honors  
James Jerome O'Connell  
Bradford Clare O'Connor  
Kay Louise Russell Owen  
Charles Henry Powers  
David Edward Randolph  
Frederick Leonard Ringe  
David Russell Roscoe  
John Allen Rosholt  
William Franklin Roy  
Ann Marie Scott  
Fred Dale Sharp  
Ella Gaye Springer  
With High Honors  
William Andrew Stellmon  
Carol Jean Temple  
James Everett Terrill  
With High Honors  
Marie Van Orman  
With High Honors  
Edward Daniel Van Thiel  
Rolland Lee Watenpaugh  
Merrell L. Watts  
Donald Duane Welton  
Gerald LeRoy Weston  
Kristen Winifred Bengston White  
Russell Charles Whitney, Jr.  
Dale LaVerne Williams  
Roger Leslie Williams  
Barbara Barry Yount

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Dayle Wayne Allen  
Louretta Frances Alley  
Eugene Anthony Arnone  
Iain Joseph Wilson Baxter  
Charles Ellison Bend  
Dora Mary Bretthauer  
Bruce Richard Cairns  
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Donald Wayne Chambers  
Clarence Eugene Chrisp  
John William Ciboci

Carole Lee Clark  
Carl Dave Corbit  
With High Honors  
John Allan Dodds  
Helen Louise Farmin  
William Ray Gavin  
Jerrald Eugene Giles  
Ted. H. Hallstrom  
Karen Louise Hayden  
Leslie Eldon Huntley  
With High Honors

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 Thomas Nathaniel Jones  
 Nick Tom Karagianes  
 Edward William Laird, Jr.  
 Richard Norman Loeppky  
 Beverly Anne Lord  
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 Eddie Miller  
 Leonard Peter Miller  
 Malcolm Duane Neely  
 Larry Dennis Nelsen  
 Kathryn Lunders O'Connor  
 Ladaun Darlene Olin  
 Peter Harold Ostrander  
 Suzanne Katherine Roffler  
     With High Honors  
 Charlotte Blanche Ruckman

Douglas Dean Rushfeldt  
 James Howard Shaw  
 Clyde Henry Sheppard  
 Phyllis Lou McAlexander Sheppard  
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 Dean Eldon Shippen  
 L. Wilson Slocum  
 Claude Daryle Smith  
 Richard Charles Sorenson  
 Delores Valene Thorpe  
 Dale Elwin Tritten  
     With High Honors  
 Roger Lindelle Tyson  
 George Kei Watanabe  
 Royce Allen Wise  
 George Wallis Woodbury, Jr.  
     With High Honors

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 Walter Ray Petersen  
     With High Honors

Janice Lou Willms

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 Patricia Ann Casey  
 Diana Kay Conrad  
     With High Honors  
 Elizabeth Ann Curtis  
 Charlotte Moon Darling  
 Eleanor Richardson Whitney Fowler  
 Doris Elaine Gissel  
     With High Honors  
 Mary Lou Morken Hanson  
 Lynnette Allene Hawkins  
 Patricia Jo Lawton Koster  
 Clara Ann Lowry  
 Lois Marie Lundquist  
 Beverly Jo Rasor McDonald  
 Mary Christine Nelson

Carma Elizabeth Nilson  
 Lucy Ellen Roberts Pline  
 Sharon Shuldberg  
 Jane Perry Simmons  
     With High Honors  
 Janemarie Smith  
     With High Honors  
 Kathryn Irene Smith  
 Dorothy Ann Sowa  
 Sylvia Christine Stoddard  
 Cecelia Ann Sullivan  
 Frances Marie Brown Thompson  
 Jean Louise Iverson Vasiloff  
 Freida Mae Wilson  
 Marlene Gay Zajanc  
 Kathryn Berry Zenier

## BACHELOR OF SCIENCE IN PRE-NURSING

Helen Marie Corbett

## BACHELOR OF MUSIC

William LeGrande Herr

Don Lee Royster  
     With High Honors

## BACHELOR OF ARCHITECTURE

Duane Ernest Gowland  
 William Grover Irvine  
 William Lew Kim-Yong

James Bert Mann  
 James Edward Shearer, Jr.  
 Athel Bernard York, Jr.

## College of Agriculture

## BACHELOR OF SCIENCE IN AGRICULTURE

William Donald Albertson  
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 Clark Eugene Bedow  
 James Darrel Bivens  
 Albert Lawrence Brackebusch

William Greenwood Carlson  
 George Major Carnie  
     With High Honors  
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 Herman Carlton Clemans

Mark Monroe Cole  
 Keith Leon Contor  
 Marion Franklin Fisk  
 William Alexander Gardner  
 Dale Leonard Geaudreau  
 Doyal John Gilson  
 James Edgar Givan  
 Harry Lloyd Hofstetter  
 William Harry Hutchinson  
 John David Jansen  
 Donald Wayne Johnson  
 Robert Jones  
 Gary Lee Kendall  
 Richard Lee Kerbs  
 Elwood Wayne Kintner  
 Douglas Nelson Klein  
 Jerry Wilson Knapp  
 Richard Arthur Koster  
     With High Honors  
 Glen Albert Linder  
 James Franklin Lockwood  
 James Michael McDonald  
 William Kenneth McDonald  
 William Marvin Mackie

Donald Ray Miller  
 August Christian Mueller  
 Denny Ve Naylor  
 Walter Charles Nelson  
 Thomas Taylor Nicholson  
 George James Patton  
 Edgar Richard Pickett  
 Dale Sherman Pline  
 William Russell Purcell  
 Anton Edwin Smutny  
 Tommy Sherrill Stroschein  
 Arthur Allen Swenson  
 Charles Frederick Swenson  
 Merle Ronald Thiessen  
 Byron Richard Thomas  
 Charles Melton Thomas  
 Melvin Andrew Van Dyke  
 Cletus Lawrence Von Tersch  
     With High Honors  
 Danny LaVerne Warfield  
 John Henry Warnke, Jr.  
 Norman Orlow Warren  
 James Elmer Wommack  
 David Vance Youmans

