Idaho State University

Graduate Catalog 2009-2010
Volume 62

Tom Jackson, Ph.D., Dean

Graduate School
Idaho State University
921 South 8th Avenue, Stop 8075
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Policy Statement Concerning Graduate Catalog Contents

Catalogs, bulletins, course or fee schedules shall not be considered as binding contracts between Idaho State University and students. The University reserves the right at any time, without advance notice, to: (a) withdraw or cancel classes, courses, and programs; (b) change fees schedule; (c) change the academic calendar; (d) change admissions and registration requirements; (e) change the regulations and requirements governing instruction in, and graduation from, the University and its various divisions; and (f) change any other regulations affecting students. Changes shall go into force whenever the proper authorities so determine, and shall apply not only to prospective students but also to those who are matriculated at the time in the University. When economic and other conditions permit, the University tries to provide advance notice of such changes.

Students enrolled in a program that is closed, relocated, or discontinued should be given notice of the closure as soon as is practical. Notwithstanding any other provision of State Board of Education policy, University policy, or University catalog statements to the contrary, arrangements should be made for enrolled students to complete affected programs in a timely manner and with minimum interruptions. When there is a similar program within the institutions governed by the Board, an affected student will be provided with information on transferring to that program, although admission to any such program is contingent upon the availability of a position and the student meeting all applicable admission requirements. If there is no similar program available within the institutions governed by the Board or the student is not able to gain admission to a similar program, the University will make reasonable efforts to place the student in a related or comparable program within the University. If none is available, the University will make reasonable efforts to assist the student in locating to another program at the University or elsewhere for which he or she is qualified.

Postmaster

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Dean Academic Programs, Idaho State University - Meridian.....Bessie Katsilometes, M.A.

Graduate Council Membership, 2009-2010

Area	Name	Mail Stop	Phone
Arts and Sciences			
Humanities/Fine Arts	Dr. Russell Wahl	8056	282-2392
Natural Sciences	Dr. Rosemary Smith	8007	282-4918
Social Sciences	Dr. Chris Loether	8114	282-2629
Business	Dr. Joanne Tokle	8020	282-2934
Education	Dr. Mark Neill	8059	282-5646
Engineering	Dr. Marco Schoen	8060	282-4377
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Pharmacy	Dr. James Bigelow	8334	282-4259
Technology	Dr. Karen Scott	8081	282-2923
At-Large Representative	Dr. Alex Urfer	8045	282-4095
Graduate Student Representative		8075	282-2398
Presiding	Dr. Tom Jackson, Dean Graduate School	8075	282-2490
Ex-Officio	Dr. Cynthia Pemberton, Associate Dean Graduate School	8075	282-3140
Ex-Officio	Dr. Debra Easterly, Director of Research Development and Compliance, Office of Research	8130	282-2618

Graduate School Programs

College of Arts and Sciences

Program	Degree	Chair/Director	Stop Number	Phone
Anthropology	M.A., M.S.	Dr. Ernest 'Skip' Lohse	8005	282-2629
Art	M.F.A.	Prof. Rudy Kovacs	8004	282-2361
Biological Sciences	M.S., Ph.D. in Biology (Botany and Zoology options) M.S., in Microbiology, M.N.S., D.A. in Biology M.S. in Clinical Laboratory Science	Dr. Terry Bowyer	8007	282-3765
Chemistry	B.S./M.S., M.S., M.N.S.	Dr. Robert Holman	8023	282-4444
Communication and Rhetorical Studies	M.A. in Organizational Communication M.A. in Rhetorical Studies	Dr. James DiSanza	8115	282-3695
English	M.A., Ph.D., TESOL Certificate	Dr. Jessica Winston	8056	282-2478
Geosciences	M.S., M.N.S. M.S. with Environmental Geoscience Emphasis GeoTechnology Certificate, M.S. in Geographical Information Science	Dr. Dave Rodgers	8072	282-3365
History	M.A. in Historical Resources Management	Dr. Allan Christelow	8079	282-2379
Mathematics	M.A. in Mathematics for Secondary Teachers M.S., D.A.	Dr. Catherine Kriloff	8085	282-3350
Physics	M.S., M.N.S. M.S with Health Physics Emphasis Ph.D. in Applied Physics Ph.D. in Engineering and Applied Science - See College of Engineering	Dr. Steven Shropshire	8106	282-2350
Political Science	M.A., M.P.A., D.A.	Dr. Wayne Gabardi	8073	282-2211
Psychology	M.S. (General Experimental Psychology) Ph.D. (Clinical Psychology)	Dr. Kandi Turley-Ames	8112	282-2462
Sociology	M.A.	Dr. Ann Hunter	8114	282-2170
Theatre	M.A.	Mr. Chad Gross/ Ms. Tara Johnson	8006	282-3173

College of Business

Business Administration	M.B.A. (Accounting, Computer Information Systems, Finance, Management, Marketing, Health Care Administration emphasis areas) Certificate in Business Administration	Dr. Joanne Tokel Mr. Sam Peterson	8020	282-2934 282-2966

College of Education

Educational Leadership and Instructional Design	M.Ed. in Education (Educational Administration emphasis area) M.Ed. in Instructional Technology Ed.S. in Educational Administration Ed.D. in Educational Leadership (Educational Administration, Higher Education Administration, Instructional Technology emphasis areas) Ph.D. in Instructional Design	Dr. Jonathan Lawson	8059	282-3273
Educational Foundations	M.Ed. in Education (Elementary Education, Secondary Education, K-12 Education/Music Education, and Child and Family Studies emphasis areas)	Dr. Beverly Ray	8059	282-4516
Educational Learning and Development	Ed.S. in Special Education Ed.S. in School Psychology M.Ed. in Education (Literacy emphasis) M.Ed. in Human Exceptionality (School Psychological Examiner emphasis area) (Special Education emphasis area)	Dr. David Squires	8059	282-3552
Sport Science and Physical Education	M.P.E. in Athletic Administration	Dr. Michael Lester	8105	282-4563

Program	Degree	Chair/Director	Stop Number	Phone
College of Engineering				
Engineering	M.S. in Civil Engineering;	Dr. Arya Ebrahimpour	8060	282-4695
	M.S. in Environmental Engineering	Dr. Arya Ebrahimpour	8060	282-4695
	M.S. in Measurement and Control Engineering	Dr. Marco Schoen	8060	282-4377
	M.S. in Mechanical Engineering	Dr. Marco Schoen	8060	282-4377
	M.S. in Nuclear Science and Engineering	Dr. George Imel	8060	282-3732
	M.S. in Environmental Science and Management	Dr. Chikashi Sato	8060	282-4389
Kasiska College of Health Professions				
Audiology	Au.D.	Dr. Kathleen Kangas	8116	282-3812
Deaf Education	M.S.	Dr. Kathleen Kangas	8116	282-3812
Speech-Language Pathology	M.S.	Dr. Kathleen Kangas	8116	282-3812
Counseling	M.Coun. (Marital, Couple and Family Counseling, Mental Health Counseling, School Counseling, Student Affairs Counseling) Ed.S. (Counseling) Ph.D. (Counselor Education and Counseling)	Dr. Nicole Hill	8120	282-3156
Dental Hygiene	M.S.	Dr. Linda Boyd 12301 W. Explorer Dr., Ste 100 Boise ID 83713	8048	282-3796 208-373-1800
Health and Nutrition Sciences	M.H.E., M.P.H.	Dr. Willis McAleese	8109	282-2729
Nursing	M.S., Post Master's Certificate	Dr. Carol Ashton	8101	282-2443
Occupational Therapy	M.O.T.	Dr. Aaron Eakman	8045	282-3758
Physical Therapy	D.P.T.	Dr. Kevin Helgeson	8045	282-4591
Physician Assistant Studies	M.P.A.S.	John Schroeder	8253	282-4726
College of Pharmacy				
PharmD (See Undergraduate Catalog for description)				
Biomedical and Pharmaceutical Sciences	M.S. in Pharmaceutical Sciences (Pharmaceutical Chemistry, Pharmacognosy, Pharmacology, Pharmaceutics majors) Ph.D. in Pharmaceutical Sciences (Biopharmaceutics, Biopharmaceutical Analysis, Pharmacokinetics, Pharmacology emphasis areas)	Dr. Paul Cady	8334	282-2175
Pharmacy Practice and Administrative Sciences	M.S. in Pharmacy (Pharmacy Administration emphasis) Ph.D. in Pharmaceutical Sciences (Pharmacy Administration emphasis)	Dr. Christopher T. Owens	8333	282-4454
College of Technology				
Human Resource Training and Development	M.T.D.	Dr. Robert Croker	8081	282-3906
Interdisciplinary Programs				
Natural Science	M.N.S. (Biological Sciences, Chemistry, Geology, Physics)	See Chairpeople/Directors listed above		

Other

Family Practice Residency Program: Stop 8357, Pocatello, ID 83209; (208) 282-4508
Idaho Advanced General Dentistry Program: Stop 8088, Pocatello, ID 83209; (208) 282-3289
Meridian Graduate Programs: 12301 W. Explorer #102, Boise, ID 83713; (208)685-6778
Idaho Falls Graduate Programs: 1784 Science Center Drive, Idaho Falls, Idaho, 83402; (208) 282-7800
Twin Falls Graduate Programs: Box 1238, CSI Evergreen B-40, Twin Falls, ID 83303; (208) 282-4840

The following departments/disciplines offer graduate courses, but no graduate degrees:Economics, Languages and Literatures, Health Care Administration, Mass Communication, Museum, Philosophy, Social Work

Summary of Procedures for Graduate Degrees

Procedure	Under Direction of	Date
Application & Fee	Graduate School	No later than May 1 for summer semester enrollment; July 1 for fall semester enrollment; and December 1 for spring semester enrollment (or the following Monday, should these dates fall on a weekend).
Selection of an Advisor	Department Chair	Varies by program
Selection of a Committee	Advisor	Varies by program
Preliminary Examinations	Department Chair or Advisor	Not required by some programs
Final Program of Study/ Admission to Candidacy	Advisor, Department Chair, Dean of Academic College, Dean of Graduate School.	Not later than the third week of the semester of intendeddateofgraduation.ClassifiedStatusRequired
Comprehensive Examinations	Advisor or Department Chair	Varies by program
Application for Graduation	Graduate School	Not later than the third week of the final semester. For summer graduation, last day of Spring Semester.
Thesis or Dissertation Final Draft to Committee	Student and Advisor	Not later than 2 weeks prior to oral defense
Thesis or Dissertation Defense	Advisor, Committee, and Dean of Graduate School	Not later than 2 weeks prior to end of final semester. Schedule by Midterm
Oral Examination (Non-Thesis)	Advisor, Committee, and Dean of Graduate School	Not later than 2 weeks prior to end of final semester. Schedule by Midterm
Payment of Application Fee for Graduation/Diploma	Office of Registration/Records	Not later than 2 weeks prior to end of final semester.
Submission of Final Thesis	Dean of Graduate School	Within 2 weeks following oral examination for Dissertation Copies

Accreditation

Association for Assessment and Accreditation of Laboratory Animal Care; Association to Advance Collegiate Schools of Business, International; American Association of Medical Assistants Endowment; American Association of Museums; Accreditation Board for Engineering and Technology, Inc.; Accreditation Council for Graduate Medical Education: Residency Review Committee for Family Medicine; Accreditation Council for Occupational Therapy Education; Accreditation Council for Pharmacy Education; American Chemical Society; American Equipment Distributors; American Health Information Management Association; American Psychological Association; Accreditation Review Commission on Education for the Physician Assistant, Inc.; American Society of Health-Systems Pharmacists; American Speech-Language-Hearing Association; Association of University Programs in Health Administration; Commission on Accreditation of Allied Health Education Programs; Council for Accreditation of Counseling and Related Educational Programs; Commission on Accreditation for Dietetics Education; Commission on Accreditation for Health Informatics and Information Management Education; Commission on Accreditation in Physical Therapy Education (American Physical Therapy Assoc.); Commission of Collegiate Interpreter Education; Commission on Collegiate Nursing Education; Council for Exceptional Children; Council on Education for Public Health; Commission on Accreditation of Allied Health Education Program; Commission on Dental Accreditation (American Dental Association); Council on Social Work Education; Idaho State Board of Nursing; Idaho State Department of Education (state approval process through state Dept. of Ed.); National Accrediting Agency for Clinical Laboratory Sciences; National Association for the Education of Young Children; National Association of Schools of Music; National Association of School Psychologist; National Association of Schools of Theatre; National Council for Accreditation of Teacher Education; National League for Nursing Accrediting Commission; State Department of Education

Graduate School

Idaho State University Mission Statement

The mission of Idaho State University is to advance scholarly and creative endeavors through the creation of new knowledge, cutting-edge research, innovative artistic pursuits and high-quality academic instruction; to use these qualities to enhance technical, undergraduate, graduate, and professional education, health care, and other services provided to the people of Idaho, the Nation, and the World; and to develop citizens who will learn from the past, think critically about the present, and provide leadership to enrich the future in a diverse, global society.

Graduate School Mission Statement

The Graduate School at Idaho State University provides quality control for and to the Idaho State University graduate education experience. Our mission is realized through high quality, effective, efficient, and courteous service to individuals and programs involved in graduate education.

Graduate School Vision Statement

The Graduate School at Idaho State University provides and supports exemplary service to its constituents (e.g., prospective and current students, faculty, departments, alumni) by working to increase national and international awareness of the high quality graduate education experience available at Idaho State University, by its positive and proactive response to technological change, and by its commitment to, and advocacy of, rigorous, fair, and consistent support of graduate students and programs.

Graduate School Belief Statement

The Graduate School at Idaho State University believes in:

a. quality service
b. integrity
c. fairness
d. consistency
e. courtesy
f. problem solving
g. future looking
h. graduate student advocacy
i. accuracy
j. facilitation
k. communication
l. life-long learning
m. individual worth

Admission

Idaho State University invites applications for admission to Graduate School from students holding baccalaureate degrees from any regionally accredited college or university in the United States or with equivalent preparation acquired in another country. Prospective students may apply as degree-seeking or non-degree-seeking students. Non-degree-seeking students include those seeking certification, professional growth, or strengthened backgrounds for various professional and industrial occupations.

Admission Requirements for Doctoral Programs

Admission to doctoral programs varies depending upon the program of study. Potential applicants are encouraged to read the appropriate sections of the Graduate Catalog for individual program variations. Generally, students applying for admission to a doctoral program must hold a master's degree and must have achieved at least the 50th percentile in one or more of the aptitude sections (Verbal, Quantitative, or Analytical) of the Graduate Record Examination. Doctor of Arts applicants must have an average total GRE placing them in the 50th percentile or above. Please see individual department sections for GPA requirements for doctoral programs.

Admission Requirements for Other Programs (e.g., Master's degrees)

Degree-seeking students must meet the following requirements:

1. A baccalaureate degree from a college or university regionally accredited in the United States or its equivalent from a school in another country.
2. The minimum **Master's level standards are**:

GPA (last 60 credits)	Standardized Test
3.5 to 4.000	No standardized test (GRE/MAT) required
3.0 to 3.499	40th Percentile on at least one area of the GRE or 40th Percent tile on the MAT
2.5 to 2.999	Combined Verbal and Quantitative (V+Q) score of 1000 on GRE or 45th Percentile on the MAT
below 2.499	No admission

The method of calculating an Admission GPA is based on the last 60± semester undergraduate credits (90± quarter credits), using complete semesters (quarters).

In the case of those students who have not completed the baccalaureate degree, the grade point average will be calculated on the last 60 credits at the time of application.

3. In instances where a standardized test is required, to register for the GRE, contact either the **GRE-ETS, Box 6000, Princeton, New Jersey, 08541-6000**, or the ISU Counseling and Testing Center **(208)282-2130**. To register for the GMAT/MAT, contact the Idaho State University Counseling and Testing Center.

   GRE/GMAT/MAT scores are used for other purposes in addition to admission. Most departments/colleges also use these scores as part of the criteria for awarding graduate assistantships, fellowships, or scholarships. Other parts of the campus may also use these scores in the process of awarding scholarships. Students at Idaho State University may take these tests at the Counseling and Testing Center. Special study sessions are available at the University in the Center for Teaching and Learning (208) 282-3662 to aid the student in preparing for the GRE/GMAT.
4. Recommendation for admission by the department or college offering the desired degree program. Please see individual department sections of this catalog for additional requirements.
5. Approval for admission by the Dean of the Graduate School.

The Application Process

Prospective graduate students must initiate the admission process as follows:

1. Applications for admission may be obtained online (www.isu.edu) or from the Graduate School.
2. Applicants applying as degree-seeking students must request that each institution at which they have taken any post-secondary work submit one official transcript directly to the Graduate School. Idaho State University undergraduate transcripts are available to the Graduate School and need not be forwarded by the applicant. Non-degree seeking applicants must provide a transcript (official or copy) showing proof of degree.
3. **Applicants must include a $55 non-refundable processing fee with each application form.** The files of students who do not pay the required application fee will not be processed for admission.
4. Some programs require additional information (e.g., letters of recommendation); please contact the specific department and review individual departmental sections of this catalog for additional requirements.
5. Applicants must clearly indicate the desired graduate program on the application form, or if a non-degree-seeking student, the college and department in which the student intends to take courses.
6. GRE/GMAT/MAT may be required for degree-seeking applicants at the discretion of the department.
7. Additional requirements for degree-seeking last semester seniors, and international students are described under those headings on the following pages.