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 Anders Anderssen  
 Dale Lee Berg  
 Roald Bjornland  
 Charles Edward Brockway  
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 Joseph Francis Cerniglia  
 William Feng-Jye Chang  
 Frank Ralph Collett  
 Ralph Roy Halstead  
 John Loring Hatch  
 Leonard Carl Hayes  
 Richard Vaughn Iorns  
 Richard Erving Johnson

James Joseph King  
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 Tony Wing-Nin Lam  
 Leonard Francis McKinney  
 Gary Glenn McMichael  
 William LeRoy Meyer  
 Fred William Read, Jr.  
 Robert Estle Sargent  
 James Francis Sizemore  
 Gary Grant Sturman  
 Jack Bassett Taylor  
 Donald Lee Whitson  
 Donald Ellis Woodward

#### BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

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 Gerry J. Behunin  
 Arnold Brauff  
 Rodney Owen Brink  
     With High Honors  
 Jackie Earl Brown  
 Kenneth Max Chapman  
 Conrad Clayton Chatburn  
 Darrell Ray Christensen  
 Gerald Carl Clodius  
 Robert Eldon Cole  
 Ivan Lamar Crockett  
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 William H. Duvendack  
 Jerald Lee Edson  
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 Harry Albert Haycock  
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 Charles Rickman Higgins  
 Carl Eugene Hymas  
     With High Honors  
 Alden Dale Johnson  
 David Rozell Laws  
 Heng Mun Low  
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 David Epps Marshall

Charles Cleon Mitchell  
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 Milan Glen Moody  
 John Alden Neilson  
 Walter Richard Oelwein  
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 Edward Carl Stohs, Jr.  
 John Scharling Sullivan  
 Franklin Jesse Thompson  
 Lee Ray Thurber  
 Laroy Robert Tollbom  
 Gary Roland Tronson  
 Leslie Merrill Walker  
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     With High Honors  
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     With High Honors  
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 Charles William Wilson  
 Donald Dean Wilson  
 Thomas Elliott Wilson  
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Joseph Robert Climer	James Patrick McManus
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John Botkin Hoch	Arthur Donald Scholes
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Chong Cheong Ho	Harold Earl Thomas
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Bruce Alexander Lorenz	Alvin Lee Tuten
Richard Lynn Mackrill	John Reed Welker
Joseph Roosevelt Rippee	Neal E. Williams
Ronald Keith Rogstad	Charles Raymond Wilson
Dennis Marshall Ross	

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Oliver Benjamin Bacus	Leroy Fred Scherer
Hilary James Bieker	Dale Roy Smelcer
Joseph Ernest Cass	Roger Carville Sparks
Robert Blair Ellsworth	
Delbert Wayne Fitzsimmons	
With High Honors	

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Alonzo Franklin Davis	Robert Carson Huntley, Jr.
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Donald Edward Downen	Peter Gregory Snow
John David Hansen	Jay Leon Webb
Andrew Matthew Harrington, Jr.	Leon Richard Weeks
Vern Edwin Herzog, Jr.	Robert Starr Williams

## College of Mines

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	With High Honors

## BACHELOR OF SCIENCE IN METALLURGICAL ENGINEERING

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Carl Harry Hogberg	With High Honors
Monte Bert Shirts	

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David Grant Mickle, Jr.  
With High Honors

Charles Henry Rau

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Frank Anastacio Oneida  
Malkiat Singh Smagh  
Roger Chris Stoker  
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## College of Forestry

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Ryder Wesley Chronic  
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Raymond Ross Emerson  
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Gerald Raymond Flanik  
Joe LeRoy Frazier  
Henry Joseph Gerke, III  
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Darrol Lee Harrison  
Kenneth Elmo Harrison  
James Rodney Howland

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Carl Cooper Jacobs  
Rex S. Johnson  
Homer Parker Leach  
Ted Emmett Leach  
Jens Michael Lund  
Jerry LeRoy Mallet  
Warren Bruce Olney  
James Wallace Parker  
Ned Neal Pence  
Robert Edward Pizel  
Reed Eugene Ragan  
Thomas Lee Reveley  
Richard Thomas Rice  
LaRalle Richard Smith  
Jon Eric Soderblom  
Kenneth Earl Solt  
Arthur Edward Stauber  
Raphael John Steinhoff  
Stanley Warren Stroup  
Harry Arthur Teilmann  
Denton Robinson Vander Poel  
Leonard Allan Volland  
Hal A. Watson  
Warren Gene Weinel  
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Barry Lloyd Truman Westhaver

## College of Education

## BACHELOR OF SCIENCE IN EDUCATION

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Dixie Rae Young Anderson  
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With High Honors  
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Janice Elaine Berg  
Marilyn Clara Berrett  
Donna Belle Davie BeVan  
Shanon Newman Bivens  
Joseph Walter Bloomsburg  
Eleanor Harland Blume  
Jane Bonham  
Richard George Boyce  
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Walter Richard Bratton  
Marlene Mary Graveen Bruhn  
Esther Prins Burgess  
Morva Marion Casey  
Janice Ilene Chamberlain  
Edward Burns Clark, Jr.  
Gladyce Strohl Coble  
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Sandra Lee Compton  
Sharon Sue Connaughton  
Janet Frances Gabbert Corwin  
Ross Ralph Cotroneo  
Jeanne Marilyn Crane  
Patricia Anne Decker  
With High Honors  
Nike' Anne Doerr