Application Deadlines

Please note that some programs have earlier deadlines than those listed; please contact the program director or department chair for specific details. Priority deadlines for application forms to be completed and returned to the Graduate School are: April 1st for summer semester enrollment; April 1st for fall semester enrollment; and November 15th for spring semester enrollment, or the following Monday should these dates fall on a weekend.

Notification of Admission

Applicants will receive a notification letter from the Graduate School on admission status.

Admission to Graduate School allows a student to enroll in graduate courses in the specified department and college. It does not imply admission to courses in other departments. Only those admitted as degree-seeking students may assume that they are permitted to seek an advanced degree in the discipline/department that approved the admission. Non-degree-seeking students who are admitted are permitted to take courses in the department that admitted them, but this admission does not imply they will later be approved for admission as a degree-seeking student.

Re-Enrollment or Re-Admission of Graduate Students

Graduate students who have been admitted to Graduate School may enroll for graduate or undergraduate classes by preregistration or registration without further application activity if they enroll within two years from the beginning of the term for which they were accepted. **Graduate students who fail to enroll during the two year period, or more restrictive period of the department, must reapply for admission, and pay a processing fee.** Students who were not enrolled in the previous term may register for the current term. However, some departments may have more restrictive requirements and admission may be valid for only a particular semester or year. Students should contact departments to determine these more restrictive requirements.

Registration

All applicants who have received notice of admission into Graduate School may preregister during the appropriate preregistration periods or during the regular registration times prior to each semester. On-line registration is available to admitted students. To expedite completion of the registration procedure, all recipients of graduate teaching assistantships, graduate fellowships, and/or scholarships to be applied toward tuition and fees must preregister.

Late Registration Processing Fees

To help defray the extra cost involved with late registration, processing fees are charged in addition to regular fees. All students (full-time, part-time, faculty, staff, etc.) paying fees after the first day of official university classes are charged a late processing fee. The cashier is not authorized to accept late registration fee payment without the appropriate late processing fee. This fee is non-refundable. No department or employee of the university, other than those specifically authorized, has the authority to waive the fee.

Second through tenth day of classes	$50
After tenth day of classes	$100
Summer (charged as above, except $100 fee is assessed after last day to withdraw)	

Restricted Registration

Any graduate student receiving a grade of C+ or below in two graduate courses on his or her program of study, or whose GPA falls below 3.0, will automatically be blocked from registering for additional courses. For the block to be removed, the student's department or college must communicate to the Graduate School in writing its wish to allow the student to continue in the program. Please note that some programs vary in their restrictions with regard to this policy; contact the graduate program director or department chair for specific details.

Continuing Registration for Graduate Students

Graduate students who have registered for one or more credits of master's project, master's paper, master's thesis, or doctoral thesis or dissertation (usually, courses numbered 650, 651, 699, 750, or 850) must be registered for at least one graduate credit during subsequent semesters, including each summer semester, until they have completed their degrees. Students who, for compelling reasons, wish to interrupt their work on projects, theses, or dissertations may request, in writing, a leave of absence from the Graduate School.

Graduate students who fail to meet the continuing registration requirement will be judged to have dropped out of their programs and will no longer enjoy access to university resources, including the library and computer facilities. In order to regain access to university resources, students will be required to reapply to the Graduate School and be readmitted. A corollary of this requirement is that a graduate student must be registered for at least one graduate credit in order to take a final oral examination or be processed for graduation. Any student who registers for the required credit and then subsequently drops the credit, will be considered in violation of this policy.

Registration without Permission

Students who register for graduate courses in violation of any restriction printed in the Graduate Catalog or written on their Admission notification, or who register for graduate courses after receiving a letter of dismissal from the department or college that admitted them, will be dropped from these graduate course(s) as soon as the violation is discovered.

Classifications of Degree-Seeking Graduate Students

Classified Status

Graduates of regionally accredited institutions who have earned grade point averages of 2.5 or higher for the last 60 credits taken at the undergraduate level, are eligible, upon submission of official GRE/GMAT/MAT scores if appropriate, to be admitted to Classified status in graduate master's programs. Doctoral students must meet individual department GPA and standardized test requirements. See department sections of this catalog for complete information.

The College of Business requires the GMAT. The Department of Counseling and the College of Education accept the MAT in lieu of the GRE. Please see the department sections for this information.

Classified (with Performance Requirements) [Classified (w/PR)] Status

Classified (with Performance Requirements) [i.e., Classified (w/PR)] status is a transitional status, and is not a valid status for a student to graduate. In order to graduate, a student must have Classified status (see the following section "Change from Classified (w/PR) to Classified Status").

A department/college may, at its discretion, recommend admission for graduate students in a degree program with Classified (w/PR) status to ascertain their ability to do graduate work within a particular curriculum. Students admitted to Classified (w/PR) status are those who may not have satisfactorily met all admission requirements.

Classified (w/PR) status also may be recommended by a department for students whose credentials do not meet specific departmental requirements.

NOTE: Students admitted to Classified (w/PR) status should ascertain their eligibility for federal financial aid.

Change from Classified (w/PR) to Classified Status

The following criteria must be met by the student before Classified (w/PR) status can be changed to Classified:

1. The student must complete at least nine graduate credits and maintain a 3.0 GPA or higher;
2. If the GRE/GMAT/MAT was not taken by the student prior to admission to Classified (w/PR) status, the student must take the GRE/GMAT/MAT,as specified in the Admission notification.

Upon completion of the above two criteria, a request to change the student's status to Classified may be submitted to the Dean of the Graduate School. The following steps must be followed to accomplish this change:

1. At any time after meeting the above criteria, a student may initiate an Approval for Change of Student Status in the Graduate School. The department/college may also initiate the change and should do so by written request when the student has met the required criteria. The department/college also has the option of requesting the change to Classified status before the student has completed nine credits.
2. The change from Classified (w/PR) to Classified status must be approved by the Dean of the Graduate School.

Departments/colleges may request that students be changed to Classified status by written request. Not all departments/colleges exercise this option, and departments may have regulations in addition to those previously listed. Students seeking admission to Classified status should contact individual departments for advice on admission and registration. If a student admitted to Classified (w/PR) status fails to meet the conditions for admission stated on the Admission notification the student's admission may be revoked.

Admission of International Students

Applications for admission to Graduate School are processed in the Graduate School. Applications will not be processed until the processing fee has been received.

In addition to the admission requirements listed previously, international students must meet the following conditions:

1. As a step toward obtaining a U.S. visa, international students must submit a financial statement to the Graduate School verifying that they will be able to support themselves financially for a minimum of one year while attending Idaho State University. This document must consist of a statement or letter from a bank indicating that funds are available and accessible. The amount of money available to the student must be listed on the financial statement. A graduate assistantship or fellowship awarded by a department or college may be used as part of this amount.
2. International students who have not graduated from an accredited college or university in the United States and whose native language is not English, normally must achieve satisfactory scores on the Test of English as a Foreign Language (TOEFL) or on the International English Language Testing System (IELTS). Satisfactory TOEFL requirements for Classified admission are: **(1) Internet-based test (iBT):** a total score of 80 with a score of at least 20 on each Section (graduate assistants who teach courses must score 23 or above on the Speaking Section) on the iBT; or **(2) Computer-based test:** a total score of 213 with a score of at least 21 on Section 1 (Listening Comprehension) on the computer test; or **(3) Paper-based test:** a total score of 550 with a score of at least 55 on Section l (Listening Comprehension) on the paper test. Information about the TOEFL, including test dates and locations in international countries, can be obtained from Educational Testing Service (ETS) at www.ets.org. Satisfactory IELTS performance for Classified admission include scoring 6.5 or higher on the total band score. An international student may also meet the English language proficiency requirement by achieving a Level 112 from an ELS Language Center. PHOTOCOPIES OF TOEFL OR IELTS SCORES WILL NOT BE ACCEPTED.
3. International students may not enter the United States for graduate study without

a U.S. Immigration (I-20) form. This form will be issued by the International Program Office after the student is approved for admission by the Dean of the Graduate School. International students are urged to remain in their own countries until they receive notice of acceptance.

4. International students transferring from a school within the United States must be "IN STATUS" with Immigration and Naturalization Services to be issued an I-20 form from Idaho State University. A transfer form will be sent after the application has been received, to be completed as verification of acceptable immigration status.

If you have questions or need additional information, please contact the Graduate School at (208)282-2270, FAX number (208)282-4847.

Non-degree Seeking Students (Unclassified Status)

Applicants holding a bachelor's degree who desire to take courses for graduate credit for personal or professional enrichment but who do not want to pursue a graduate degree are eligible to apply for admission to Unclassified (non-degree-seeking) status. Courses may be taken only in those departments that have approved a student's Unclassified admission. Students who are admitted to Unclassified status are allowed to register for a maximum of 7 credits per semester.

Admission Requirements for Non-Degree-Seeking Students

Non-degree-seeking students who apply for admission must meet the following conditions:

1. A baccalaureate degree from a college or university regionally accredited in the United States or its equivalent from a school in another country.
2. An earned grade point average of at least 2.5 or higher for the last 60 credits taken at the undergraduate level, regardless of the institution at which the credits were earned.
3. A copy of a transcript providing evidence of the awarding of a degree must be submitted.
4. A properly completed application form that includes signing an agreement that the applicant will provide evidence that he/she holds a baccalaureate degree.
5. Continuation beyond nine credits in Unclassified status requires the student to sign an "Unclassified Credit Continuation Form For Non-Degree Seeking Students" with the Graduate School. This form allows the student to continue taking graduate courses without earning a degree.
6. If an unclassified student wishes to pursue a graduate degree within the University, the student must apply for Classified status and meet all associated admission requirements.This application requries a $55 processing fee.

At the option of the department, students may petition the Dean of the Graduate School to transfer course work taken while under Unclassified status to a degree program. The total number of such credits transferred shall not be more than 30% of the credits of the program of study required for the degree.

Admission of Last-Semester Seniors

Seniors in residence at Idaho State University may register for no more than 6 graduate credits during the semester or summer session in which they will complete the work for a bachelor's degree at Idaho State University. This option is reserved for outstanding seniors who are seriously considering attending Idaho State University for graduate education. This registration must be approved by the course instructor, by the student's advisor, and the department chairperson. ONLY COURSES NUMBERED 500-599 MAY BE TAKEN WITH THIS OPTION.

If a senior admitted to graduate study under this provision fails to complete graduation requirements for a bachelor's degree, all graduate credits earned revert to undergraduate credit. The student's load, including both graduate and undergraduate credit, may not exceed 16 credits, or 9 credits in the case of summer school. A senior selecting this option must file an Application for Admission with the Graduate School when he/she requests permission to take graduate level courses. Application deadlines for admission of last-semester seniors are the same as those for degree-seeking graduate students.

PharmD students may apply and be admitted to the Graduate School after completing 120 credits if they meet all application requirements.

Admission Requirements for Professional Development Students - K-12 Teachers (597 Courses)

The Graduate School recognizes the need for K-12 teachers certified in Idaho to improve their professional capabilities In most cases, the courses are workshops or short courses that can be taken in a compressed time period. These types of courses are "advanced" with respect to the students who enroll, but are not courses that a particular discipline offers to a student with the goal of earning an advanced degree. Therefore, professional development courses are offered by many departments to meet the perceived need of individuals, and are treated differently in the following respects:

1. Students may enroll in professional development courses offered under the 597 number without the necessity of being admitted to Graduate School. However, they must hold a baccalaureate degree from an accredited institution at the time they enter the class or receive special permission from the Dean of the Graduate School if they are last semester seniors.
2. The credits earned will not count toward an advanced degree nor may they be petitioned to count at a later date.
3. There is no limit to the number of 597 credits that a student may earn.
4. All instructors of 597 courses must have an advanced degree.
5. For each 597 course in which students enroll, students must certify that they possess a baccalaureate degree and agree to the conditions by which they are permitted to register for the course.
6. Students who have not been admitted previously to Graduate School at Idaho State University will be listed as Unclassified, Master's, Professional Development students. They will not be permitted to register for any graduate level courses except 597 courses, unless they apply for admission and are accepted into the Graduate School.
7. Students who have been admitted into the Graduate School are permitted to take 597 courses but must register for these courses by signing the special registration form in addition to the regular procedures for registration.
8. Departments shall determine if and when professional development courses are to be offered with their prefix.

Admission Requirements for Professional Development Students (598P Courses)

The Graduate School recognizes the need for individuals to improve their professional capabilities. In most cases, the courses can be taken in a compressed time period. These types of courses are "advanced" with respect to the students who enroll, but are not usually courses that a particular discipline offers to a student with the goal of earning an advanced degree. Therefore, professional development courses are offered by many departments to meet the perceived need and are treated differently in the following respects:

1. Students may enroll in professional development courses offered under the 598P number without the necessity of being admitted to Graduate School. However, they must hold a baccalaureate degree from an accredited institution at the time they enter the class or receive special permission from the Dean of the Graduate School if they are last semester seniors.
2. The credits earned will not count toward an advanced degree unless a petition is filed within three years of the last day of the course. The petition must have the following documentation: (1) A copy of the instructor's curriculum vita, (2) A copy of the course syllabus (including a list of achievement measures), (3) A copy of the class list (with grades). (The Office of Academic Support, Idaho State University Summer Programs, the Office of Continuing Education, and/or the department or college offering the course will provide materials not otherwise available to the student).
3. While there is no limit to the number of 598P credits that a student may earn, a maximum of three credits may be petitioned for use to satisfy elective credits in the student's program of study. 598P courses may not be substituted for "required" courses.
4. All instructors of 598P courses must have an advanced degree.
5. For each 598P course in which students enroll, students must certify that they possess a baccalaureate degree and agree to the conditions by which they are permitted to register for the course.
6. Students who have not been admitted previously to Graduate School at Idaho State University will be listed as Unclassified, Master's, Professional Development students. They will not be permitted to register for any graduate level courses except 598P courses, unless they apply for admission and are accepted into the Graduate School.
7. Students who have been admitted into the Graduate School are permitted to take 598P courses but must register for these courses by signing the special registration form in addition to the regular procedures for registration. If they desire to use 598P credits in their degree program, a petition must be filed for each course in accordance with the procedures described.
8. Departments shall determine if and when professional development courses are to be offered with their prefix.

Course Levels, Credits, and Grading

Course Levels

Courses numbered 6xx and 7xx are for students admitted into Graduate School only. Courses numbered g5xx also provide graduate credit (except 597 and 598P, see the sections entitled "Admission Requirements for Professional Development Students"). However, undergraduate students may be enrolled in these courses; the undergraduate counterpart will be designated as g4xx. Extra work is required of graduate students enrolled in g5xx courses (see next section). Applicability of g5xx courses to degree requirements is determined by the department offering the degree. Credit by examination (course challenge) is not permitted in graduate programs. Credit is not generally granted toward a graduate degree for g5xx courses when the corresponding g4xx course was taken at the undergraduate level.

Activities Instructors May Require to Meet the "Additional Work" Requirement to Receive Graduate Credit in Those Courses Offered as g5xx:

The Graduate School expects instructors to require specific work to be done in a graduate level course to justify graduate credit being given. This expectation is particularly true for courses that may be used to count toward a degree. For students to receive graduate credit in those courses designated at the g5xx level, specific and evaluated activities and performances must be identified in the course syllabus. Below is a suggested list of activities that an instructor might use to meet this requirement.

1. An additional scholarly activity such as:
   a. integrative term paper(s);
   b. substantive report(s) that may be one of the following: survey, analysis and report; laboratory investigation and report; library research and report;
   c. participation in a significant regional or national meeting (e.g., poster session, panel discussion, paper presentation).
2. Classroom activities that are beyond those required of undergraduates and are evaluated:
   a. special presentation of some subject;
   b. provision of leadership on discussion of some significant topic in the classroom;
   c. any other classroom activity that is evaluated and not required of undergraduates
3. Examinations: Special examinations that are different from those given to undergraduates and are more demanding than those given to undergraduates. Such exams should be those that require greater performance at the higher cognitive level such as interpretation, synthesis, and evaluation.

Credits

For a master's degree, a minimum of 30 credits in approved course work, including thesis credits if required, must be completed. Except in the cases of the M.N.S., M.A.M.S.T., and M.P.A. degrees, a master's degree student must complete at least fifteen 600-level credits. Credit requirements for doctoral degrees vary by program.

A credit hour in graduate courses requires:

1. 50 minutes in class each week for 16 weeks (or equivalent in summer sessions and in courses offered in special formats), or
2. Approximately two and one-half hours in laboratory work each week for 16 weeks (or equivalent).

Students who, because of exceptional circumstances, want to take more than the maximum number of credits, must request permission in

writing from the Dean of the Graduate School. They must also have support in writing from the graduate program director or chairperson of their department.

Thesis or dissertation credits are not awarded to the student until after completion and final approval by the examining committee. At this time, the advisor reports a grade of S or U for all previous thesis registrations. The student may register for thesis credits any semester she/he is enrolled as a degree-seeking student, subject to the approval of the department chair or program director, but the letters IP (in progress) are recorded on the transcript in place of a grade for all such registrants until final approval is obtained. Usually thesis credits are limited to 6 that can count toward a degree on a Master's level program of study.

Semester Credit Limits

The maximum number of credits obtainable in a semester is 16, including courses taken at the undergraduate level. In a summer semester, a student may earn a number of credits equal to the number of weeks enrolled plus two, and the total number of summer semester credits may not exceed 12 (e.g., a student taking classes for eight weeks may earn up to 10 credits). Graduate Assistants may register for no more than 12 credits per semester.

Grading

A 3.0 GPA for the courses listed on the program of study is required for any graduate degree or certification at Idaho State University. A grade of C+ or lower indicates questionable performance at the graduate level. However, some departments may accept a C+ grade in one or two courses as long as the minimum overall 3.0 GPA is maintained. C+ or lower grades may cause departments/colleges to dismiss students from a graduate degree program. (See section entitled Restricted Registration) NOTE: Due to grading changes approved during the 1998-1999 academic year, any restrictions or requirements in this catalog referring to a grade of C also include a C+ grade.

Idaho State University uses a graduated letter grading system to indicate the instructor's evaluation of a student's performance in a course. These letter grades are converted to a numerical value for computing a student's semester and cumulative grade point averages. At the beginning of each course, an instructor should inform students of the criteria to be used in evaluating their performance through the class syllabus or other written means.

The grade of A is the highest possible grade; grades of D+ or lower will not be allowed for graduate work. Plus (+) or minus (-) symbols are used to indicate grades that fall above or below the letter grades. The grades of A+, F+, and F- are not used. A student's work is rated in accordance with the following scale:

A	4.00	excellent performance
A-	3.70	excellent performance
B+	3.30	good performance
B	3.00	good performance
B-	2.70	good performance
C+	2.30	inadequate performance
C	2.00	inadequate performance
C-	1.70	inadequate performance
D+	1.30	unacceptable performance
D	1.00	unacceptable performance
D-	0.70	unacceptable performance
F	0.00	unacceptable performance

Courses in which A, A-, B+, B, or B- grades are earned are acceptable toward a graduate program and graduation requirements, unless specifically excluded for a particular course, program, or degree. Courses in which C+, C, or C- grades are earned might be used toward program and graduation requirements in some programs; two such grades will place the student on semester-by-semester review. Grades of D+, D, D-, or F may not be used to satisfy graduation requirements. No credits are awarded for any course in which an F grade is earned.

All thesis and dissertation credits and some research courses are graded on a satisfactory (S) or unsatisfactory (U) basis. Departments/colleges may grade additional graduate courses with the S/U system with approval of the Graduate Council. IP (in progress) grades may be given for those students who have initiated but not completed their thesis, dissertation, or research work. No graduate courses will be offered on a Pass/No Pass (P/NP) basis.

With permission of the relevant department, students may repeat a course in which they received a grade lower than an A. In such cases, the last grade received shall be the grade used in the calculation of the program of study GPA.

Incomplete Grades

An Incomplete grade (I) may be awarded at midterm or semester end. At midterm, an Incomplete indicates the student, through illness or other excusable absence, has missed so much work the instructor cannot assign a regular grade. An Incomplete grade at midterm is not a final grade. An Incomplete grade may, at the option of the instructor, be given at the end of the semester only when a student has satisfactory performance within three weeks of the end-of-semester examination period.

The instructor must submit a Course Completion Contract along with the grade report for that class. The Course Completion Contract must be signed by the student and the instructor stipulating the assignment(s) required to finish the course within the allowable time period. A copy of the Contract is to be given to the student, a copy retained by the instructor, a copy send to the Graduate School, and the original sent to the Registrar's Office.

Incomplete work must be completed within one (1) calendar year from the date such grade is given, but an instructor could specify a shorter time period. A change of grade must be submitted by the faculty member or the Incomplete will become permanent.

To receive credit for a course in which an Incomplete grade has become permanent, the entire course must be repeated.

Petitions to deviate from the incomplete grade policy will not be allowed except under extraordinary circumstances (e.g., serious, long-term illness).

Transfer of Credits

Master's Degrees

All graduate credits must be earned as Idaho State University resident credits except for the following:

In all master's degree programs a total of 9 semester credits may be transferred from an accredited institution. Transfer of credits from an accredited institution is acceptable only if the courses are specifically approved by the Graduate School and the academic department of Idaho State University when the final program of study is submitted. In these instances, only the credit hours transfer, not the grades.

Official transcripts to be used for transfer of credits in a degree program must be received by the Graduate School before application for a degree will be approved.

Intra-institutional Transfer

Transfer of Credits from Unclassified to Classified Status: Students may petition the Dean of the Graduate School to transfer course work taken while admitted to Unclassified status to a degree program. The total number shall not be more than 30% of the credits of the program of study required of each student for the degree.

Transfer of Credits from One Program to Another

There are no limits to the number of credits that may be applied toward a master's degree program or certificate program that were originally earned in a different degree program if:

1. the student was not awarded a degree in the original program, and
2. the department approves the transfer of such credits and the courses taken meet the requirements for the degree approved by the Graduate Council.

There are no limitations with respect to electives that exceed the requirement for the degree.

Departments and/or colleges may allow students to apply up to 9 semester credits earned at Idaho State University to two master's degrees with Graduate School approval.

Doctoral Programs

Departments may accept credits by transfer in total or in part from a master's degree earned at Idaho State University or at another accredited institution regardless of age of the courses. See section on "Time Limits" for further discussion of this policy.

Residency Credits

All credits that are to be applied to an advanced degree must be earned as resident credits or accepted for transfer as described in the Transfer of Credits section. Resident credits are those earned through the main Idaho State University campus, the Idaho State University-Idaho Falls campus, the Idaho State University-Meridian campus, and/or the Idaho State University-Twin Falls campus.

Courses approved by the Graduate Council and taught solely by approved faculty of Idaho State University at other sites in the state may be accepted as resident credit.

Time Limits

Master's and Educational Specialist Degrees

All requirements for a master's degree (except the MBA degree) or educational specialist degree must be completed within 8 years preceding the student's graduation. An extension of time may be obtained for good cause with the approval of the Graduate Council (file petition through the Graduate School).

The time limit for the MBA degree is 5 years for any course used to meet MBA II, elective, or emphasis area graduation requirements. Please refer to the College of Business section of this catalog.

Doctoral Degrees

The doctorate is a research or performance degree and signifies that the holder has the competence to function independently at the highest level of endeavor in the chosen profession. Hence, the number of years involved in attaining or retaining competency cannot be readily specified. Rather, it is important that the doctoral student's competency be assessed and verified in a reasonable period of time prior to conferral of the degree.

The comprehensive examination is the method of assessing whether the student has attained sufficient knowledge of the discipline and supporting fields in order to undertake independent research or practice. It is expected that the examination will occur after all course work has been completed and language or other requirements satisfied, and that it consists of a series of examinations covering all areas specified in the program of study.

Because the comprehensive examination attests to the academic competence of the student who is about to become an independent researcher or practitioner, the examination should not precede the awarding of the degree by too long a period of time. Consequently, doctoral candidates are allowed no more than 5 years in which to complete remaining degree requirements. In the event a student fails to complete the doctorate within 5 years after passing the comprehensive examination, an extension of time can be obtained by:

1. The student getting a specified set of requirements from the student's committee that states in writing what must be done to make the candidate up-to-date in the discipline. These new requirements for obtaining an extension may include the necessity to repeat parts or all of the comprehensive examination;
2. The student must then submit a petition to the Graduate Council for the extension and provide the written documents showing the additional requirements established by the student's committee justifying the requested extension.

Out-of-Date Credits

All credits applied to a master's degree or to an educational specialist degree must have been taken within 8 years immediately prior to granting of the degree unless it can be shown that the course work taken more than 8 years earlier covers material that has not changed substantially during the intervening time or that the student has been able to remain current in the topics covered in the course. Evidence that the older course work is still appropriate must be supported and approved in writing by the student's advisor and department chair, and submitted with a petition to the Dean of the Graduate School.

Advisors & Examining Committees

All Examining Committees shall consist of an odd number of members. These members normally must be members of the Graduate Faculty and approved by the Dean of the Graduate School. Appointments to Examining Committees of non-faculty members or of faculty members not on the Graduate Faculty must be approved by the Dean of the Graduate School. A listing of Graduate Faculty is contained in this catalog.

Usually, when a student is admitted to graduate study, a temporary advisor is assigned. In some cases, the department chairperson or graduate program director serves in this capacity for all incoming graduate students. Following departmental procedures and regulations, a permanent advisor who will be responsible for helping the student to finalize the program of study is then selected.

For most degree options, a second member is selected from the student's department to serve on the examining committee with final approval by the Dean of the Graduate School. In some programs of study, more than one departmental faculty member, in addition to the advisor, serves on the examining committee.

A third member of the examining committee, called the Graduate Faculty Representative (GFR), is approved by the Dean of the Graduate School. The GFR must be a current member of the Graduate Faculty and may not be selected from a separate discipline within a yoked department. The GFR is the representative of the Graduate School on the examining committee and is responsible for reporting the results of graduate examina-

tions to the Dean of the Graduate School. The Graduate School welcomes suggestions from the student or department regarding candidates for the GFR.

Conflict of Interest of Graduate Faculty

Faculty are expected to exclude themselves from evaluation of graduate students with regard to whom impartiality may be jeopardized by considerations that are not academic. Such considerations may include, but are not limited to, membership in the same household or close familial relationships among the involved parties.

Procedure for Changing a Major Advisor

When a graduate student seeks a change in his/her major advisor, the following procedure must be followed:

1. The student must submit to the academic unit head or graduate program director, as appropriate, a written request for change of major advisor. This request shall contain the rationale on which the request is based and may, if the student wishes, propose a specific replacement.
2. If the unit head/program director and the current advisor accept the rationale, and if an appropriate new advisor acceptable to the student is secured, the unit head/program director will submit the proposed new appointment to the Dean of the Graduate School for approval.
3. Should the unit head/program director or the current major advisor not agree to the proposed change and the conditions thereof, and if no compromise acceptable to all parties can be reached, the matter shall be arbitrated by the unit graduate faculty (or its designated committee). Such arbitration may need to consider the question of ownership of data from research already undertaken by the student under the major advisor's supervision, similarly whether another appropriately specialized major advisor is available for the student. The unit head/program director will notify the Dean of the Graduate School of the decision reached by the department graduate faculty or its designated committee.
4. Any appeal of the department's decision by the student shall be directed to the Dean of the Graduate School.

Program of Study, Candidacy, Application for a Degree

Program of Study

A program of study must be submitted to and approved by the Graduate School by the third week of the semester in which a student intends to graduate. The Program of Study will list all requirements that must be completed in order to receive the degree or certificate.

If the requirements for the degree or certificate being sought change during a student's program, the student is entitled to follow those requirements in effect at the time of admission, or the student may elect to follow the new requirements.

Candidacy for Doctoral Degrees

Admission to candidacy for doctoral degrees occurs only after the student has passed a preliminary examination that is usually administered early in the program, or when substantially all course work has been completed.

Students seeking doctoral degrees must submit a Program of Study to the Graduate School upon completion of examinations, but no later than the third week of the semester in which they intend to graduate. The Program of Study lists all requirements that must be completed in order to receive the doctoral degree.

Application for a Degree

Within the first three (3) weeks of the fall or spring semester in which the student expects to complete work for the degree, or the last day of the spring semester for completion during the summer semester, an application for graduation must be filed with the Graduate School.

The application and a diploma fee of $20 must be paid at this time. If the student does not complete requirements during this semester, an updated application must be submitted for the subsequent semester and a $20 reprocessing fee paid to the Graduate School.

Degree applicants must submit all official transcripts before applying for a degree. Official transcripts to be used for transfer of credits into a degree program must be received before the application for a degree will be processed.

Applications for degrees will not be processed without the prior approval of a Program of Study.

Examinations

All graduate students are required to complete a final examination. Final examinations are scheduled by departments and reported to the Graduate School. Final examinations are scheduled by departments after receiving aprroval of the Program of Study.

All examinations must be completed at least two weeks before the end of the semester in which the student plans to graduate. All graduate requirements must be completed prior to or at the end of the semester during which final examinations are held.

Students writing theses/dissertations/DA scholarly activities are given final oral examinations. Others are usually given both written and oral examinations.

Oral examinations are open to all members of the Graduate Faculty as observers. Oral examinations are not open to non-Graduate Faculty without permission of the advisor and the Dean of the Graduate School. When students are required to make presentations as part of the examination process, these presentations will be advertised, and they will be open to the public.

Following the oral exam, the committee meets in closed session to determine the outcome of the examination. The student passes the exam if a majority of the committee so votes. Otherwise, the student fails the exam. For students failing the oral exam, the Graduate School allows one re-examination. This re-examination is to take place during the subsequent three (3) semesters unless otherwise approved by the Graduate School. If the academic unit involved has a formal re-examination policy that is more stringent, that policy supersedes the Graduate School re-examination policy.

If the candidate's program requires a thesis/dissertation/DA scholarly activity, copies in substantially final form shall be in the hands of the examining committee at least two (2) weeks before the date scheduled for the oral examination. Oral examinations are to be held at least two (2) weeks prior to the date of graduation. If any committee member questions the adaquacy of the substance or form of the thesis/dissertation/DA scholarly activity, the committee as a whole decides if the document and the student are sufficiently prepared for an oral examination.

The major advisor is responsible for reporting a grade to the Registrar (using a Change of Grade) for all prior thesis/dissertation/DA scholarly activity registrations of the candidate when the document has been approved by the examining committee.

After the successful defense of a thesis/dissertation/DA scholarly activity, the student must submit all appropriate documents to the Graduate School within two weeks. Failure to do so may delay graduation. If the required documents are not submitted within one year, the Dean of the Graduate School may declare the defense void and require that it be repeated.

A manual with detailed instruction for thesis/dissertation/DA scholarly activity preparation and clearance (Instructions for Preparing Theses, Dissertation, DA Papers, and Professional Projects) is available from the Graduate School website or from the Graduate School.

If the candidate's program requires no thesis/dissertation/DA scholarly activity, the department or college is responsible for having a written examination on the degree program prepared and administered. If the student's performance is judged to be satisfactory or if it is determined that deficiencies may be cleared up during the oral examination, the examining committee conducts the oral examination on the scheduled date. Otherwise, the student may be expected to complete subsequent requirements before the oral examination is held. All oral examinations must be completed at least two (2) weeks prior to the date of graduation.

Petitions

A student may petition the Dean of the Graduate School for exceptions to the rules and procedures stated in the Graduate Catalog or for consideration of problems not covered by the stated procedures. Petition forms for graduate students are available only from the Graduate School; undergraduate petition forms will not be accepted.

A student may use the petition form to request:

1. withdrawal from courses after the deadline for withdrawal as stated in the University Calendar;
2. use of credits more than eight (8) years old to count towards a master's degree;
3. transfer of credits from unclassified to classified status;
4. transfer of more than nine credits from another institution to a master's degree program at Idaho State University;
5. an extension of the maximum time (eight years) allowed for completion of a master's degree or educational specialist certificate;
6. an extension of the maximum time (five years) allowed for completion of a doctoral degree after comprehensive examinations have been passed;
7. correction of errors or inaccuracies on the student's official transcript;
8. any other deviation from Graduate School policy listed in this catalog.

Petition forms may not be used for:

1. appeals of a grade or of dismissal from a program. See the section on "Appeals and Dismissals" in this Catalog;
2. substitutions of courses within degree requirements or waivers of degree requirements. Exceptions to degree requirements are requested as a part of the approval process for the Program of Study.

Drop or Withdrawal

Students may voluntarily drop graduate courses until the official drop date listed in the University Calendar. Dropped classes will not appear on a student's transcript. After the official drop date, students may withdraw from a course(s) prior to the withdrawal deadline with a "W" appearing on the transcript. To withdraw from a course or courses, students must provide a written request using the appropriate forms available from the Office of the Registrar. Students wishing to withdraw from graduate courses or a graduate program after the official withdrawal date must obtain approval from their professors, program/department chair, and the Dean of the Graduate School. Voluntary withdrawal from a graduate program during an appeal of dismissal automatically terminates the appeals process.

Appeals and Dismissals

Appeal of a Grade

A grade appeal is not designed to evaluate general teaching effectiveness, but rather to determine whether a student was treated in an arbitrary and/or capricious manner by the instructor in regard to a final grade.

Graduate students who wish to appeal final grades must use the following procedural format. Appeal of a grade must be made within one semester following the posting of the grade. Grades earned in the spring semester that are to be appealed need not be appealed during the summer, but the appeal process must be initiated in the following fall semester. Documentation of the appeal must be sent to the Graduate School to be placed in the student's file. The Graduate School encourages resolution of appeals at the lowest possible level. Faculty members who are overruled in the appeal process are entitled to the same sequence of appeal as the graduate student.

Midterm grades are not official and may not be formally appealed. Students who wish redress for midterm grades should discuss the grade with the instructor of the course in order to determine a course of action leading up to the final grade.

When a grade appeal involves plagiarism, cheating, or other academic dishonesty, please also refer to the "Academic Dishonesty" section of the Graduate Catalog.

Procedures for the Appeal of a Grade

After each step in the procedures for the appeal of a grade, all written appeal request and decision statements must be copied to all involved parties (e.g., the student, the instructor, the department chair, the dean of the college).

Step 1: The Instructor of the Course
When a student receives a grade that is judged by that student to be unjustifiably low, normally the first step in the appeal process is to discuss the matter with the instructor of the course. This is an informal meeting to attempt to resolve the issue. If the instructor agrees with the student, the grade is changed using standard procedures. If the instructor supports the original decision, the student may file a formal appeal. The student must prepare a formal written statement in accordance with the format presented in the "Protocol for Appealing a Grade," which is described in the next section. The original of this statement is given to the department chair, and a copy is given to the instructor. In response, the instructor must prepare a written statement explaining the reasons for the grade and submit that statement to the department chair with a copy to the student.