George William Dowling  
 Marian Jean Dunning  
 Jean Elizabeth Eckert  
 Marjorie Hyatt Erstad  
 Gerald Michael Estes  
 Marifrances Geisendorfer Field  
 Patricia Joan Parke Foster  
 Fay Freeman  
 Sandra Lee Fritz  
 Frederick Harvey Fuller  
 Donna Marie Gale  
 Norman Francis Geertsen  
 Richard Allan Gilberts  
 Alice Louise Giroux  
 Gertrude Jean Carder Gosselin  
 Donna Annette Grant  
 Dennis Mack Gray  
 Kala Gresky  
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 Chester Deon Hall  
 Kenneth Seama Hall  
 Gladys Darlene Hansen  
 Robert Thomas Hardie  
     With High Honors  
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 Ora Gene Hill  
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 Alvin Thomas Holterman  
 Carole Jean Howerton  
 Jamie Junita Hughes  
 Nancy Lue Backstrom Hutchins  
 Thurston LeRoy Inglis  
 Nona Ruth Jantz  
 Mary Madsen Johnson  
 Ruth Giese Jones  
 Vonda Lee Jones  
 Kay Charles Kalbfleisch  
 Kay Susan Kelly  
     With High Honors  
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 Robert Henry Kiefer  
 Sherman Duane Kirk  
 Ralph Henry Kistler  
 Shirley Ann Kletke  
 Mary Sue Kniefel  
 James Alford Kohl  
 Karen Lee Kramer  
 Donald Allen Krier  
 Gordon Darrell Kreisher  
 Arlene Phyllis Denmler Laird  
 David Ray Laird  
 Leonard Leroy Lawr  
 J. D. Lawson  
 Laurence James Leahy, Jr.  
 George Franklin Linard  
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 John Edward Lynch  
 George Anthony McDougall  
 Geraldine Brewster McMinn  
 James King McPherson  
 Elna May Magnusson  
 Melva Mary Manville  
 Kent Bille Marboe  
 Carroll Brown Marchant  
 Barbara Osier Martin  
 Marcia Dawn Maxwell  
 Eugene Mecherikoff

Bonnie Gay Miller  
 Shannon Lillian Mitchell  
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 Paul Fredrick Muhonen  
 Wendell Herbert Myers  
 Diane Marie Olmsted  
 Harry Arnold Olson  
 Thomas Earl Olson  
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 Myrna Karen Palmer  
 Betty Rae Appling Park  
 Elizabeth Ann Passmore  
 Wade Naylor Patterson  
 Leroy Allen Payne, Jr.  
 Donald Harold Perry  
 Tonia Louise Peterson  
     With High Honors  
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     With High Honors  
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 John Paul Price  
 Patricia Rae Quane  
 Richard Radde  
 Freda Maurine Augustine Radermacher  
 James Mintford Rathburn  
 Betty Joan Rettinger  
 Rodney Emmett Richeson  
 Beverly J. Stocks Roussos  
 John Christ Roussos  
 Maxine Louise Miller Rowett  
 Melvin Ray Ruark  
 George Clifton Scharf, Jr.  
 Kathryn Carstens Scharf  
 Louis Arthur Schilke  
 Edward Clark Schrader  
 Richard Deryle Seely  
 William Shane  
 David Allen Shepherd  
 Dawn Marilyn Shipley  
 Fannie Susie Shriner  
 Esther Anne Smith  
 Jerry LeRoy Smythe  
 William Lavern Stephens  
 Shirley Gail Horning Sturts  
 Sonya Charis Bond Tate  
 Emily Joan Terry  
 Roberta Charlene Holes Thomas  
 Sharon Darlene Pease Thomas  
 Jean McCroy Thomsen  
 Robert Tresnit  
 Lois Jean Settle Troxell  
 Kay Kilby Vinson  
 Don Duane Vogler  
 Thomas Edmond Vopat  
 Elizabeth Jean Walker  
 Sherry Colleen Walsh  
 Nell Gregory Wells  
 Barbara Faye Wheeler  
 Nancy Mae Wheeler  
 Eva May Whitehead  
 Duane Edward Wilke  
 Donna Jean Lightner Williams  
 Norman Bachtel Wilson  
 Nancy Ann Woods  
 Delores Anne York

## BACHELOR OF SCIENCE IN MUSIC EDUCATION

Wayne Jay Benson  
 Helen Grace Furey Cannon  
 Sanford Eli Downing  
 Robert Elmer Hazelbaker  
 Susan Jane Holmes  
 Nettie Gayle Partner Hungerford

Lorana Cordelia Jones  
 Barbara Joan Neely  
 Cherrie Mary Anne Wood Tankersley  
     With High Honors  
 Faye Udell  
 William Lane Woods

## BACHELOR OF SCIENCE IN BUSINESS EDUCATION

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 Deanna Mae Geertsen  
 Gail Ruth Guernsey  
 Walt Lawrence Hardin  
 Shirley Ann Henriksson  
 With High Honors  
 Carol Winifred Wachal Holden

Virginia Louise Monson  
 With High Honors  
 Noretta Dianna Smith  
 Patricia Reeve Sparkman  
 Lucille Connors Strecker  
 Renee Marie Wallen

## College of Business Administration

## BACHELOR OF SCIENCE IN BUSINESS

Kent LeRoy Ahlschlager  
 Russell Dean Allan  
 Gerald Haight Allen  
 Pastal Roy Allen  
 William Eugene Anderson  
 Keith Patterson Bingham  
 With High Honors  
 Robert Lee Brady  
 David Gordon Campbell  
 Richard Earl Campbell  
 James Bowden Chrisman  
 Arthur Duane Clemons  
 Walter Dale Clemons  
 Thomas Fredrick Cook  
 Robert Gilmore Cowan  
 Donald Gordon Cushing  
 Thorndike Belmore Dame, Jr.  
 Harold Lee Damiano  
 Darrell John Daubert  
 William Wallace Deal  
 Mary Jane Deputy  
 James William Derr  
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 Arnold Joseph Eidam  
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 Eugene Elling Ellingson  
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 Robert Herman Felton  
 Michael Storaasli Floan  
 Edward William Foster  
 Dean Clair Gentry  
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 Lawrence Christian Kary  
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 Robert John Kopke  
 John Charles Lacy  
 Roy Roger Lee  
 Francis Patrick McGough  
 Leland Leroy Marley  
 Ronald Lee Mason  
 Michael Steven Meyer  
 Edro Wayne Miller  
 Janet Louise Novak  
 Fred Keith O'Brien  
 Leonard Stanley Oliver  
 James Richard Pavel  
 Virgil Loyd Phelps  
 Merlin Swendsen Powell  
 Wayne Allen Rigg, Jr.  
 Maxine Darlene Harris Riggers  
 June Lauree Robertson  
 Jamie Lafayette Rollier  
 Douglas Frederick Schedler  
 John George Schwenger  
 Julia Belle Semple  
 Harold Alvin Simmons  
 Theodore William Slater  
 Willis Eugene Smith  
 With High Honors  
 George Erich Sprung  
 Francis Eugenia Stockdale  
 With High Honors  
 Jack Joseph Streibick  
 With High Honors  
 Joe Subia  
 Robert Dean Thomas  
 Bud Ellison Thompson  
 Robert Eugene Vallat  
 Duane Wilber Watson  
 Robert Stephen Watson  
 Anna Charlene Wells  
 Delwyn Charles Williams  
 Joseph Gregg Wilson, Jr.

## ADVANCED DEGREES

## MASTER OF ARTS

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 Floyd Dale Fairweather  
 Charles Benjamin Flatt

Richard Dee Humphrey  
 Michael Grogan McQuade

## MASTER OF SCIENCE

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 William John French  
 Helmi Shafik Habib  
 Robert William Holder

George David Joanou  
 Richard Wallace Keith  
 Robert Verner Kester  
 Archie J. Latham

Ernel Loren Luther  
Joseph William Oppe  
William Eugene Payne  
Dallas Thurston Pence

Jay Allan Waitz  
Ralph William Walker  
Herbert Dale Warren

#### MASTER OF SCIENCE IN HOME ECONOMICS

Bernice Smith Davis

#### MASTER OF SCIENCE IN AGRICULTURE

Rodney William Bovey  
George Major Carnie  
Donald Hudson Conrad  
Carl Eugene Crisp  
Robert Church Day  
Edward Paul Duren  
Gary Hilton Farmer  
Robert Evan Higgins

Don Morgan Huber  
John Stoner McDonald  
Frank Davis Morrison  
Donald LaVerne Perry  
Clarence James Peterson, Jr.  
Charles Robert Staib III  
Darrell Jack Weber

#### MASTER OF SCIENCE IN CIVIL ENGINEERING

Clifford Albert Taylor

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David Ray Cunningham  
Bill Everett Dozer  
Albert Gail Hamp

Lee Medill Maxwell  
Goang-Yih Niu  
Pyati Sudhindranath

#### MASTER OF SCIENCE IN MECHANICAL ENGINEERING

Glen Earl Brandvold

Leo Francis Kocher

#### MASTER OF SCIENCE IN CHEMICAL ENGINEERING

Rowland Earl Felt  
Cheng-Chien Hsu  
Hsiang-Sung Lu

Lewis Grant Neal  
George Rey

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George Lukens Bloomsburg  
Everett Henry Davis  
Paul Kenneth Fanning  
Lynn F. Johnson

Robert Lloyd McFall  
Larry Gene Williams  
Dossie William Works

#### MASTER OF SCIENCE IN METALLURGICAL ENGINEERING

Arden Lee Bement

William Wesley Staley, Jr.

#### MASTER OF SCIENCE IN GEOLOGY

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Billy Francis Kern  
Richard Sigmund Kopp  
Denis Le Moine

Andrew Jerome Nalwalk  
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Lester Oscar Storey

#### MASTER OF SCIENCE IN FORESTRY

George David Frazier  
Robert Bailey Hill  
Robert Earl Jones

Robert Joseph Robel  
Jon Matthew Skovlin  
Don Childs Stanton

## UNIVERSITY OF IDAHO

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Edward Wayne Bronson  
Wayne George Foltz

Somphong Pachotikarn  
Ronaldo Algadoal Guedes Pereira  
Mouine Fahed Zoghet

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Mary Ellen Blodgett Bottjer  
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Jackie Lee Bryan  
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Nell Elizabeth Carnie  
Sumner Brooks Carpenter  
Moire Clayne Charters  
Mildred Garth Christian  
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Clarke Curtis Coover  
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Donnelly Emmett O'Neill  
Cecil Andrew Olsen  
Morgan Plant  
Dorothy May Purser  
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Richard Benedict Roche  
Rex Steinbeck Roper  
Ramon Royal Ross  
Alfred E. Stams  
James Warren Todd  
James Louis Trowbridge  
Donald Edmund White  
Lorine Montana Bowers Wilkinson  
Monte Glen Worle  
Jane Ackerman Wyllie

## MASTER OF SCIENCE IN MUSIC EDUCATION

Richard Griffiths Mansfield  
George Laurance Mowry  
Nona Franklin Olsen

Robert Stephens Staley  
Elmer Wilford Stitzlein, Jr.

## MASTER OF BUSINESS EDUCATION

Raymond William Heley

G. C. Thompson

## PROFESSIONAL DEGREES

## CIVIL ENGINEER

Arval Lloyd Anderson

William Vaughn Iorns

## HONORARY DEGREES

## DOCTOR OF LAWS

Lawrence H. Chamberlain, New York City, N. Y.

## DOCTOR OF LITERATURE

Inez Callaway Robb, New York City, N. Y.

## DOCTOR OF SCIENCE

Carl G. Paulsen, Washington, D. C.

## CITATION OF MERIT UPON RETIREMENT

LEWIS M. MESSERSMITH, *Shop Instructor in Agricultural Engineering and Assistant Shop Technologist, Jr.*

## COMMISSIONS

APPOINTED AS SECOND LIEUTENANTS IN THE  
UNITED STATES ARMY

William Donald Albertson  
Alonzo Franklin Davis

Charles Cleon Mitchell  
Theodore Albert Schumaker

APPOINTED AS SECOND LIEUTENANTS IN THE  
UNITED STATES ARMY RESERVE

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Henry Ronnie Blecha  
Keith Patterson Bingham  
Bill Bonnichsen  
Rodney Owen Brink  
Charles Edward Brockway  
Bruce Richard Cairns  
Stanley Barton Carpenter  
Joseph Francis Cerniglia  
William Wallace Deal  
John Douglas Henderson  
Robert John Hentges  
Robert John Kopke  
Richard Arthur Koster

Paul David McCabe  
James Michael McDonald  
William Kenneth McDonald  
John Alden Neilson  
Wade Naylor Patterson  
Thomas Lee Reveley  
Frederick Leonard Ringe  
John Allen Rosholt  
Gerald Louis Schierman  
Floyd Frederick Soderstrom  
Gary Grant Sturman  
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UNITED STATES MARINE CORPS RESERVE

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Jerrald E. Giles

Jerry L. Smythe

TO BE COMMISSIONED AS ENSIGN IN THE UNITED STATES NAVAL RESERVE  
UPON COMPLETION OF SUMMER TRAINING OR SUMMER SCHOOL

Ronald R. Thomas

UNIVERSITY OF IDAHO

To BE COMMISSIONED AS SECOND LIEUTENANTS  
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Val R. Johnson

Gene A. Kisling  
Richard L. Mackrill  
Clyde H. Sheppard  
Willis E. Smith  
Cletus L. Von Tersch

To BE COMMISSIONED AS SECOND LIEUTENANTS  
UPON COMPLETION OF SUMMER CAMP

Harold R. Hilker



# University of Idaho Enrollment Table

## CONSOLIDATED ENROLLMENT, SECOND SEMESTER 1958-59.

As of March 13, 1959. (Not complete for the semester).