Step 2: The Department Chair

The chair of the department in which the appealed grade was received is charged with reviewing the student's and the instructor's written statements. The chair may also interview the student and the instructor, and may conduct whatever additional investigation deemed appropriate to help in the decision-making process. The chair must render a decision within 15 working days of receipt of the student's appeal documents.

If the chair sustains the decision of the instructor, the appeal may be taken by the student to the dean of the college. If the chair disagrees with the instructor's decision, the chair must forward all appeal documents to the dean of the college. Regardless of the decision, the chair must prepare and submit to the dean of the college, a written statement that explains the reason for her/his decision.

Step 3: The Dean of the College

The dean of the college is next in the formal appeal process. The dean's first charge is to appoint an impartial committee of graduate faculty members to review all documentation pertaining to the appeal. The dean will provide copies of all documentation to the committee. In addition to reviewing these documents, the committee should interview both the student and the instructor and may conduct any other investigation deemed necessary. The committee, which is advisory to the dean, must submit a written statement of its recommendation to the dean. The dean should review all documents and recommendations and may interview the student, the instructor, department chair, and conduct any other investigation deemed necessary. The dean's decision is to be tendered in writing, and addressed to the student, sent by certified mail (return receipt requested) with copies to the instructor, department chair and chair of the impartial committee.The committee's deliberation and the dean's decision must be completed within 30 working days of receipt of the student's appeal in the dean's office. If the decision of the dean is rejected by the student, the appeal may be taken by the student to the Graduate Council.

Step 4:The Graduate Council via the Dean of the Graduate School

At the request of the student, the Graduate Council will review all appeal documentation and respond with a decision within 30 working days of receipt of the student's appeal. The Graduate Council may interview the student and instructor and carry out any other investigation deemed necessary. Once the decision is made, it is final and will be communicated by the Dean of the Graduate School.

Step 5: Change of Grade Within the Specific College (instructor, department chair, dean)

At any stage where the appeal process is concluded, the last appeal level will process a change of grade, if appropriate, using standard procedures. In instances where the appeal is resolved at the Graduate Council level, the Council's decision is communicated in writing by the Dean of the Graduate School to the student, and copied to the Dean of the College, department chair, instructor, and chair of the impartial committee. The dean of the college is responsible for processing the change of grade, if appropriate, using stamdard procedures upon receipt of Council's appeal decision correspondence.

Protocol for Appealing a Grade

Protocol for appeal of a grade must include the student's name, department/college, date of the appeal, course title and number, instructor's name, and grade received in the course. Also included must be the student's rationale for appeal of the grade. The student should state as succinctly as possible the reasons for making the appeal. The student must also state the remedy he/she is seeking.

Dismissals

Dismissal Policy

A graduate student may be dismissed from a graduate program by a department/college according to the following criteria:

1. If the student receives two or more grades of C+ or below, or
2. If the student fails to meet the continuation standards of the department (including conditions stated in the Admission letter), or
3. If it is the academic judgment of two-thirds of the graduate faculty in the department that the student is not making satisfactory progress in the program, and such judgment is recorded by formal vote.

In all cases the student must be notified in writing by certified mail, return receipt requested, that he/she is dismissed and must be told in the document that she/he has the right of appeal according to the Idaho State University Graduate Catalog. The student should be given a copy of the Graduate Catalog, appropriate catalog pages, or notified that the Catalog is available online or in the Graduate School.

All dismissal communications are to be copied to the department chair, Dean of the academic college , and Dean of the Graduate School.

Students receiving letters of dismissal will automatically be dropped from all graduate courses in the program from which they are being dismissed, regardless of whether they choose to appeal; fees will be refunded in accordance with university policy. A "W" grade will then be entered on the transcript for all graduate courses not completed. Students receiving dismissal letters after the 10th day of classes may petition the Dean of the Graduate School for permission to complete the graduate courses in which they are enrolled. Students who appeal the dismissal will be blocked from registration for additional graduate courses during the appeals process. See "Procedures for the Appeal of Dismissal from a Graduate Program" for specific procedures.

The initiation of the appeal of the dismissal must occur within 15 working days of the notification of the dismissal, unless the student is appealing dismissal due to receiving two or more grades of C+ or below. In that case, the student may wish to appeal one or more grades before beginning appeal of dismissal (see "Appeal of a Grade" section). If the grade is upheld, and the student now wishes to appeal the dismissal, the student must begin the appeal of dismissal within 15 working days of receipt of the notification of the decision of the grade appeal. If the grade is changed to a B- or above, and the student no longer has two or more grades of C+ or below, the dismissal will be cancelled by the department/college. However, if the dismissal is based on Items 2 or 3, previously listed, the dismissal proceedings may continue. The Graduate School encourages resolution of appeals at the lowest possible level.

When a dismissal involves plagiarism, cheating, or other academic dishonesty, please refer to the "Academic Dishonesty" section of the Graduate Catalog.

Procedures for the Appeal of Dismissal from a Graduate Program

At each level appeal decisions are to be communicated in writing and addressed to the student, sent by certified mail (return receipt requested), and copied to all appropriate level decision persons, and the Graduate School.

Step 1: The Departmental Level

1. The student must request reconsideration in writing using the "Protocol for Appealing Dismissal from a Graduate Program," which is described in the next section.
2. A majority of the graduate faculty of the department must meet within 15 working days of the filed appeal and must decide by a 2/3 vote of those present to sustain the dismissal, or the dismissal is revoked. If necessary, the meeting of the graduate faculty may include those participating by telephone, email, or video conference. Should it prove impossible during the summer to convene a majority of the graduate faculty, the department chair/program director is required to assemble them in the first 15 working days they are on contract in the Fall semester.
3. Either decision (revoke or sustain) is to be explained in writing to the student. Copies of this decision and explanation must be sent to the dean of the college and the dean of the Graduate School.
4. If the department upholds the dismissal, the student may appeal the decision to the dean of the college. The student must appeal to the dean of the college within 15 working days of the receipt of the notification of the department's decision.
5. If the dismissal is revoked, the department chair shall notify, in writing, the student, the dean of the college and the Dean of the Graduate School, and the student shall be reinstated using standard procedures.

Step 2: The Dean of the College

1. If the student appeals to the dean of the college, then the dean should review all documents and recommendations and may interview the student, the instructor, department chair, and conduct any other investigation deemed necessary. The dean must consider the appeal within 30 working days of the student's filed appeal and must decide to either revoke or sustain the dismissal.
2. Dean Overrules Dismissal. If the dismissal is revoked, the dean must state in writing the reasons for the overrule and notify the student, the department chair, and the Dean of the Graduate School, and the student shall be reinstated using standard procedures. The graduate faculty of the department may appeal the dean's decision to the Graduate Council following the appeal steps listed in this policy.
3. Dean Sustains Dismissal. If the dean sustains the decision to dismiss, she/he must notify in writing the student, the department chair, and the Dean of the Graduate School.

Step 3: The Graduate Council via the Dean of the Graduate School

1. The student may appeal to the Graduate Council if the dean of the college sustains the dismissal. The student must appeal to the Graduate Council within 15 working days of receipt of the notification of the dean's decision. This appeal must be in writing.
2. The Graduate Council must consider the appeal within 30 working days of receipt of the student's appeal. This appeal should include copies of all appeal documents.
3. The Graduate Council may interview the student, graduate faculty, and college dean and conduct any other investigation deemed necessaryThe student may have an advisor present during Council's interview, but this person shall not act in a legal capacity (these are not legal proceedings) and may not address the Council.
4. The Council's decision to revoke or sustain the dismissal is final.
5. In instances where the appeal is resolved at the Graduate Council level, the Council's decision is communicated in writing, by the Dean of the Graduate School to the student, and copied to the Dean of the College and the department chair.
6. The Council's decision, with all other documentation, will be kept in the student's file in the Graduate School.
7. If the decision is to revoke the dismissal, the Dean of the Graduate School will reinstate the student in the program.

Protocol for Appealing Dismissal from a Graduate Program

Protocol for appeal of dismissal from a graduate program must include the student's name, department/college, and date of the appeal. Also to be included is the rationale for appeal of the dismissal. The student should state as succinctly as possible the reason for making the appeal. The student must also state the remedy he/she is seeking.

Academic Dishonesty

Academic dishonesty includes, but is not limited to, cheating and plagiarism. Academic dishonesty at the graduate level is considered a serious offense and may result in dismissal from a graduate program.

Whenever a faculty member suspects a graduate student of academic dishonesty, the instructor should present the evidence to the student and consider the student's response. If the instructor concludes after consultation with the student that academic dishonesty occurred, the instructor writes a letter to the chair of the department in which the student is seeking a graduate degree, describing the incident. The instructor should include with the letter any evidence used to draw the conclusion that academic dishonesty has occurred (e.g., copies of the student's written assignment, copies of documents thought to have been plagiarized, etc.), and should state clearly the penalty imposed within the course itself. The penalty should be in proportion to the severity of the offense. If the penalty is to be a failing grade, the instructor should first consult with the chair of the department, and the chair should meet jointly with the student and faculty member to review the incident. The student may appeal the penalty by following the procedures in the Graduate Catalog entitled "Appeal of a Grade."

The department chair may, in accordance with the policy and procedures of the department, impose the penalty of dismissal from the program. A student may appeal the dismissal by following the procedures in the Graduate Catalog entitled "Appeal of Dismissal from a Graduate Program."

The chair of the department should send a copy of the instructor's letter reporting the offense, along with any evidence submitted to the chair, to the student, to the dean of the college in which the student is seeking a graduate degree, and to the Dean of the Graduate School. A copy of the letter is to be placed in the student's file in the department and in the Graduate School. If the student's appeal is upheld, the letter and all other records of the accusation of academic dishonesty are to be deleted from the student's files.

Graduate Student Participation in Classified or Proprietary Research

The Graduate School affirms the policy regarding the participation of graduate students in classified or proprietary research as it is stated in the Idaho State University Patent Policy. "Idaho State University shall only make agreements with third parties which will not inhibit a student's timely completion of a course of study or degree." This statement shall be interpreted to mean that students must not be delayed in their program of study up to and including the awarding of the degree and that placement of the finished thesis or dissertation in the library for public access may not be delayed longer than six months.

Interdisciplinary Degrees

Idaho State University offers students the opportunity to pursue an interdisciplinary master's degree (M.A., M.S., M.N.S., M.Ed.). The degree sought and the field appearing first in the title of the program will be that of the department providing the major portion of the graduate credits. Other fields in the title will be secondary fields of concentration.

The requirements include: completion of a minimum of 30 credit hours with a minimum of 10 credits in each of the departments participating. Students must be admitted into such a program by each department that participates. Students must contact each department contemplated to be involved prior to initiating the development of an interdisciplinary program.

Although students must take at least 10 credits in each of the departments participating, departments may, at their discretion, require additional credit hours of the students as a condition of the departmental participation and admission of the student in the program. An initial program of study must be submitted to the Graduate School during the first year of course work.

Requirements for interdisciplinary programs are the same as for other degree programs. An interdisciplinary thesis may be written with a minimum of three credits and a maximum of five credits in each department. The final oral examination must include a representative from each department and a GFR from a department not involved in the interdisciplinary program.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. Certain departments may also have other admission requirements. Please check with specific departments for further details.

Master of Natural Science

Majors in Biology, Chemistry, Geology, and Physics or approved interdisciplinary combinations of the foregoing may lead to the degree of Master of Natural Science. This program is designed to provide subject matter material for those teaching at the secondary level or intending to do so. Requirements include possession of or pursuit of a standard secondary teaching credential. "Pursuit of a standard secondary teaching credential" shall be defined as follows: The following requirements must be completed by the student, or the student must have equivalency in these areas to meet the definition:

Requirements include: (1) completion of a prescribed program of study of at least 30 credits at the graduate level approved by a departmental committee selected by the student in consultation with the student's major professor, and approved by the Dean of the Graduate School, and (2) satisfactory performance on final written and oral examinations.

If a student enters a M.N.S. program with no equivalent course work in education, the student must take additional credits in addition to 30 graduate credits in the discipline to receive the M.N.S. degree. This requirement involves 12-19 credits, including student teaching, to be completed to receive teacher certification in Idaho. Candidates must complete a program of study in one, two, or three of the areas listed. The committee designing the program of study, in consultation with the student, should be comprised of members from each department involved plus a GFR.

Courses to be counted toward the degree must be 500-level or above. At least 22 credits must be taken in residence.

Study Abroad

STUA g500 Study Abroad 9-12 credits. Pre-arranged, planned courses of study at selected academic institutions outside of the United States. Student is responsible for resident credit arrangements with department(s) and the International Programs Office prior to departure. Prefix and course name will be replaced on ISU transcript when study abroad transcript arrives. Graded S/U. REPEATABLE WITH DEPARTMENT PERMISSION.

Tuition and Fees

Fees are subject to change without advance notice by the Idaho State Board of Education prior to the first official day of class. (See "Policy Statement Concerning Graduate Catalog Contents" on the title page of this catalog.)

In general, the expenses for Idaho State University graduate students may be divided into classifications of fees, board, and room. In addition to the fees listed, some courses may require the expense of special uniforms, protective clothing, field trip expenses, lab fees, or instructional costs for remedial courses.

Enrollment Fees

All graduate students will be charged fees as a full-time student whenever they enroll for 9 credits or more. For financial aid purposes, graduate assistants/fellows and students receiving other financial aid must enroll for 9 credits per semester to be considered full-time.

Certain programs require full-time summer study. Students in these programs are assessed full-time fees during the summer semester.

2009-2010 Fees and Tuition, including student health insurance fee*.

	Per Semester	Per Year
Resident	$3,531.00	$7.142.00
Non-Resident	$7,825.00	$15,650.00

*The student insurance premium is $647.00 per semester as a part of full-time fees. All full-fee paying students are automatically covered under the University's Student Insurance program. The premium is included in the fee schedule for each semester. Any student with existing health insurance coverage may be exempt from participation in the Student Insurance Plan by completing and filing a Health Insurance Waiver each academic year.

Part-time Fees (2009-2010 Fees)*

Graduate	$297.00 per credit hour
Non-Resident	$437.00 per credit hour

* See note regarding fees at beginning of this section.

Idaho Residency Requirements for Fee Payment

Residency for tuition purposes is governed by Idaho Code §33-3717 and the residency rules of the State Board of Education. Although a full-time regularly-enrolled resident student is not required to pay tuition while enrolled at Idaho State University, students are charged fees for educational costs excluding the cost of instruction in accordance with the Idaho State System of Higher Education "Notice to Nonresidents of the State of Idaho."

A student is a "resident" for purposes of fee payment if:

1. He/She has a parent or court-appointed guardian currently domiciled in Idaho who has maintained a bona fide domicile in Idaho for at least one year prior to the opening day of the term for which the student enrolls; or
2. She/He receives less than 50% financial support from parents or guardians and has continuously resided in Idaho for at least 12 months prior to the opening day of the term for which the student enrolls and has established a bona fide domicile in Idaho primarily for purposes other than educational; or
3. He/She is a graduate of an accredited Idaho high school, unless the student graduates while attending on an exchange student visa; or
4. She/He is the spouse of an Idaho resident or person who qualifies for Idaho residency; or

5) He/She is a member of the armed forces stationed in Idaho or whose parents or guardians are members of the armed forces stationed in Idaho and who receives 50% or more financial support from parents or guardians; or

6. She/He is honorably discharged from the military and elects Idaho as his/her intended domicile within one year of discharge; or
7. He/She is a member of the Coeur d'Alene, Shoshone-Paiute, Nez Perce, Shoshone-Bannock, or Kootenai Tribe.

Direct specific questions to the ISU Admissions Office, Stop 8196, Pocatello, ID 83209, (208)282-4946.

A "Non-resident" Student shall Include: Any student attending an institution in this state with the aid of financial assistance provided by another state or governmental unit or agency thereof, such non-residency continuing for one (1) year after the completion of the semester for which such assistance is last provided.

Any person who is not a citizen of the United States of America, who does not have permanent or temporary resident status or does not hold "refugee-parolee" or "conditional entrant" status with the U.S. Immigration and Naturalization Service or is not otherwise permanently residing in the U.S. under cover of the law and who does not also meet and comply with all applicable requirements for establishing residency as covered under these provisions.

Establishing a New Domicile in Idaho: The establishment of a new domicile in Idaho by a person formerly domiciled in another state has occurred if such person is physically present in Idaho primarily for purposes other than educational and can show satisfactory proof that such person is without a present intention to return to such other state or to acquire a domicile at some other place outside of Idaho. In determining whether a student is domiciled in the state of Idaho primarily for purposes other than educational, Idaho State University shall consider, but shall not be limited to the following factors:

- Registration and payment of Idaho taxes or fees on a motor vehicle, mobile home, travel trailer, or other item of personal property for which state registration and the payment of a state tax or fee is required.
- Filling of Idaho state income tax returns.
- Permanent full-time employment or the hourly equivalent thereof in the state of Idaho.
- Registration to vote for state elected officials in Idaho at a general election.