COLLEGE, COURSE OR CURRICULUM	GRADUATES			SENIORS			JUNIORS			SOPHOMORES			FRESHMEN			SPECIAL TRANSIENT			TOTAL BY CURRICULA			TOTAL BY COLLEGES										
	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T								
COLLEGE OF LETTERS AND SCIENCE	55	13	68	115	69	184	128	88	216	146	120	266	229	174	403	2	16	18							675	480	1155					
Arts	14	8	22	47	27	74	56	42	98	73	55	128	95	79	174		5	5	285	216	501											
Science	40	3	43	42	10	52	46	12	58	47	26	73	86	36	122		3	3	261	90	351											
Pre-Medical Studies				4		4	9		9	7	1	8	16		16				36	1	37											
Home Economics		2	2		27	27		32	32		34	34		51	51		4	4		150	150											
Pre-Nursing Studies					2	2		2	2		3	3		2	2					9	9											
Music	1		1	5	2	7					3	3		2	2	1		1	9	2	11											
Architecture				17	1	18	17		17	18		18	29	1	30				81	2	83											
Non-Degree										1	1	2	1	5	6	1	4	5	3	0	13											
COMBINED ARTS AND LAW				7		7	4		4	1	1	2	1		1										13		13					
COLLEGE OF AGRICULTURE	47	1	48	51		51	52		52	62	2	64	92	2	94										304	5	309					
COLLEGE OF ENGINEERING	36		36	176		176	160		160	171	1	172	252	1	253										795	2	797					
Civil Engineering	5		5	31		31	46		46	34		34	43		43				159		159											
Electrical Engineering	10		10	66		66	58		58	67		67	78		78				279		279											
Mechanical Engineering	5		5	46		46	34		34	48		48	70		70				203		203											
Chemical Engineering	8		8	21		21	16		16	13	1	14	52	1	53				110	2	112											
Agricultural Engineering	8		8	12		12	6		6	9		9	9		9				44		44											
COLLEGE OF LAW				19		19	12		12	14	1	15																				
COLLEGE OF MINES	17		17	40		40	41		41	33		33	36		36										167		167					
Mining Engineering				4		4	4		4	5		5	5		5				18		18											
Metallurgical Engineering	7		7	6		6	2		2	3		3	7		7				25		25											
Geological Engineering	1		1	8		8	8		8	11		11	13		13				41		41											
Geology	9		9	20		20	25		25	14		14	11		11				79		79											
Geography				2		2	2		2										4		4											
COLLEGE OF FORESTRY	21		21	79		79	60		60	56	1	57	84		84										300	1	301					
COLLEGE OF EDUCATION	53	23	76	73	92	165	102	135	237	77	107	184	68	110	178		2	2							373	469	842					
Education	48	20	68	66	83	149	95	114	209	69	82	151	65	85	150		2	2	343	386	729											
Music Education	4	2	6	5	2	7	6	8	14	7	7	14	1	9	10				23	28	51											
Business Education	1	1	2	2	7	9	1	13	14	1	18	19	2	16	18				7	55	62											
COLLEGE OF BUSINESS ADM.	6	1	7	99	10	109	116	8	124	92	18	110	130	51	181	2	3	5							445	91	536					
COMBINED BUSINESS AND LAW				3		3				1		1													4		4					
UNCLASSIFIED—NO DEGREE	27	50	77																						27	50	77					
TOTAL IN RESIDENCE	262	88	350	662	171	833	675	231	906	653	250	903	892	338	1230	4	21	25				3148	1099	4247								
SPECIAL COURSES:																																
Artificial Insemination																14		14							18	5	23					
Special Music																4	5	9														
NON-RESIDENCE INSTRUCTION	College:			779	788	1567	High School:	171	144	315													950	932	1882							
SUMMER SESSION (1958)	Graduates:			265	130	395	Undergrad.	359	326	685				Special:	62	48	110							686	504	1190						
EXTENSION COURSES																						155	444	599								
IN-ABSENTIA																						16	5	21								
G.E.N.E.																						50		50								
N.R.T.S.																						146	1	147								
GRAND TOTAL																						5169	2990	8159								
Deducted Duplications																						543	424	967								
NET TOTAL																						4626	2566	7192								

ENROLLMENT STATISTICS

# University of Idaho Enrollment Table

## CONSOLIDATED ENROLLMENT, SECOND SEMESTER 1957-58.

End of semester, June 7, 1958.

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UNIVERSITY OF IDAHO

COLLEGE, COURSE OR CURRICULUM	GRADUATES			SENIORS			JUNIORS			SOPHOMORES			FRESHMEN			SPECIAL TRANSIENT			TOTAL BY CURRICULA			TOTAL BY COLLEGES				
	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T		
COLLEGE OF LETTERS AND SCIENCE	35	13	48	121	68	189	119	87	206	157	122	279	189	179	368	2	12	14	263	214	477	623	481	1104		
Arts	12	8	20	47	30	77	52	31	83	67	62	129	85	81	166	...	2	2	252	86	338	...	...	...		
Science	23	1	24	62	12	74	36	15	51	59	17	76	71	41	112	1	...	1	40	4	44	...	...	...		
Pre-Medical Studies	...	...	...	5	...	5	9	2	11	16	...	16	10	2	12	...	...	...	...	147	147	...	...	...		
Home Economics	...	4	4	...	25	25	...	34	34	...	36	36	...	45	45	...	3	3	...	14	15	...	...	...		
Pre-Nursing Studies	...	...	...	...	...	...	...	3	3	...	6	6	...	1	5	6	...	...	...	...	6	2	8	...	...	...
Music	...	...	...	1	1	2	2	1	3	...	...	...	...	...	2	...	...	...	...	55	1	56	...	...	...	
Architecture	...	...	...	6	...	6	18	...	18	15	...	15	16	1	17	...	...	...	6	13	19	...	...	...		
Non-Degree	...	...	...	...	...	...	2	1	3	...	1	1	4	4	8	...	7	7	...	...	...	...	...	...		
COMBINED ARTS AND LAW	...	...	...	8	...	8	4	...	4	2	...	2	...	...	...	...	...	...	...	...	...	14	...	14		
COLLEGE OF AGRICULTURE	37	1	38	71	1	72	53	...	53	61	1	62	76	4	80	1	...	1	299	7	306	...	...	...		
COLLEGE OF ENGINEERING	25	...	25	145	...	145	185	...	185	175	...	175	248	1	249	...	...	...	778	1	779	...	...	...		
Civil Engineering	2	...	2	27	...	27	39	...	39	40	...	40	43	...	43	...	...	...	151	...	151	...	...	...		
Electrical Engineering	5	...	5	40	...	40	71	...	71	63	...	63	80	...	80	...	...	...	259	...	259	...	...	...		
Mechanical Engineering	5	...	5	47	...	47	42	...	42	42	...	42	77	...	77	...	...	...	213	...	213	...	...	...		
Chemical Engineering	6	...	6	21	...	21	20	...	20	19	...	19	35	1	36	...	...	...	101	1	102	...	...	...		
Agricultural Engineering	7	...	7	10	...	10	13	...	13	11	...	11	13	...	13	...	...	...	54	...	54	...	...	...		
COLLEGE OF LAW	...	...	...	13	...	13	18	1	19	8	...	8	...	...	...	1	...	1	...	...	...	40	1	41		
COLLEGE OF MINES	14	...	14	28	1	29	42	...	42	46	...	46	28	...	28	...	...	...	158	1	159	...	...	...		
Mining Engineering	1	...	1	2	...	2	4	...	4	6	...	6	4	...	4	...	...	...	17	...	17	...	...	...		
Metallurgical Engineering	4	...	4	9	...	9	6	...	6	6	...	6	1	...	1	...	...	...	26	...	26	...	...	...		
Geological Engineering	...	...	...	3	...	3	9	...	9	10	...	10	7	...	7	...	...	...	29	...	29	...	...	...		
Geology	9	...	9	13	...	13	21	...	21	23	...	23	14	...	14	...	...	...	80	...	80	...	...	...		
Geography	...	...	...	1	1	2	2	...	2	1	...	1	2	...	2	...	...	...	6	1	7	...	...	...		
COLLEGE OF FORESTRY	25	...	25	70	...	70	69	...	69	59	...	59	77	1	78	2	...	2	...	...	...	302	1	303		
COLLEGE OF EDUCATION	43	24	67	77	86	163	76	93	169	87	138	225	68	100	168	...	3	3	326	364	690	351	444	795		
Education	42	23	65	72	68	140	69	79	148	78	116	194	65	75	140	...	3	3	16	31	47	...	...	...		
Music Education	1	...	1	1	10	11	6	3	9	6	11	17	2	7	9	...	...	...	9	49	58	...	...	...		
Business Education	...	1	1	4	8	12	1	11	12	3	11	14	1	18	19	...	...	...	...	...	...	450	67	517		
COLLEGE OF BUSINESS ADM.	9	...	9	92	5	97	104	12	116	117	14	131	126	30	156	2	6	8	6	...	6	43	35	78		
COMBINED BUSINESS AND LAW	...	...	...	3	...	3	...	...	...	...	...	...	3	...	3	...	...	...	...	...	...	...	...	...		
UNCLASSIFIED—NO DEGREE	43	34	77	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...		
SUB-TOTALS	231	72	303	628	161	789	670	193	863	712	275	987	815	315	1130	8	22	30	3064	1038	4102	22	3	25		
	Less Mid-Year Graduates duplicated in Graduate and Undergraduate Classes:																									
TOTAL IN RESIDENCE																							3042	1035	4077	
SPECIAL COURSES:																							17	5	22	
Artificial Insemination																							17	...	...	
Music																							...	5	5	
NON-RESIDENCE INSTRUCTION	College:	1121	904	2025	High School:	132	141	273											1253	1045	2298					
SUMMER SESSION (1957)	Graduates:	205	123	328	Undergrads:	294	264	558	Special:	122	61	183							621	448	1069					
EXTENSION COURSES																							113	337	450	
IN-ABSENTIA																							14	2	16	
G.E.N.E.																							125	1	126	
N.R.T.S.																							140	2	142	
GRAND TOTAL																							5325	2875	8200	
Deducted Duplications																							473	345	818	
NET TOTAL																							4852	2530	7382	

**GEOGRAPHICAL DISTRIBUTION OF STUDENTS**

**Office of the Registrar**

Consolidated - End of Second Semester June 6, 1959

SUMMARY

	In Residence	Summer School	Correspondence	Class Extension	In-Absentia	Special Courses
IDAHO .....	3306	886	1674	806	16	184
Other States and Territories .....	823	278	448	48	7	58
Foreign Countries .....	105	26	11	1	1	1
<b>TOTALS</b> .....	<b>4234</b>	<b>1190</b>	<b>2133</b>	<b>854</b>	<b>23</b>	<b>242</b>

	In Residence	Summer School	Correspondence	Class Extension	In-Absentia	Special Courses
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COUNTIES IN IDAHO