Residency decisions for fee payment purposes for graduate students are made by the Office of the Registrar in compliance with the practices and policies of Idaho State University. Students may appeal through the Residency Appeals Committee at Idaho State University. Students who initially enroll at Idaho State University as non-residents and later wish to be considered for a change in residency status must obtain an affidavit for residency application from the Admissions Office, Stop 8270, (208)282-2475. The affidavit must be completed, notarized and submitted to the Admissions Office along with supporting documentation. If approved, the student's status is changed in the computer and the student is billed as a resident. It is the responsibility of the person requesting reclassification of residency status to provide clear and convincing evidence of bona fide domicile in Idaho.

Other Fees and Charges

Graduate Application Fee $55

Student Health Insurance Fee $647.00 per semester; included in full-time fees

Class Fees (in addition to regular registration fees)

Many university classes require additional fees for specialized instruction and/or supplies. See the Class Schedule for class fees required for specific courses.

Late Registration Processing Fees

To help defray the extra cost involved with late registration, processing fees are charged in addition to any other regular fees. Students (full-time, part-time, faculty, staff, etc.) paying fees after the first day of official university classes are charged a late processing fee. The cashier is not authorized to accept late registration fee payment without the appropriate late processing fee. This fee is non-refundable. No department or employee of the university, other than those specifically authorized, has the authority to waive the fee.

Tuition and fees are not paid by the due date	$50
After last day to drop the class	$100
Summer (charged as above, except $100 fee is assessed after last day to withdraw)	

Audit Fee - Same as Part-time Credit Hour Fees

Faculty, Staff and Spouse Registration Fee $20 + $5 per credit hour

A copy of the current "Education Policy for Idaho State University Employees" is available in the Human Resources Office. Verification of employment and authorization forms for reduction in fees can be obtained from the Human Resources Office.

Senior Citizen Registration Fee $20 + $5 per credit hour

Age 60 years or older: proper identification indicating date of birth is required. Fee reduction applies to Idaho residents only. It does not apply to special class fees. Fee is for courses on a space available basis only.

Transcript Fee $5

Please contact the Office of Registration and Records for full information. This fee does vary, depending on the number of transcripts requested.

Application for Graduation and Diploma Fee $20

This fee is collected from each applicant for each graduate degree and for each certificate. This fee is paid to the Office of the Registrar.

Reprocessing Fee for Graduation $20

This fee is paid to the Graduate School.

Housing Costs

Please contact the University Housing Office for more information, Stop 8083, Idaho State University, Pocatello, ID 83209, or (208)282-2120.

Refund Policy

General Fee Refunds:

The Refund Policy applies to all for-credit classes regardless of location of the class.

All fee refunds will be paid by University check.

When any student enrolled in for-credit classes withdraws from Idaho State University or makes schedule changes that reduce the fee obligation, refunds are made on the following basis:

General University Fees Paid Without Use of a Fee Reduction Program:

Refunds are calculated and authorized by the Office of Financial Services. The drop/withdrawal date is the actual date the drop or withdrawal form is received by an authorized University office or automated system.

Refunds of registration charges for full-time fees, part-time credit hour fees, nonresident tuition, professional program fees, and departmental fees are calculated on the total amount of fees paid, using the first official day of the University semester or session as the starting date.

First-time students at Idaho State University who receive Federal Financial Aid may have their refund determined on a pro-rated basis per Federal Guidelines.

Percentage Refund of Computed Base:

Academic Semester:

Before and during the first week of classes (less a registration processing charge of $25.00)	100%
During the second week of classes	75%
During third and fourth week of classes	50%
After the fourth week	No Refunds

For classes, seminars and workshops with non-standard starting and ending dates, refund requests are reviewed on an exception basis. The starting and ending dates are those designated by the University Registrar.

Non-Refundable Fee Charges/Payments:

1. The State Board of Education authorized reduced fee charges. (Examples include but are not limited to faculty/staff reduced fee, senior citizen reduced fee, education contract classes, etc.)
2. Late processing charges
3. Any amounts paid to satisfy fees/charges due from previous terms.
4. Amounts paid for student health insurance and student malpractice insurance.

Refunds for Exceptional Circumstances:

In specific cases, as listed below, a full refund of the registration fee, credit hour fee, nonresident tuition and professional fees will be granted following official withdrawal from school, provided the withdrawal process is completed during the first half of the semester or session (i.e., first eight weeks of a semester, first four weeks of a session). Proper documentation, including notification of the academic advisor and the Graduate School, must be presented and approval granted by the offices of Student Affairs and Financial Services before the refund will be processed.

1. Induction of the student into the U.S. armed forces.
2. Incapacitating illness or injury that prevents the student from returning to school for the remainder of the term. A medical withdrawal must be processed through the University Student Health Center.
3. Death of a student.
4. Death of spouse, child, parent, or legal guardian of student.

Deductions from Calculated/Authorized Refund:

The University reserves the right to deduct from refunds any amounts due the University. Refunds of actual fees for the term, less any remaining fee loan balances for the term, are used to offset financial aid awarded as prioritized below:

1. Agency authorizations for payment of actual fees.
2. University authorizations specifically for the payment of fees (i.e., graduate teaching assistant, athletics, etc.)
3. Federal aid programs (see Financial Aid Handbook for priority).
4. Miscellaneous outstanding balances due the University.
5. University loan programs.
6. University and donor scholarship programs.
7. Balance to student.

Payment of Refund to Student:

A check for the balance is mailed to the home address of the student with an itemized statement of deductions.

Refund checks are not processed until four weeks after the start of the term or until at least three weeks after the actual date of payment for the term.

Registration Refund Appeals:

Contact the Vice President of Student Affairs or the University Controller for information on the University registration fee refund appeal process. Appeals should be submitted in writing before the end of the term for which the student is appealing.

Room and Board Fees:

Students who fail to complete their agreement with the University Housing Office will have their room and board fees pro-rated and, after appropriate penalties have been deducted, may receive a refund. See the University Housing Office for details on residence hall and apartment living, and for details on any penalties for breaking agreements.

Delinquent Accounts

The cancellation of the registration and withholding of academic credit of any student with a delinquent account or an unsatisfactory financial relationship with the Office of Financial Services is authorized without further notice, provided an attempt has been made to notify the student by the campus department in which the hold originated. This regulation may be invoked at the discretion of the Vice President, Finance and Administration, in cases of disregard in the settlement of returned checks, residence hall damage, library fines, telephone toll charges, overdue notes, traffic fines, room and/or board charges, apartment rental charges, etc.

Dishonored Check Policy

A charge is assessed each time a check is returned, the amount is charged to the student's account, and the student is so notified. If the check is not cleared within ten (10) days, a second notice is sent and a "hold" placed on his/her records.

Any check tendered in payment of registration fees and subsequently returned by the bank will result in automatic postponement of the student's registration.

In the case of a check tendered in payment for room and board and subsequently returned by the bank, the student is notified immediately and allowed not more than five (5) days for the check to clear. If not cleared within that time, the student's meal ticket and/or room reservations is canceled.

Federal Family Educational Rights and Privacy Act of 1974

Idaho State University in compliance with the Family Educational Rights and Privacy Act (FERPA), is responsible for maintaining educational records and monitoring the release of information of those records. Staff and faculty with access to student educational records are legally responsible for protecting the privacy of the student by using information only for legitimate educational reasons to instruct, advise, or otherwise assist students.

Only those records defined as "directory information" may be released without the express written permission of the student. Directory information includes the student's name, address listings, telephone listings, e-mail addresses, full-time/part-time status, class level, college, major field of study, degree types and dates, enrollment status, club and athletic participation records, and dates of attendance including whether or not currently enrolled. No other information contained in a student's educational records may be released to any outside party without the written consent of the student.

A student may restrict release of all directory information by filing a Declaration of Non-disclosure of Educational Record Information form in the Office of Registration and Records. Students may choose to restrict release of their address and telephone listings only. This may be done through their MyISU portal by accessing the Student Address Change Request form under Student Records information. This restriction will apply to the students' address and telephone listings only; all other directory listings will continue to be available for release.

Students must request complete directory information restriction or address/phone listing restrictions during the first week of the fall term to prevent their information from being published in the Student Directory. Any restriction is permanent and remains in place even after the student has stopped attending or has graduated from the University unless the student requests, in writing, that it be removed. Additional FERPA information may be found on the web at: http://www.isu.edu/areg/ferpafacts.shtml

Financial Support

The following financial information is a listing of the categories of financial help that may be available to graduate students. However, in many instances specific sources of assistance are available only at certain times of the year and require application with a deadline enforced. With respect to campus-based aid (special non-resident waivers, loans, and college work study), applications should be made the January preceding the fall/spring semester for which aid is desired. To obtain specific details about a particular type of financial assistance, contact the Office of Financial Aid, Museum Building, Stop 8077, Idaho State University, Pocatello, ID 83209-8077, (208)282-2756.

Satisfactory Academic Progress

To retain financial support as a graduate student, almost all sources of funds require that the student must maintain satisfactory academic progress. For graduate assistantships and fellowships, students ordinarily must earn nine graduate credit hours or more each semester and maintain a 3.0 grade point average. Some departments may require additional evidence of satisfactory progress for a student to remain eligible to receive assistantship or fellowship support. Students who receive financial aid through the Office of Financial Aid must meet the criteria established by that office for satisfactory progress to remain eligible for further aid.

Assistantships and Fellowships

Assistantships and fellowships are awarded at the departmental or college level. Requests for consideration of these awards should be directed to the graduate program director, department chair, or academic dean of a specific academic unit. Most assistantships and fellowships are awarded on an academic year basis. These awards are generally made in the spring for the following academic year. To ensure consideration, a request for such financial support should be made to the academic unit by February or March. Contact individual departments or colleges for specific application deadlines.

Only students admitted as Classified (degree-seeking) students are eligible to apply for graduate assistantships or fellowships. Classified (w/PR) and Unclassified students are not eligible to receive assistantships. Because full-time graduate assistants are expected to work up to 20 hours per week, the maximum number of graduate credits an assistant may earn in a given semester is 12. Normally, a full-time graduate assistant is expected to carry a minimum of nine graduate credits, which is a full load. DA fellows are expected to carry a minimum of nine graduate credits per semester.

Permission to carry fewer than nine or more than 12 graduate credits may be granted by the Dean of the Graduate School upon written recommendation of the student's advisor or program director.

Doctoral graduate assistants ordinarily receive higher stipends than those at the master's level. Full-time graduate assistants and fellows may also be awarded scholarships to cover in-state student fees, student health insurance, and non-resident tuition in addition to the stipend.

A student with a graduate assistantship or fellowship may be employed by the university

for compensation in addition to the awarded stipend. This employment may only occur with permission of the Dean of the Graduate School and usually must be limited to 10 hours per week. Requests for permission for such employment must be sent in writing by the department chair or graduate program director to the Dean of the Graduate School.

Graduate Assistantships (GA)

There are about 200 GAs available across the University; most of these require serving as an instructor for a department. Most assistantships are awarded in the spring semester for the next academic year. Full-time GAs are expected to work up to 20 hours/week for their stipend. Contact the department chair or graduate program director for GA application information.

Graduate assistants who are international students, whose native language is not English, and who have been assigned to teach, must complete an English speaking proficiency examination, usually the Spoken English Assessment Kit (SPEAK), administered at the Center for Teaching and Learning. In order for an international student to be awarded a GA and teach a course, the student must score 23 or above on the Speaking Section of the TOEFL iBT.

Normally, graduate assistants are involved in classroom instruction, supervision of laboratory sections, grading papers and/or examinations, assisting faculty members in research activities, or other equivalent duties.

Research Assistantships (RA)

Research Assistantships (approximately 100) are available across the University through grant monies or other external sources. Conditions of employment and amounts of compensation vary. Questions about such sources of support should be directed to the academic departments or colleges.

Fellowships

Doctor of Art Fellowships are awarded each year to students admitted to and enrolled in Doctor of Arts programs. These fellowships are available in the Departments of Biological Sciences, Mathematics, and Political Science. Most of these fellowships are awarded in the spring semester for the next academic year. Contact the departments for details and applications.

Contact	Location	Phone
Biological Sciences	Life Sciences Bldg.	282-3765
Mathematics	Physical Sciences Bldg.	282-3350
Political Science	Graveley Hall	282-2211

Tuition and Fee Scholarships

Departments may offer tuition and fee scholarships as separate awards to graduate assistants, research assistants, and DA fellows. However, these offers are at the discretion of the departments. Non-resident tuition waivers accompany all graduate assistantships and DA fellowships but are offered as separate scholarships.

Graduate School Awards

Graduate Assistantship Teaching Experience (GATE)

The former "At-Large" Graduate Assistantships are renamed: Graduate Assistant Teaching Experience (GATE) Assistantships. GATE assistantships are awarded annually by the Graduate School to departments. Department applications are due December 15, with awards being made in early March annually. GATE Assistantships are one year, Master's level awards. GATE assistants are required to participate in the GATE Curriculum and the GATE opportunity; and allocate and fulfill their assistantship hour requirements as follows:

-Up to 15 hours/week = Department discretion in support of "teaching"
-Up to 5 hours/week = dedicated to the GATE experience.

The GATE Curriculum requires GATE awardees to: (a) enroll in the GATE Seminar during their first (the Fall) semester of graduate study. The GATE Seminar (GRAD599-01) is a 1 credit graduate seminar, designed and delivered by the Graduate School, focused on enhancing, supporting, and facilitating graduate student exploration of, and success in college-level teaching; and (b) enroll/participate in 1 "elective" graduate-level academic credit (or equivalent).

Non-Resident Tuition Waivers (NRTW)

There are several categories of non-resident tuition waivers. In each case a different contact person or procedure must be followed in applying. It is important to note that these waivers do not cover the required in-state enrollment fees, but only the non-resident tuition. Unless other scholarships are awarded, the student must pay the in-state enrollment fees each semester, including summer.

These awards are distributed on a competitive basis by the Graduate School. Students should apply using the form supplied by the Graduate School. Application must be received by May 1st for the following Fall Semester consideration and by December 1st for the following Spring Semester. The non-resident tuition waiver may be granted for the academic year or for one semester only. Awards are made after final grades for the current semester are recorded.

Other Non-Resident Tuition Waivers (NRTW)

Additional waivers beyond those described may be available and require application to the appropriate office. These waivers are awarded on a competitive basis. Contact and application may be made to the offices listed below.

Category of NRTW	Contact	Location	Phone
Financial need	Financial Aid Office	Rm 337, Museum Bldg	282-2756
International Students	Office of Student Affairs	Rm 184, Hypostyle	282-2315

Loans

Loans may be available to graduate students. To inquire about application and eligibility requirements contact the Office of Financial Aid, Room 337, Museum Building, Stop 8077, Idaho State University, Pocatello, ID 83209-8077, (208) 282-2756.

Grants

Federal grant programs administered by the Office of Financial Aid are not available to graduate students. Pell Grants, Supplemental Educational Opportunity Grants, and State Student Incentive Grant Programs are only available to undergraduate students who have not earned a bachelor's degree. Special non-resident waivers administered by the Office of Financial Aid are available to graduate students who are citizens or eligible non-citizens and meet other financial need criteria.

Research Grants

A small fund in the Office of Research has been created to provide money to graduate students on a competitive basis to conduct thesis or dissertation research. Research

proposals with budgets must be submitted to the Office of Research by deadlines established by the Graduate Student Research and Scholarship Committee. This committee awards grants both fall and spring semester. Guidelines for proposal preparation are available in the Office of Research and from representatives on the committee. The Call for Proposals is sent out the first Monday in February for the following Fall Semester, and the last Monday in September for Spring Semester awards.

Expenses for thesis and dissertation research are often paid by research grants obtained by faculty or departments. In addition, students may be employed with such funds at the discretion of the principal investigator.

Scholarships

Scholarships are available to graduate students in some instances. Announcements of scholarships currently available are posted on the scholarship bulletin board located outside the Scholarship Office (Museum Building 327). Please note that some scholarship categories are discontinued at times and new ones are created. Therefore, a regular check at the Scholarship Office may be useful to interested students. In addition, there may be off-campus scholarship sources such as parents' or spouses' employers, fraternal organizations, churches or businesses, or national foundations. These sources may be discovered by a systematic and careful search by the student. Departments/colleges may also have specific scholarships.

A small number of ASISU scholarships, which are derived from student fee payments are available to graduate students. These are awarded on a competitive basis. Application materials can be obtained from the offices of college deans, the Office of Research and the Graduate School near the middle of each semester. The Graduate Student Scholarship Committee recommends awardees to the Scholarship Office and the ASISU Senate. Graduate student applications for consideration of ASISU scholarships must be returned to the Graduate School to be considered for a graduate student ASISU Scholarship.

Employment Information

A student with a graduate assistantship or fellowship may be employed by the university for compensation in addition to the awarded stipend. This employment may only occur with permission of the Dean of the Graduate School and usually must be limited to 10 hours per week. Requests for permission for such employment must be sent in writing by the department chair or graduate program director to the Dean of the Graduate School.

Other graduate students may find employment on campus or off-campus by applying at the appropriate office below.