Ada .....	299	44	176	189	2	1
Adams .....	14	4	18	1	2	...
Bannock .....	60	8	74	2	...	...
Bear Lake .....	13	...	3	1	...	...
Benewah .....	40	14	19	6	...	...
Bingham .....	64	9	36	...	...	...
Blaine .....	22	2	19	8	...	...
Boise .....	1	...	7	...	...	...
Bonner .....	122	22	29	16	1	...
Bonneville .....	99	21	46	1	162	...
Boundary .....	38	14	14	1	1	...
Butte .....	11	4	11	...	...	...
Camas .....	12	4	8	...	...	...
Canyon .....	183	35	142	100	3	...
Caribou .....	6	1	7	...	...	...
Cassia .....	43	11	26	4	...	...
Clark .....	1	...	...	...	...	...
Clearwater .....	53	19	43	1	1	...
Custer .....	16	1	12	...	...	...
Elmore .....	37	12	31	16	...	...
Franklin .....	2	3	1	2	1	...
Fremont .....	34	3	10	2	...	...
Gem .....	41	11	42	41	...	...
Gooding .....	65	18	47	19	1	...
Idaho .....	100	37	61	22	1	1
Jefferson .....	27	4	3	1	1	...
Jerome .....	62	6	46	...	...	...
Kootenai .....	153	38	96	50	1	...
Latah .....	713	295	188	75	3	9
Lemhi .....	32	5	23	1	...	...
Lewis .....	52	15	37	18	1	...
Lincoln .....	23	12	6	6	1	...
Madison .....	28	1	4	1	...	...
Minidoka .....	39	5	19	2	2	...
Nez Perce .....	229	92	82	92	2	...
Oneida .....	8	4	2	...	...	...
Owyhee .....	19	2	20	...	...	...
Payette .....	64	10	25	28	1	...
Power .....	10	3	14	...	...	...
Shoshone .....	164	43	67	53	...	...
Teton .....	4	1	1	...	...	...
Twin Falls .....	237	29	105	8	1	...
Valley .....	22	15	17	29	...	...
Washington .....	39	9	37	10	1	...
<b>TOTAL</b> Counties in Idaho .....	<b>3306</b>	<b>886</b>	<b>1674</b>	<b>806</b>	<b>16</b>	<b>184</b>

STATES AND TERRITORIES  
OTHER THAN IDAHO

Alabama .....	...	...	2	...	...	...
Alaska .....	8	...	12	...	...	...
Arizona .....	7	1	...	...	...	...
Arkansas .....	4	1	...	...	...	...
California .....	141	49	87	...	2	...
Canal Zone .....	1	...	1	...	...	...
Colorado .....	6	8	...	...	...	...
Connecticut .....	7	2	2	2	...	...
Delaware .....	2	1	2	...	...	...
District of Columbia .....	6	1	2	...	...	...
Florida .....	6	...	4	...	...	...
Georgia .....	3	1	...	...	...	...
Hawaii .....	7	1	1	...	...	...
Illinois .....	46	11	9	...	...	...
Indiana .....	10	3	1	...	...	...
Iowa .....	9	8	2	...	...	...
Kansas .....	9	...	7	...	...	...
Kentucky .....	3	1	1	...	...	...
Louisiana .....	...	...	3	...	...	...
Maine .....	2	...	...	...	...	...
Mariana Islands ..	1	1	...	...	...	...
Maryland .....	6	1	1	...	1	...
Massachusetts .....	9	4	2	...	...	...
Michigan .....	20	1	7	...	...	...
Minnesota .....	11	4	1	...	...	...
Mississippi .....	...	...	2	...	...	...
Missouri .....	5	6	6	1	...	...
Montana .....	17	6	16	...	...	...
Nebraska .....	12	5	7	...	1	...
Nevada .....	6	3	16	...	...	...
New Hampshire ..	1	1	...	...	...	...
New Jersey .....	17	3	4	...	...	...
New Mexico .....	4	4	2	...	...	...
New York .....	31	4	34	1	...	...
North Carolina ..	1	...	11	...	...	...
North Dakota .....	21	...	4	...	...	...
Ohio .....	18	5	6	...	...	...
Oklahoma .....	4	1	5	...	...	...
Oregon .....	44	31	33	17	1	...
Pennsylvania .....	17	1	5	...	...	...
Puerto Rico .....	1	...	...	...	...	...
Rhode Island .....	2	...	...	...	...	...
South Carolina ..	...	...	8	...	...	...
South Dakota .....	7	3	1	...	...	...
Tennessee .....	...	1	...	...	...	...
Texas .....	7	2	12	...	...	...
Utah .....	5	2	8	...	...	...
Vermont .....	2	...	...	...	...	...
Virginia .....	1	1	7	...	...	...
Washington .....	253	89	97	27	2	58
West Virginia .....	1	...	1	...	...	...
Wisconsin .....	18	7	3	...	...	...
Wyoming .....	4	4	7	...	...	...

Total  
(Other States  
and Territories) 823 278 448 48 7 58

	In Residence	Summer School	Correspondence	Class Extension	In-Absentia Special Courses		In Residence	Summer School	Correspondence	Class Extension	In-Absentia Special Courses	
FOREIGN COUNTRIES												
Argentina	2	...	...	...	...	Jamaica	1	...	...	...	...	
Austria	1	...	...	...	...	Japan	1	...	...	...	...	
Bolivia	1	...	...	...	...	Jordan	1	...	...	...	...	
Brazil	1	1	...	...	...	Korea	3	...	...	...	...	
Canada	41	7	10	...	...	Lebanon	2	...	...	...	...	
China	10	5	...	...	...	Malaya	1	1	...	...	...	
Egypt	1	1	...	...	...	Mexico	9	5	...	...	...	
England	6	1	...	...	...	Norway	1	...	...	...	...	
Germany	1	1	...	...	...	Panama	1	...	...	...	...	
Holland	1	...	...	...	...	Syria	1	...	...	...	...	
Honduras	...	...	1	...	...	Thailand	2	...	...	...	...	
Hungary	1	...	...	...	...	Turkey	2	...	...	...	...	
India	12	3	...	...	...	Totals (Foreign Countries)	105	26	11	...	...	
Iran	2	1	...	...	...							

**GEOGRAPHICAL DISTRIBUTION OF STUDENTS**

**Office of the Registrar**

Consolidated - Second Semester 1957-58 - End of Semester June 8, 1958

**SUMMARY**

	In Residence	Summer School	Correspondence	Class Extension	In-Absentia	Special Courses
IDAHO	3166	773	1473	655	11	163
Other States and Territories	815	242	371	40	5	129
Foreign Countries	112	10	12	...	...	...
<b>TOTAL</b>	<b>4093</b>	<b>1025</b>	<b>1856</b>	<b>695</b>	<b>16</b>	<b>292</b>

	In Residence	Summer School	Correspondence	Class Extension	In-Absentia Special Courses		In Residence	Summer School	Correspondence	Class Extension	In-Absentia Special Courses		
COUNTIES IN IDAHO													
Ada	273	35	206	162	1	2	Gooding	66	17	64	29	...	1
Adams	15	4	8	...	...	...	Idaho	84	35	32	...	...	...
Bannock	57	7	100	1	...	...	Jefferson	31	4	5	...	...	...
Bear Lake	22	...	6	2	...	...	Jerome	41	6	34	3	...	1
Bennewah	46	13	13	2	...	...	Kootenai	149	29	53	3	...	...
Bingham	55	5	34	1	...	2	Latah	673	266	143	45	2	5
Blaine	24	6	16	1	1	...	Lemhi	31	1	17	1	...	...
Boise	1	1	7	...	...	...	Lewis	52	12	18	1	...	...
Bonner	114	31	34	29	1	...	Lincoln	32	5	6	3	...	...
Bonneville	103	18	26	3	1	146	Madison	27	3	1	1	...	1
Boundary	28	5	8	...	...	...	Minidoka	30	2	23	2	...	...
Butte	7	5	12	1	...	...	Nez Perce	217	64	49	100	2	1
Camas	14	4	7	...	...	...	Oneida	11	...	1	...	...	...
Canyon	179	22	110	86	...	1	Owyhee	21	...	20	4	...	...
Caribou	11	2	8	...	...	...	Payette	51	8	38	19	...	...
Cassia	49	7	18	2	...	...	Power	11	...	23	...	...	...
Clark	3	...	...	...	...	...	Shoshone	165	34	57	54	...	...
Clearwater	54	24	34	30	...	...	Teton	6	...	2	...	...	...
Custer	16	1	10	...	...	...	Twin Falls	225	50	121	4	...	...
Elmore	37	11	36	32	...	1	Valley	17	9	13	...	...	...
Franklin	4	1	2	1	...	...	Washington	46	7	29	2	1	...
Fremont	30	2	7	2	...	1	<b>TOTAL</b>						
Gem	38	17	22	27	...	1	Counties in Idaho	3166	773	1473	655	11	163

	In Residence	Summer School	Correspondence	Class Extension	In-Absentia	Special Courses
<b>STATES AND TERRITORIES OTHER THAN IDAHO</b>						
Alabama	.....	.....	3	.....	.....	.....
Alaska	7	1	9	.....	.....	.....
Arizona	6	1	.....	.....	.....	1
Arkansas	3	.....	4	.....	.....	.....
California	141	36	72	.....	.....	.....
Colorado	5	1	3	.....	.....	.....
Connecticut	10	1	1	.....	.....	.....
Delaware	1	1	.....	.....	.....	.....
District of Columbia	3	2	.....	.....	.....	.....
Florida	3	1	2	.....	.....	.....
Georgia	1	.....	6	.....	.....	.....
Hawaii	5	3	1	.....	1	.....
Illinois	47	10	7	.....	.....	.....
Indiana	11	6	1	.....	.....	.....
Iowa	14	1	.....	.....	.....	.....
Kansas	1	2	3	.....	.....	.....
Kentucky	4	.....	2	.....	.....	.....
Louisiana	.....	.....	2	.....	.....	.....
Maine	2	.....	1	.....	.....	.....
Mariana Islands	2	.....	.....	.....	.....	.....
Maryland	7	1	1	.....	.....	.....
Massachusetts	9	1	1	.....	.....	.....
Michigan	21	3	3	.....	.....	.....
Minnesota	11	1	1	.....	.....	.....
Mississippi	.....	.....	3	.....	.....	.....
Missouri	7	1	4	.....	.....	.....
Montana	24	8	19	.....	.....	.....
Nebraska	9	4	4	.....	.....	.....
Nevada	5	5	17	.....	.....	.....
New Hampshire	.....	1	.....	.....	.....	.....
New Jersey	21	4	4	.....	.....	.....
New Mexico	2	8	1	.....	.....	.....
New York	26	3	23	.....	.....	.....
North Carolina	2	.....	6	.....	.....	.....
North Dakota	16	3	4	.....	1	.....
Ohio	20	4	2	.....	.....	.....
Oklahoma	4	2	4	.....	.....	.....
Oregon	45	27	29	11	.....	1
Pennsylvania	17	3	4	.....	.....	.....
Rhode Island	1	.....	1	.....	.....	.....
South Carolina	1	.....	4	.....	.....	.....

	In Residence	Summer School	Correspondence	Class Extension	In-Absentia	Special Courses
South Dakota	5	7	.....	.....	.....	.....
Texas	5	2	13	.....	.....	.....
Utah	6	2	5	.....	.....	.....
Vermont	.....	2	.....	.....	.....	.....
Virginia	6	2	7	.....	.....	.....
Washington	247	75	83	29	3	127
Wisconsin	24	8	2	.....	.....	.....
Wyoming	8	2	4	.....	.....	.....
Total (Other States and Territories)	815	242	371	40	5	129

FOREIGN COUNTRIES

Argentina	1	.....	.....	.....	.....	.....
Austria	.....	.....	1	.....	.....	.....
Bolivia	1	.....	.....	.....	.....	.....
Brazil	.....	.....	.....	.....	.....	.....
Canada	41	6	11	.....	.....	.....
China	5	.....	.....	.....	.....	.....
Columbia	1	.....	.....	.....	.....	.....
Denmark	1	.....	.....	.....	.....	.....
Ecuador	2	.....	.....	.....	.....	.....
Egypt	2	.....	.....	.....	.....	.....
England	9	.....	.....	.....	.....	.....
France	1	.....	.....	.....	.....	.....
Germany	2	.....	.....	.....	.....	.....
Hungary	1	.....	.....	.....	.....	.....
India	10	.....	.....	.....	.....	.....
Iran	3	2	.....	.....	.....	.....
Italy	1	.....	.....	.....	.....	.....
Jamaica	1	.....	.....	.....	.....	.....
Jordan	2	.....	.....	.....	.....	.....
Korea	1	.....	.....	.....	.....	.....
Malaya	16	2	.....	.....	.....	.....
Norway	1	.....	.....	.....	.....	.....
Panama	1	.....	.....	.....	.....	.....
Philippines	1	.....	.....	.....	.....	.....
Scotland	1	.....	.....	.....	.....	.....
Syria	1	.....	.....	.....	.....	.....
Thailand	2	.....	.....	.....	.....	.....
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