Employment

Category	Contact	Location	Phone
International Students (off campus)	Office of Student Affairs	Rm 384, Hypostyle	282-2315
International Students (on campus)	Departments and other offices		
On campus (part-time)	Student Employment Office	Rm 440 Museum Bldg	282-2778
	Department and other offices		
Off campus (part-time or temporary)	Student Employment Office	Room 440 Museum Bldg	282-2778
College Work Study	Financial Aid Office		282-2756

Travel Funds

Graduate students may request aid for travel expenses to present papers on thesis or dissertation research at regional or national meetings. Such requests should be presented only after a paper has been accepted by the official sponsoring organization of the discipline. Funds for such purposes are very limited, and only modest requests are likely to be funded. Funds for such purposes should be requested sequentially from the following contact points:

Academic Department
Academic College
Office of Research
Graduate School

When submitting written requests to the Office of Research for travel funds, a breakdown of expenses for registration, lodging, travel, and per diem is necessary.

Publication Costs

Graduate students may submit requests for funding to meet publication costs of a paper accepted for publication up to $100 from the Graduate Student Research and Scholarship Committee (GSRSC) in the form of dissemination grants. Requests should be in the form required by the GSRSC and submitted to the Office of Research. (See previous information under Research Grants.)

Thesis and Dissertation Research Costs

Academic departments ordinarily are expected to meet at least some of the costs of thesis and dissertation research. In some instances such costs may be met by extramural funds obtained by faculty and/or departments. With the exception of the small research grant program listed previously, the Office of Research does not provide funds for such purposes and will refer students to the department chair or dean of the college when such requests occur. Publication costs of theses and dissertations are met by the student unless a faculty member or department chooses to pay such costs with funds available to them.

University Services

Student Health Services

The ISU Student Health Center provides the entire range of medical office care as is provided at a hometown doctor's office. This includes everything from treatment of colds and flu to treatment of high blood pressure and diabetes. Care is provided for broken bones, lacerations, abscesses, and other urgent care problems. Preventative health services such as immunizations, nutrition counseling, and birth control are areas of particular interest.

All full-time fee paying students (9 credits or more) are eligible to see a care provider at the Student Health Center at no charge. (Student insurance is not required to utilize the Student Health Center.)

Part-time students and spouses of full-time students are charged a clinic fee to see a care provider. The Student Health Center bills private insurance as well as student insurance when billable services such as laboratory tests, X-ray studies, special procedures, etc. are performed. Same day appointments are available as well as advance appointments. A walk-in clinic is held each day. A valid Bengal ID card is required to obtain services.

The Student Health Center is located at 990 Cesar Chavez Avenue—across from Graveley Hall. For additional information call 208-282-2330.

The Student Pharmacy provides low-cost prescription drugs as well as over-the-counter medications at reduced costs. Students may wish to transfer prescriptions to the Student Pharmacy while they are attending ISU. All ISU students, both full- and part-time can use the Student Pharmacy.

The Dental Hygiene Clinic provides dental care by dental hygiene students, evaluated

by licensed hygienists serving as faculty, and supervised by licensed dentists.

The Department of Physical and Occupational Therapy operates several programs providing clinical services to patients from the university and community on a sliding payment scale.

The Department of Speech Pathology and Audiology operates the ISU Speech and Hearing Center and the Audiology Clinic, offering comprehensive evaluation, diagnostic testing and therapy services.

The ISU Wellness Center helps students maintain desired levels of health and fitness through a wide variety of classes, including aerobics, aquacise, and yoga, as well as weight machines, free weights, and a variety of cardio machines. The Wellness Center also provides fitness assessments, health appraisals, nutrition analyses and education, and campus-wide health screenings. Many Wellness Center services are free to ISU students.

The Janet C. Anderson Gender Resource Center at Idaho State University serves as the focal point on campus for the consideration of gender issues. The mission of the Center is to increase awareness and promote open dialogue about gender through its resources and services, educational programming and support of gender-related research. In our efforts, we are especially guided by the ideal of diversity, as valued by the Division of Student Affairs, which allows us to envision a future free of the limitations imposed by our culture's standard definitions of gender. Funded by Student Affairs through mandatory student fees, the Center's primary target audience is that of ISU students; the Center also welcomes the interest and participation of prospective students, ISU faculty and staff, and members of the Eastern Idaho community.

Counseling and Testing Center

The Center for Counseling and Testing Services provides personal counseling and individual assessments to assist students in coping with psychological, emotional and interpersonal stress. Crisis intervention and consultation with concerned faculty and staff regarding student's needs are other important services available. Counseling staff can usually assist students with concerns such as anxiety, depression, self-esteem, motivation, eating problems, stress relief, and interpersonal relations. Personal counseling is free and confidential; all staff are licensed by the State of Idaho as counselors or psychologists.

The Center administers over 50 national and several institutional tests, including those for Graduate School and professional school admission, such as the Graduate Record Exam (GRE), Graduate Management Aptitude Test (GMAT), Medical College Aptitude Test (MCAT), etc., teacher certification (NTE), and professional certification exams (Real Estate, Social Work, Dental Hygiene, etc.).

The Center is the Computer-Based Testing Center in this region for administering the GRE, GMAT, MAT, PPST, and NBTCP.

Information Technology Services

Information Technology Services (ITS), located in the basement of the College of Business building, is dedicated to meeting the computing needs of students. Kiosk computers are installed in numerous locations throughout campus to provide fast and convenient stand-up email and Internet access. Nine computer labs in Pocatello, three in Idaho Falls, two in Meridian, and one in Twin Falls are open to Idaho State University students. Additional computer labs with specialized discipline-specific software, operated by individual departments, but supported by ITS, are also available. Use of the computer labs, kiosks, wireless network and most departmental labs require the purchase of an ISU Computer Account (currently $35.00 per semester and $30.00 summer).

ISU Computer Accounts may be purchased at the IT Service Desk in Pocatello (BA-B9 and Rendezvous Computer Lab), and in the ISU-Idaho Falls, ISU-Twin Falls and ISU-Meridian computer labs. The ISU Computer Account allows access to the computer labs, kiosks, data storage, personal web page, printing, access to email and the ISU wireless network. Some courses require an ISU Computer Account.

The IT Service Desk, help@isu.edu or 208-282-HELP (4357), provides support to students accessing ISU's information technology services, such as Moodle ISU and e-mail from personal computers and laptops. Students may also visit our IT Service Desk locations wherever ISU Computer Accounts are sold (locations listed above).

Idaho State University's home page, http://www.isu.edu, provides access to a wide variety of university information (such as web-based course material, campus events, online library access and this Catalog). All admitted students have a personal customizable Web portal found at http://my.isu.edu. All enrolled students are provided an Idaho State University email account.

Students are encouraged to use the online technical support page at http://help.isu.edu.

For more information about ISU's Information Technology Services, visit http://www.isu.edu/its and the Computer Labs & Technology web site found on ISU's "Current Student" home page (http://www.isu.edu/current.shtml).

Eli M. Oboler Library Building

The University Library, named for its past Director, Eli M. Oboler, contains major collections of books, periodicals, electronic resources, maps microforms, and government publications, and provides a full range of services to students, faculty, and staff. The library collection of 656,827 book and serial volumes and its 4,444 active journal subscriptions in all formats are accessible through its automated catalog and circulation system, available through the library web page. In addition, the library provides access to an additional 39,000 journals. These resources are available to the Idaho State University community. For most resources, remote access is available across the state with appropriate authentication. The University Library has been a depository for federal publications since 1908, and for State of Idaho publications since 1972. The government publications collection contains over 445,024 printed items and approximately 1,964,868 items published in microform.

General reference service is provided on the first floor, where librarians are available to assist patrons in the use of over 89 databases and other reference resources. Library instruction is available to classes and student groups, and is tailored to address students' specific needs, from general library orientation to subject-specific bibliographic research. In addition to supplying informational materials from its own collections, the library provides an interlibrary loan service equipped to locate and deliver books and periodical articles from other libraries' holdings. Using online electronic ordering and transmission, as well as postal services, the interlibrary loan service fills most requests within a week, but students should allow a two-week turnaround time.

The Idaho Health Sciences Library, a department of the Eli M. Oboler Library, supports

the health sciences information needs of the university and the Idaho health-care community. It also provides specialized health science reference, research, and instruction services. The Arthur P. Oliver Law Library, located on the first floor of the Eli M. Oboler Library, houses more than 13,000 law books. An excellent reference resource for students, faculty, and staff, it is supplemented with legal databases.

Idaho Falls Services: The University Library Center at Idaho State University-Idaho Falls provides reference services, a limited reference collection, and a study area for Idaho State University students. Also available are public access workstations on which students and faculty are able to access most of the information databases available to students at the main campus. With the assistance of trained staff, students are able to request the delivery of books and journal articles from the University Library.

Twin Falls and Lewiston: The Oboler Library has agreements with the libraries at the College of Southern Idaho and at Lewis-Clark State College. These agreements ensure strong library support for Idaho State University's students in the Twin Falls and the Lewiston areas. Under these agreements, Idaho State University students are able to access the two libraries and check out materials. They also receive full reference, instruction, interlibrary loan, and database searching services. On-line access to Idaho State University Library databases and the catalog are available.

Meridian: A similar agreement in Meridian provides Idaho State University students and faculty the same library privileges accorded to Boise State University students and faculty upon presentation of their Idaho State University Bengal identification cards.

Graduate students are encouraged to use all the services mentioned above, especially library instruction for any classes they teach. Those teaching may also take advantage of the library's reserve service for class supplemental readings. Reserve services are available online, as well as in Pocatello and in Idaho Falls. Interlibrary loan is required to supplement the local collection in certain research fields. The reference staff is available for searching specialized databases and for assisting with research.

For more detailed information regarding Library services, including hours of service and policies, please visit the library website at www.isu.edu/library.

Affirmative Action

Idaho State University endeavors to achieve equal educational opportunity for minorities, persons with disabilities and women students through recruitment, admission, curricular and extracurricular programs, advising and retention practices, and student aid and employment. Discrimination affecting any person based on race, religion, gender or disability is illegal and should be reported to the Office of Affirmative Action.

Recreational Services

There is a wide complement of recreational opportunities for students at Idaho State University. The recreational facilities in Reed Gym and Holt Arena provide indoor running tracks, indoor tennis courts, racquetball courts, swimming pools, weight and exercise rooms, and exercise classes. A highly regarded Outdoor Program is available to members of the university community. Throughout the year, activities and classes are organized in such outdoor pursuits as canoeing, kayaking, cross country skiing, rock and mountain climbing, hiking, camping trips, and river float trips. In addition, equipment may be rented for wilderness trips at nominal cost from the Wilderness Equipment Rental Center in the Student Union. The Student Union Crafts Shop offers a wide variety of workshops and classes in most craft areas to students, faculty, staff, and community in a casual learning environment.

C. W. Hog

The Cooperative Wilderness Handicapped Outdoor Program (C.W. HOG) is a year round program of activities for people with and without disabilities. Academic credit may be granted for participation in activities which include weight training, swimming, snow skiing, water skiing, and whitewater rafting.

Americans with Disabilities

The Americans with Disabilities Act (ADA), of 1990, is the civil rights guarantee for persons with disabilities in the United States. It provides protection from discrimination for individuals on the basis of disability. The ADA extends civil rights protection to people with disabilities in matters which include transportation, public accommodations, accessibility, services provided by state and local government, ¬telecommunication relay services, and ¬employment in the private sector.

Idaho State University, in the spirit and letter of the law, will make every effort to comply with "reasonable accommodations", according to section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the ADA Amendments Act, (ADAAA), of 2008. Idaho State University will not discriminate in the recruitment, admission, or treatment of students or employees with disabilities.

Students with disabilities who wish to have accommodations provided by the University must self identify to the ADA & Disabilities Resource Center for determination of need for accommodations. Information about and applications for accommodations are available at the ADA Center and may be picked up in person or requested by telephone or TDD by calling (208) 282-3599.

In order for the ADA Center to arrange accommodations for those who need assistance, they request documentation of disability as early as possible so that timely arrangements can be made.

Students and employees who need auxiliary aids or other accommodations should contact the Director, Dennis Toney, at the ADA & Disabilities Resource Center, Graveley Hall, Room 123, Stop 8121, (208) 282-3599.

Other Student Services

In addition to the services mentioned previously, some of the other general student services available on campus are:

- the Office of the International Student Advisor, which provides assistance, support and guidance to Idaho State University's international students. Services include student orientation to the Idaho State University campus and Pocatello community, on-going cross-cultural activities, student-to-student mentor programs, and additional programs to help international students make the most of their time at ISU.
- the Center for Teaching and Learning, which offers programs in study skills, reading, writing, mathematics, and English for speakers of other languages, and includes individualized instruction, tutoring, and workshops. The Center also administers the ASISU Content Area Tutoring Program.
- the Career Development Center, which provides career counseling, career test-

ing, alumni consultants, internship opportunities, student employment assistance, job interviewing techniques, networking skills training, credential files, on-campus recruiter interview, and other career-related support to students and alumni in both individual and group settings.

- the Student Employment Center, which assists students seeking employment while enrolled at the university and provides lists of summer employment opportunities for Idaho and other states. Assistance is available to all students enrolled for 6 credit hours or more each semester. Employment vacancies are listed on the web and posted in the office.
- the Idaho State University Bookstore offers a selection of textbooks, computer supplies, school and office supplies, Idaho State University clothing, gifts and greeting cards, and general interest books. The Bookstore maintains branch offices in Idaho Falls (University Place) and Twin Falls (CSI Bookstore).
- the ASISU Early Leaning Center, which provides child care for children six weeks of age through elementary school while their parents attend classes or work at the university. Children are enrolled in developmentally appropriate classes led by a professional staff assisted by student employees. Parents are encouraged to visit the Center, for more information about services.

Institutes

Biomedical Research Institute

Director and Professor: Daniels

The Biomedical Research Institute embraces the latest advances in biomedical engineering, biotechnology, nanotechnology, neuroscience and bioinformatics and bio-signaling research in medicine, biology, and healthcare. The Institute aims to further enhance the fulfillment of the mission and goal of Idaho State University as the lead among Idaho universities in the health professions.

Established in 2005 to increase the collaboration, efficiency and focus of the University's biomedical research activities, the Biomedical Research Institute will provide additional resources for faculty to improve research capabilities.

The long-term vision of the Institute is to establish a nationally and internationally recognized interdisciplinary biomedical research environment where scientists, engineers, and health professionals can interact synergistically, without the restrictions of traditional discipline barriers.

The Institute's four major focus areas are behavioral and neuroscience; bio-signaling and communication; functional genomics and biotechnology; and health science and engineering.

For more information, see IBRI.ISU.EDU.

Informatics Research Institute

The Informatics Research Institute (IRI) is an academic unit providing coordination for several interdisciplinary degrees and research centers across campus. Informatics is an integrative discipline that arises from the synergistic application of computational, informational, organizational, cognitive, and other disciplines whose primary focus is in the acquisition, storage and use of information in a broad spectrum of domains.

Institute of Emergency Management

The Institute of Emergency Management, (IEM) located on the Idaho State University Meridian Center Campus, was approved by the Idaho State Board of Education in July 2003. The purpose of the Institute is to offer workshops, courses, certificates, and in the future degrees, to meet the professional and career development needs of Idahoans employed in or planning a career in Emergency Management. The Institute delivers courses statewide at various sites in Idaho communities, to meet the needs of local first responders. Here is the link to the IEM registration website.

Institute of Nuclear Science and Engineering

Idaho State University has established an Institute of Nuclear Science and Engineering (INSE) with approval from the Idaho State Board of Education in 2003. The Institute is a collaborative entity among ISU, University of Idaho and Boise State University. Under the INSE's administrative umbrella, the three universities jointly focus on nuclear science and engineering education at the combined Idaho Falls campus. Nuclear-related research in conjunction with the new Idaho National Laboratory is also coordinated through the INSE at University Place in Idaho Falls.

The 2+2 scholars program is a special opportunity for students interested in pursuing a Bachelor of Science degree in nuclear engineering. While Idaho State University has offered a nuclear emphasis for its interdisciplinary engineering degree for many years, it established the specific Nuclear Engineering B.S. degree in 2004 at the request of the U.S. Department of Energy. The University of Idaho and Boise State University are working together with ISU through the "2 + 2" program: 2 years at the main campus of one of the three universities and the second 2 years in Idaho Falls at the University Place campus. The reason for the location is to have special opportunities for the students in conjunction with the Idaho National Lab, which is a partner in this effort as well. Scholarship money, donated by AREVA to jump start the program, will be awarded to this elite group of students. Funding for the entire 2 years in Idaho Falls will cover tuition and fees, a book allowance and a small stipend. For further information and a scholarship application, visit the Institute's scholarship web page at http://www.isu.edu/departments/inse/tntp.html

Cooperative Programs

NAACP-College Exchange Program

In order to enhance campus diversity, the Faculty Senate and the local NAACP Branch sponsor and mentor minority faculty from traditionally African-American universities who seek masters or doctoral degrees. Individualized assistance packages are developed based on the applicant's qualifications and interests. These faculty use sabbatical or leave time to acquire additional graduate training at ISU, then return to their home institutions. Interested

applicants should contact Dr. Jack Owens, local NAACP representative, at (208) 282-3232 (Department of History).

Oak Ridge Associated Universities (ORAU)

Since 1993, students and faculty of Idaho State University have benefited from ISU's membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 91 colleges and universities, and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship and research appointments; and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education, the DOE facility operated by ORAU, undergraduates, graduates, postgraduates and faculty may access a multitude of opportunities for study and research. Students may participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the number of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines, and details on locations and benefits can be found in the ORISE Catalog of Education and Training Programs, which is available at www.orau.gov/orise/educ.htm, or by calling either of the contact persons below.

ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry, and major federal facilities. Activities include faculty development programs, such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scientist Program, consortium research funding initiatives, faculty research, and support programs, as well as services to chief research officers. For more information about ORAU and its programs, visit the ORAU website at www.orau.gov or contact:

Dr. Thomas F. Gesell
Professor of Health Physics
ORAU Counselor for Idaho State University

or

Monnie E. Champion
ORAU Corporate Secretary
(865) 576-3306


CHARLES H. KEGEL
LIBERAL ARTS

College of Arts and Sciences

Scott Hughes, Ph.D., Interim Dean
Dennis C. Stowe, Ph.D., Interim Associate Dean
Sheri Dienstfrey, Ph.D., Interim Assistant Dean

Department of Anthropology

Chair and Professor Lohse
Professors: Holmer, Loether, Maschner
Associate Professor: Cartwright
Assistant Professors: Peterson, Reedy-Maschner
Native Language Instructor: Gould
Adjunct Faculty: Dean, Hansen, Petersen, Thomas, Wolfley
Research Affiliate Faculty: Dean, Hansen, Reedy-Maschner

Mission

The mission of the Department of Anthropology is to research and teach about human behavior in a holistic and respectful manner. Anthropology consists of sub-fields that specialize in the human past, human biology and evolution, language, and bio-cultural behavior. Anthropology provides cross-cultural, international, and global perspectives on past and present human behavior. At Idaho State University, an important part of the anthropology mission is to apply anthropological concepts to the resolution of important social, cultural, and environmental problems of our times. The Department of Anthropology offers a graduate program leading to the Master of Arts or a non-thesis applied Master of Science degree in Anthropology. The option must be selected in consultation with the student's major advisor.

Goals

Students who have completed a graduate degree in Anthropology at Idaho State University should be able to:

1. Read and understand anthropological theory at a professional level.
2. Understand current debates within the field of anthropology.
3. Synthesize and critically evaluate the professional literature.
4. Use a comparative approach to theorize about the similarities and differences in the human condition across space and through time.

Measurable Outcomes - The Thesis or Special Project should show the following competencies based on the learning objectives:

1. Write a proposal for pure research or the application of theory to contemporary social issues.
2. Perform quantitative and/or qualitative analysis of data appropriate to the chosen subdiscipline.
3. Competently conceive, conduct, and write-up either research in anthropology or applications of anthropology at a level suitable for publication.

Admission Requirements

The student must apply to, and meet all criteria for admission to the Graduate School. In addition the student must provide:

1. A letter of application, including areas of interest and professional goals;
2. Three letters of recommendation;
3. Undergraduate transcripts;
4. Minimum grade point average of 3.0;
5. Total GRE scores that average at least the 50th percentile for admission;
6. An undergraduate degree in anthropology is not required for acceptance into the program; however, students without the equivalent of ANTH 501, 503, 530, and an upper division linguistic anthropology course will be required to take these courses or approved readings courses before enrolling in content-respective graduate seminars.

General Requirements

1. A minimum of 30 credits must be taken, including these required courses:

Master of Arts Option

ANTH 605	Seminar in Linguistic Anthropology	3 cr
ANTH 615	Seminar in Biological Anthropology	3 cr
ANTH 625	Seminar in Sociocultural Anthropology	3 cr
ANTH 635	Seminar in Archaeology	3 cr
PLUS		
ANTH 641	Research Project	6 cr
OR		
ANTH 650	Thesis	6 cr

In addition:

Four semesters of foreign language must be completed, or competence must be demonstrated by an examination administered by the Department of Languages and Literature. Nine credits of graduate level courses approved by the major advisor are also required.

Master of Science Option:

Two of the following graduate seminars:

ANTH 605, 615, 625, 635		6 cr
PLUS		
ANTH 641	Research Project	6 cr
OR		
ANTH 650	Thesis	6 cr

In addition:

1. Nine credits of advanced techniques and methods courses and six additional credits of graduate level courses approved by the major advisor.

2. Each student must develop a proposed program of study specifying electives and techniques and methods (M.S.) courses in consultation with the student's major advisor by the end of the first semester. The 12 elective credits may be satisfied by courses taken from the Medical Anthropology Option Area for those students also completing an MPH Degree. Students completing an MS or MA in Anthropology with an MPH degree may apply 12 credits to both degrees.

3. To maintain classified status, the student must register for a minimum of 6 credits each semester of the first year.

4. An acceptable thesis or publishable manuscript must be written and orally defended.

Anthropology Graduate Courses

ANTH g501 History and Theory of Sociocultural Anthropology 3 credits. Survey of the development of anthropology, various schools of thought, important personalities, and concepts that have contributed to anthropology over time. PREREQ: ANTH 250 OR PERMISSION OF THE INSTRUCTOR.

ANTH g502 Ecological Anthropology 3 credits. Interaction of human bio-cultural systems and environment. Relations of natural resources,

technological inventories, social organization, cultural categories. Native resource management practices. PREREQ: ANTH 230, ANTH 250, ANTH 203 AND BIOL 100, OR PERMISSION OF INSTRUCTOR.

ANTH g503 Method and Theory in Archaeology 3 credits. History of the development of current methods and theory in archaeology and contemporary applications. PREREQ: ANTH 203 OR PERMISSION OF INSTRUCTOR.

ANTH g504 Material Culture Analysis 3 credits. Method and analyses used in archaeology and anthropology to understand the relationship between objects and culture. PREREQ: ANTH 203 OR PERMISSION OF INSTRUCTOR. COREQ: ANTH g505.

ANTH g505 Analytical Techniques Laboratory 1 credit. Analytical techniques laboratory to accompany ANTH g504. Students will complete an assigned project in material culture analysis. PREREQ: ANTH 203 OR PERMISSION OF INSTRUCTOR. COREQ: ANTH g504

ANTH g506 American Indian Health Issues 3 credits. An overview of health concerns, both current and past, of American Indian people, and the biological and sociocultural factors which influence health status. PREREQ: PERMISSION OF INSTRUCTOR.

ANTH g507 Introduction to Medical Anthropology 3 credits. How cultures define health and illness, and how these definitions ultimately influence the health status of individuals. PREREQ: PRIOR ANTHROPOLOGY COURSE OR PERMISSION OF INSTRUCTOR.

ANTH g508 Special Topics in Medical Anthropology 3 credits. Rotating topics, including international health issues, ethno-psychiatry, ethno-medicine and non-western healing systems. May be repeated for a maximum of 6 credits. PREREQ: ANTH g507 OR PERMISSION OF INSTRUCTOR.

ANTH g509 Clinical Medical Anthropology 3 credits. Explores the culture of biomedicine and the beliefs of patients. Topics include doctor/patient communication, cultural competency, cultural construction of risk, critiques of high-tech medicine and the international pharmaceutical industry.

ANTH g510 Introduction to Cultural Resources Management 3 credits. Introduction to CRM reviewing historic preservation and federal legislation as they pertain to archaeology; practical experience in site survey and recording. PREREQ: ANTH 203 OR PERMISSION OF INSTRUCTOR.

ANTH g513 Old World Archaeology 3 credits. Prehistory of the Old World. Precise areal focus and periods may vary. Includes both theory and exposition. PREREQ: ANTH 203 OR PERMISSION OF INSTRUCTOR.

ANTH g514 New World Archaeology 3 credits. Examination of the prehistory of the Americas with emphasis on the North American Continent. PREREQ: ANTH 203 OR PERMISSION OF INSTRUCTOR

ANTH g523 Anthropology of International Health 3 credits. Exploration of critical health issues that exist in the world today from an anthropological perspective. Diseases of poverty/development, emerging infectious diseases, medical tourism and the political arena of international health.

ANTH g524 Ethnomedicine of Latin America 3 credits. Examines traditional medical systems and folk illnesses in order to better understand the underlying logics of healing that exist in Latino populations worldwide. Shamanism, witchcraft, spiritual healing and biomedicine will be addressed.

ANTH g530 Human Origins and Diversity 3 credits. Examines human origins, adaptations and biological diversity within the context of evolutionary processes. Primate lineage will be investigated. PREREQ: ANTH 230 OR PERMISSION OF INSTRUCTOR.

ANTH g532 Human Osteology 3 credits. Provides a working knowledge of skeletal anatomy, primarily focusing on identification of individual bones. Other topics include: osteogenesis, pathologies and applications of knowledge and technique. PREREQ: ANTH 230 AND ANTH 232, OR PERMISSION OF INSTRUCTOR**.**

ANTH g533 Survey of Living Primates 3 credits. Explores the anatomy, behavioral ecology, and adaptive diversity of extant non-human primates. Begins with the history of human interaction with primates, and continues with a consideration of the major primate taxa and their anatomical and behavioral trends and distinctions. PREREQ: ANTH 230 AND ANTH 232; OR BIOL 101 AND BIOL 102; OR PERMISSION OF INSTRUCTOR.

ANTH g535 Survey of Fossil Primates 3 credits. A survey of the evolutionary history and adaptations of the primates emphasizing the interpretation of their fossil record; their differentiation and adaptive radiations, spanning from the earliest primates in the shadow of the dinosaurs to the enigmatic giants of the Pleistocene. PREREQ: ANTH 230, 232; OR BIOL 101,102; OR PERMISSION OF INSTRUCTOR.

ANTH g539 Principles of Taphonomy 3 credits. Effects of processes which modify organisms between death and the time the usually fossilized remains are studied. Emphasis on vertebrates. Cross-listed with BIOL g539 and GEOL g539. PREREQ: PERMISSION OF INSTRUCTOR.

ANTH g549 Methods and Techniques of Ethnographic Field Research 3 credits. Participant observation, field notes, data types, analytical procedures, interviewing skills, oral history, report writing. PREREQ: ANTH 250 OR PERMISSION OF INSTRUCTOR.

ANTH g550 Introduction to Sociolinguistics 3 credits. Study of the patterned covariation of language and society, social dialects and social styles in language; problems of bilingualism, multilingualism, creoles and language uses. Cross-listed as ENGL g588. PREREQ: ANTH 107, ENGL 281, OR PERMISSION OF INSTRUCTOR.

ANTH g552 American Indian Verbal Arts 3 credits. Analysis of current theories in the study of oral literature and ethnopoetics, focusing on the oral traditions of American Indians. PREREQ: ANTH 107 OR PERMISSION OF INSTRUCTOR.

ANTH g554 Survey of American Indian Languages 3 credits. History of scholarship, analysis and classification of American Indian languages with emphasis on the languages of a particular phylum or geographical area. PREREQ: ANTH 107 OR PERMISSION OF INSTRUCTOR.

ANTH g555 Introduction to Phonetics 3 credits. Introduction to descriptive linguistics focusing on phonetics and phonetic phenomena of English and the other languages of the world. Extensive practice in perception and production of such phenomena. Cross-listed as LANG g555. PREREQ: ANTH/LANG 107.

ANTH g556 Introduction to Phonology and Morphology 3 credits. Phonological theory and analysis; current theories in morphology. Phonological rules, representations, underlying forms, derivation, justification of phonological analyses; morphological structure, derivational and inflectional morphology; relation of morphology to phonology. Cross-listed as LANG g556. PREREQ: ANTH/LANG 107.

ANTH g558 Historical Linguistics 3 credits. The methods and theories of the historical study of language. The comparative method, internal reconstruction, linguistic change over time, genetic typology of languages, and applications to prehistory. PREREQ: ANTH 107.

ANTH g559 Linguistic Field Methods 3 credits. Practical experience in linguistic analysis of a language using data elicited from a native speaker. May be repeated up to 6 credits. PREREQ: ANTH 456 OR PERMISSION OF INSTRUCTOR.

ANTH g563 Applied Statistics in Anthropology 3 credits. Practical applications of commonly used statistical analyses in anthropology. PREREQ: MATH 153 OR PERMISSION OF INSTRUCTOR.

ANTH g564 Advanced Analytical Methods in Anthropology 3 credits. Examination and practical experience in applying advanced quantitative and qualitative methods and analyses in anthropological research. PREREQ: ANTH g563.

ANTH g566 Current Issues in Indian Country 3 credits. Survey of significant issues affecting Indian communities including religious freedom, economic development, judicial systems, treaty rights and environmental regulation.

ANTH g572 Native American Arts 3 credits. Survey of Native American arts and industries, including prehistoric, ethnographic, and contemporary venues. PREREQ: ANTH 238 AND PERMISSION OF INSTRUCTOR.

ANTH g574 Special Topics in Indian Education 3 credits. Rotating review of topics dealing with issues in Indian education. Consult current schedule of classes for exact course being taught.

ANTH g576 Seminar in American Indian Studies 3 credits. Advanced level course with critical examination, readings, discussion and presentation of selected issues facing American Indians. PREREQ: 9 CREDITS OF AMERICAN INDIAN STUDIES OR PERMISSION OF INSTRUCTOR.

ANTH g578 Federal Indian Law 3 credits. Examination of tribal governments; their relationship with the federal government; sovereignty, jurisdictional conflicts over land and resources; and economic development. Cross-listed as POLS g578.

ANTH g579 Tribal Governments 3 credits. Complex legal position of Indian tribes as self-governing entities; principles of inherent powers; governmental organization, lawmaking, justice, relation to state and federal government. Cross-listed as POLS g579.

ANTH g580 Varieties of American English 3 credits. In-depth study of various dialects of American English, including historical evolution of different dialects, effects of migration on dialects, and influences of non-English immigrant languages on development of American English. Field work studying the Snake River dialects of Idaho. Cross-listed as ENGL g580. PREREQ: ANTH/LANG/ENGL 107.

ANTH g581 Specializations in Anthropology 3 credits. Rotating specialized topics such as applied anthropology, proxemics, ethnology, religion, international development. See current class schedule for titles. May be repeated up to 6 credits. PREREQ: UPPER DIVISION STATUS OR PERMISSION OF INSTRUCTOR.

ANTH g582 Independent Problems in Anthropology 1-3 credits. Investigation of an anthropological problem chosen by the student and approved by the staff. May be repeated up to 6 credits.

ANTH g583 Field Research 3 credits. Practical experience in field research. May be repeated for up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

ANTH g585 Anthropology of War and Violence 3 credits. Survey of war and violence from evolutionary foundations through modern representations. The course covers violence and war among chimpanzees, the genetics and biochemistry of violence, the role of evolution in making humans aggressive, and the history and ethnography of violent conflict around the world. PREREQ: ANY UPPER DIVISION SOCIAL SCIENCE COURSE.

ANTH 586 Archaeology Field School 1-9 credits. Practical field and laboratory training in archaeological excavation techniques and methods of analysis. May be repeated to a total of 9 credits. PREREQ: ANTH 203 OR PERMISSION OF INSTRUCTOR.

ANTH g587 Ethnographic Field School 1-6 credits. Supervised fieldwork in cultural anthropology in a given ethnographic setting where students and faculty work on a specific set of field problems. May be repeated to a total of 6 credits. PREREQ: ANTH 250 AND ANTH g549, OR PERMISSION OF INSTRUCTOR.

ANTH g589 Special Topics in American Indian Studies 3 credits. Rotating review of topics dealing with issues in American Indian studies. Consult current schedule of classes for exact course being taught. May be repeated with different topics.

ANTH g590 Topics in Folklore 3 credits. Focused study of an issue in folkloristics or a particular genre of folklore, including history of the scholarship concerning that issue or genre. Rotating topics. May be repeated up to 9 credits with different topics. Cross-listed as ENGL g590.

ANTH g591 Archaeology Laboratory Analysis 3 credits. Directed analysis of archaeological remains and report writing. May be repeated up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

ANTH g593 Interdisciplinary Anthropology 3 credits. Rotating review of cross-disciplinary anthropology: psychological, medical, visual, educational, bio-diversity conservation. See current class schedule for course titles. May be repeated up to 6 credits.

ANTH g594 Visual Anthropology 3 credits. Documentary and ethnographic filmmaking techniques including story structure, interviewing, audio and lighting, camera handling, composition, POV, and editing. Anthropological critiques of visual representation. Students create their own short film for a final project. PREREQ: ANTH 100 OR 250 OR PERMISSION OF INSTRUCTOR.

ANTH g595 Department Colloquium 1 credit. Presentations of current research issues in Anthropology by faculty and students.

ANTH 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

ANTH 605 Seminar in Linguistic Anthropology 3 credits. Discussion of theories, methods, and results in linguistic anthropology. PREREQ: ANTH g550 OR PERMISSION OF INSTRUCTOR.

ANTH 610 Seminar in Medical Anthropology 3 credits. Discussion of current topics within the various specializations of medical anthropology. PREREQ: PERMISSION OF INSTRUCTOR.

ANTH 615 Seminar in Biological Anthropology 3 credits. Discussion of theories, methods, and results in biological anthropology. PREREQ: ANTH g530, OR PERMISSION OF INSTRUCTOR.

ANTH 625 Seminar in Sociocultural Anthropology 3 credits. Discussions of theories, methods, and results in sociocultural anthropology. PREREQ: ANTH g501 OR PERMISSION OF INSTRUCTOR.

ANTH 635 Seminar in Archaeology 3 credits. Studies in current theories, methods, and results in archaeological anthropology. PREREQ: ANTH g503 OR PERMISSION OF INSTRUCTOR.

ANTH 641 Research Project 1-6 credits. The student will pursue original research under staff guidance. The final report will result in a publishable manuscript. PREREQ: PERMISSION OF THE CHAIR OF STUDENT'S GRADUATE COMMITTEE. Graded S/U.

ANTH 642 Practicum in Teaching Anthropology 3 credits. Directed preparation of an anthropology course with a review of course materials, format, teaching techniques, films, and other aids. The trainee will participate in a supervised teaching experience.

ANTH 649 Independent Studies 1-4 credits. Independent research under the guidance of faculty. PREREQ: PERMISSION OF INSTRUCTOR.

ANTH 650 Thesis 1-6 credits. Graded S/U .

ANTH 655 Internship in Applied Anthropology 3-6 credits. Supervised experience in the development and implementation of an anthropological project.

Department of Art & Pre-Architecture

Chair and Professor Kovacs
Director of M.F.A. Program and Professor Martin
Professors: Evans, Martin, Warnock
Assistant Professors: Leeuwrik, Zielinski

Master of Fine Arts in Art

The MFA degree is the recognized terminal degree in the studio arts. The MFA program is designed to refine the visual art skills of the graduate student in a particular area or areas of concentration by providing the instruction, facilities and time for the student both to develop a significant body of studio work and to expand his or her intellectual horizons in preparation for a rewarding professional career.

Admission Requirements

Applicants for admission to the M.F.A. program must apply to, and meet all criteria for admission to the Graduate School. For admission to the Master of Fine Arts program in the Department of Art, the Graduate School does not require submission of Graduate Record Exam (GRE) scores, however, the taking of the GRE test is recommended for students who wish to compete for a non-resident tuition waiver.

Application must also be made to the Department of Art and Pre-Architecture. Departmental evaluation requires the following materials, which should be sent directly to the Department of Art and Pre-Architecture, Stop 8004, Idaho State University, Pocatello ID 83209:

- A letter of intent stating the applicant's goals and objectives with regard to graduate study;
- A portfolio of work (20 digital images or slides of studio work which the applicant feels would most effectively represent his/her involvement, ability, and potential);
  a. Digital file portfolios must be formatted for Macintosh computers. Twenty images should be submitted on a single CD. Please submit a duplicate CD as well. Both CDs should be labeled with the student's name on the CDs, as well as on the sleeves. Digital images, in RGB color, may be no larger than 5 Megabytes each. We recommend a longest pixel dimension of 1600 at a resolution of approximately 140 ppi. Save files as TIFF or highest-quality JPEG formats. We will not accept directions to a web site, or files submitted in presentation software, such as Powerpoint, or PDF files.
  b. Name and number all files with *LastnameFirstname00.jpg* or *Lastname-Firstname00.tif* (e.g., JohnsonRobert12.jpg). Number images in the order to be viewed. Include with the submission a printed, hard-copy image inventory page headed with your name and the area/s of study to which you are applying. The inventory page should indicate, by corresponding number, the title, date, dimensions, and medium of each work; and
- Three letters of recommendation from undergraduate instructors, or other appropriate individuals, indicating the readiness of the applicant to pursue independent and sustained graduate-level work.

The Department has established **March 15** as the application deadline for fall semester admission. Graduate Assistantship applications are also due by March 15.

October 15 is the application deadline for spring semester. (Assistantship applications are not considered for spring semester.)

The entire Graduate Faculty of the Department will review all materials submitted by each applicant. Recommendations are made by measuring, as accurately as possible:

- The applicant's demonstrated preparedness and potential to be successful in the program;
- The sense, on the part of the faculty, that the faculty could contribute, in a meaningful and constructive way, to the student's development as an artist;
- Available space in the program, as well as faculty and departmental resources.

Other admission requirements include twelve credits of undergraduate Art History course work. Art History deficiencies of up to 6 credits may be compensated for by enrolling in the necessary courses concurrent with graduate work.

General Requirements

Basic requirements are a minimum of 60 credits in graduate courses approved by the Department of Art and the Graduate School. A minimum of six credits must be in the area of art history, and a minimum of 12 credits must be thesis project. The student may elect, as a program option, to take up to six credits in other related areas outside the Art Department. These courses must be departmentally approved. Students are required to complete ART 601 and ART 621. The department will accept a grade of C in one class as long as the minimum overall 3.0 GPA is maintained. The student will have the opportunity to repeat the course.

Each applicant for the MFA degree must exhibit a one-person show during the last semester before the granting of the degree. A collection of slides of the exhibit must be turned in to the Art Department at this time. The thesis project consisting of original creative work by the applicant is the focal point of all the work necessary to the granting of the degree. The MFA degree is the terminal degree in the field of the visual arts. The applicant should have the time and opportunity to create a significant body of work that demonstrates a professional level of competency within a unified creative point of view. A minimum of two years of participation in the program is required for this goal. An oral examination is held concurrently with the thesis project show. Additional information is available from the Department of Art and Pre-Architecture.

Art Graduate Courses

ART g518 Art of the Book 3 credits. Expands the traditional idea of book form with innovative structures and concepts. Textual and nontextual formats and methods for generating ideas for works are addressed. Traditional techniques for bookbinding will also be included. Cross-listed as M C g518.

ART g522 World Arts 3 credits. Study of the art produced in cultures outside of the western tradition. Topics include pre-Hispanic art of Mexico, Central and South American art, and North American Indian art, Oceanic art, and the art of Africa south of the Sahara.

ART g523 Nineteenth Century Art 3 credits. History of the visual arts from the beginning of the 19th century up to the advent of Cubism.

ART g524 Twentieth Century Art 3 credits. History of the visual arts from Cubism to the present.

ART g525 Contemporary Art Forms 3 credits. The study of the major developments of art as an expression of contemporary society. Emphasis on art since 1950. PREREQ: ART 423 OR ART 424 OR PERMISSION OF INSTRUCTOR.

ART g526 Seminar in Art History 3 credits. Extensive reading and discussion in Art History and aesthetics under the supervision of the instructor. May be repeated up to 6 credits.

ART g531-g532 Advanced Printmaking 3 credits. Advanced work in printmaking. Choice of medium. PREREQ: ART 331 AND ART 332.

ART g541-g542 Advanced Painting and Composition 3 credits. Special projects and experimental individual work for advanced students. PREREQ: ART 341 AND ART 342.

ART g551-g552 Advanced Metals-Jewelry 3 credits. Experimental work. Individual projects may include plastics, electroplating, electroforming, advanced fabrication, anodizing or raising techniques. PREREQ: ART 351 AND ART 352.

ART g561-g562 Advanced Weaving 3 credits. Experimental work. Individual projects may include on-loom and off-loom techniques, dyeing processes, basketry, or multi-layered fabrics. PREREQ: ART 361 AND ART 362.

ART g571-g572 Advanced Ceramics 3 credits. Individual projects may include ceramic sculpture, mosaics or experimental problems in form and techniques. PREREQ: ART 371 OR ART 372.

ART g581-g582 Advanced Sculpture 3 credits. Experimental work with an emphasis on scale and environmental problems. PREREQ: ART 381 OR PERMISSION OF INSTRUCTOR.

ART g591 Advanced Papermaking 3 credits. Further development of topics from ART 391. PREREQ: ART 391 OR PERMISSION OF INSTRUCTOR.

ART 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U .

ART 601 Independent Study in Drawing 3 credits (required). Individualized course designed to address drawing-specific concerns:

technical, material, and/or conceptual possibilities inherent to various drawing media. May be repeated for a total of 6 credits.

ART 621 Graduate Seminar 3 credits (required). Reading and discussion of theories and practices related to the production and presentation of studio art under the supervision of the instructor. Students will research and prepare written presentations for weekly seminar discussion and evaluation.

ART 635 Research in Studio or Theory 4 credits. Investigation of technical, material, and/or aesthetic/theoretical problems in art history/studio areas under the supervision of the instructor.

ART 640 Experimental Problems in Studio 4 credits. Experimentation in technical, material, and aesthetic problems in a studio area under the supervision of the instructor.

ART 645 Studio variable credit. Studio work under the supervision of the instructor. May be repeated up to 12 credits.

ART 649 Thesis Proposal 1 credit. Summary of the objectives and goals of the thesis project prepared under supervision of the student's advisor. Concurrent with application for admission to candidacy.

ART 650 Thesis Project 1 -12 credits; 12 credits required minimum. Preparation and presentation in a one-person show of a significant body of work which demonstrates a professional level of competency within a unified creative point of view. An exhibition and slides of the works are required by the department under the supervision of the applicant's advisor. A graduate faculty orals committee will review and approve or disapprove the show and thesis proposal. May be repeated up to 16 credits. PREREQ: ART 649. Graded S/U.

ART 699 Special Topics 1-4 credits.

Department of Biological Sciences

Chair and Professor: Bowyer
Assistant Chair for Undergraduate Programs and Professor: Scalarone
Assistant Chair for Graduate Programs and Professor: Rose
Professors: Crowell, Finney, Huntly, Inouye, Kie, C. Peterson, Rodnick, Stephens, Winston
Associate Professors: C. Anderson, Delehanty, DeVeaux, Germino, Hill, Keeley, Magnuson, Meldrum, Sheridan, Shields, R. Smith
Assistant Professors: Baxter, Bearden, Cretacos, Groome, Kelchner, Ma, Pfau, St. Hilair, Thomas, Williams
Clinical Associate Professors: Galindo, Nehr-Kanet
Clinical Assistant Professors: Spiegel
Adjunct Faculty: Black, Frank, Loxterman
Affiliate Faculty: Apel, Beckmann, Belzer, Berger, Bleich, M. Boeger, W. Boeger, Bryant, Bunde, Burch, Carlson-Lammers, Colwell, Connelly, Cook, Eisentrager, Foster, Galindo, Howard, LaPatra, Lenington, Loxterman, McGonigle, Newby, Pierce, Poulson, Ptacek, Quarder, Ray, Reed, Roberto, Rosentreter, Schuermann, Schwan, Scoville, Shell, Smith Jr., Stephenson, Stevens, Thompson, Ver Hoef, Watwood, Weinberg, Wells, White, J. Young, M. Young, Zager

Doctor of Philosophy (Ph.D.) in Biology

The Doctor of Philosophy is a research degree granted for proven ability, independent investigation, and scholarly contribution in a specialized field. It is not granted solely on the completion of a certain number of credits, and there is no set credit requirement for this degree. The dissertation research must involve original and creative work. Credits for the dissertation and the research on which it is based should comprise a substantial portion of the program.

Admission Requirements

For applicants who hold a M.S. degree, entrance into the Ph.D. program requires a minimum GPA of 3.0 for courses taken in the previous degree program, and scores in the 35th percentile or higher on the verbal and quantitative sections of the GRE.

For applicants who hold only a Bachelor's degree in biological sciences or a closely related discipline, entrance into the Ph.D. program requires a GPA of 3.0 or higher for all undergraduate work and scores in the 50th percentile or higher on the verbal and quantitative sections of the GRE.

Students for whom English is a second language who do not meet the minimum verbal GRE score must meet the Graduate School minimal TOEFL score. Other exceptions to the verbal and quantitative GRE requirements will be granted only in exceptional circumstances.

All applicants must also submit scores for the GRE subject area test in Biology or in Biochemistry/Cell/Molecular Biology.

The application must be approved by a majority vote of the Graduate Programs Committee prior to formal acceptance by the Department. No student in the Department's Master's program will be permitted to advance to the Ph.D. program without approval of the Graduate Programs Committee. Application for advancement must include (1) a letter from the student that provides a rationale for the status change and (2) a letter of support from the major professor.

Progressing Through the Ph.D. Program (10 Easy Steps)

1. Initial Evaluation

The purpose of this evaluation is to provide incoming students with guidance regarding coursework and other studies that will help them to be successful in their degree programs. The evaluation should take place by the end of the second full month in residence (October, for students entering in the fall).

The Evaluation Committee should consist of the major advisor and two other faculty members, at least one of whom is also a regular (i.e., tenure track or research) faculty member in the Department of Biological Sciences. Members of the Evaluation Committee should be chosen by the advisor and student, and may become part of the student's Advisory Committee.

The result of the Initial Evaluation should be the creation of an Initial Program of Study.

2. Initial Program of Study

Based on the results of the GRE Subject test, the student's transcripts, and the student's research interests, the Evaluation Committee should help the student draft an Initial Program of Study that lists coursework the student will take to meet the program requirements and support the student's research. The Initial Program of Study should indicate how the student will meet the requirement for exposure to three Core Areas (Cellular and Molecular Biology, Organismal Biology, and Ecology & Evolution). A copy of the Initial Program of Study should be given to the Chair of the Graduate Programs Committee and then filed in the student's permanent file.

3. Core Areas

Students in the Ph.D. program are required to have some exposure to each of the following core areas:

- Cellular and Molecular Biology which can include cellular structure and function, genetics, and molecular biology
- Organismal Biology - which can include any of the '-ologies', organismal structure, function, development, growth, and diversity
- Ecology and Evolution - which can include population biology, conservation biology, evolutionary ecology, community ecology, population ecology, and behavior

Exposure to these areas can include undergraduate coursework, graduate coursework, or directed readings. The taxonomic focus of coursework may reflect the student's research focus. For example, a microbiologist could satisfy the first core area with coursework in microbial genetics, the second core area with coursework in microbiology, and the third core area with coursework in microbial evolution, whereas a mammalian physiologist could satisfy the first core area with coursework in population genetics, the second core area with coursework in comparative anatomy, and the third core area with coursework in vertebrate paleontology.

4. Advisory Committee

Ph.D. students should establish an advisory committee no later than the end of their second semester in residence. The Advisory Committee will consist of the major professor, at least three other members of the graduate faculty, and a Graduate Faculty Representative (GFR). The GFR is officially appointed by the Dean of the Graduate School, however, recommendations made by the Department are typically honored by the Graduate Dean. Because the primary role for GFR is to serve as a representative of the Graduate Faculty, the GFR does not have to be identified during the first year of the student's program. The Advisory Committee may include individuals from other departments or persons from outside the University who hold affiliate rank in the Department, but the majority of any committee must consist of regular departmental faculty.

Within the broad guidelines outlined in this document and the General Graduate Program Requirements, it is the responsibility of the Advisory Committee to monitor and direct the student's progress and:

1. identify how the student will satisfy the requirement to have some background in each of the three core areas;
2. review the student's research proposal, conduct an oral examination following a public presentation of the research proposal, and determine if the student has passed that examination;
3. review and sign the student's Program of Study, ensuring that it meets the Graduate School requirements (i.e., total number of credits, number of 600-level credits, number of credits if a minor is part of the student's program);
4. conduct a comprehensive examination after the student has completed the majority of the coursework on the Program of Study; and
5. review the dissertation and conduct a rigorous examination of the candidate's research before approving and signing the dissertation.

5. Research Proposal

All Ph.D. students are required to develop a research proposal that details how they will develop the research that will form the basis of their dissertation. The proposal should follow the guidelines for an NSF dissertation improvement grant or proposal to a comparable national funding source. The proposal will include: (1) a survey of the literature to develop a rationale for the research, (2) a statement of the problem(s) or hypothesis(es) to be addressed, (3) detailed descriptions of methods including the experimental design and planned statistical analyses, (4) preliminary data (optional, but strongly encouraged), (5) a time line, (6) a bibliography, and (7) a budget.

The student must present the proposal to the department during a one-hour seminar to be scheduled no later than the end of the third semester of residency. The proposal must be provided to all members of the Advisory Committee at least seven days before the seminar. After the seminar, the student will meet with the Advisory Committee for an oral defense of the proposal. The committee may ask to re-examine the student upon revision of the proposal if significant shortcomings are identified.

If the committee decides that the student is not able to demonstrate sufficient mastery of the research area, the committee may recommend that the student not complete the Ph.D. program, but consider alternative possibilities, such as switching to the M.S. program. Following approval of the proposal by the Advisory Committee, the proposal should be submitted to an appropriate agency for funding.

Once the student has successfully defended the research proposal, the student is advanced to candidacy.

6. Revised Program of Study

Following the successful proposal defense, the student should submit to the Assistant Chair for Graduate Programs a Program of Study that has been approved and signed by the Advisory Committee. This form should indicate how the student will satisfy all of the degree coursework requirements. Subsequent substitutions for any courses on this Program of Study must be approved by the student's Advisory Committee.

7. Minor

There is no requirement for Ph.D. candidates to have a minor, however a candidate may identify a minor that develops expertise in an area outside the major research focus. The minor should consist of 9 or more credit hours that address a common theme. That theme may be in a subject area outside of Biology (e.g., Geosciences), or it may be an area within the Biological Sciences that is distinct from the candidate's primary research topic. For example, a microbiologist might develop a minor in ecology, a physiologist might develop a minor in environmental science, an ecologist might develop a minor in microbiology, and candidates in any discipline might develop a minor in pedagogy that takes advantage of pedagogical training available in the Department of Biological Sciences and the College of Education.

8. Comprehensive Examination

The student must pass a Comprehensive Examination intended to test his/her preparation for completing the Ph.D. degree program. The Comprehensive Examination should address at least two of the three core areas (see above). The extent to which these areas are addressed in the Comprehensive Examination will be determined by the Advisory Committee, and should reflect the student's area of research specialization. In addition to the core areas, the Comprehensive Examination should address the specific knowledge the Advisory Committee feels the student will need to successfully address the research that is the focus of the dissertation.

The Comprehensive Examination should be scheduled after the student has completed the majority (i.e., all but one or two classes) of the coursework for the degree program. At

least three months prior to the examination, the student should meet with the Advisory Committee to identify the specific areas that will be covered and the committee member who will be responsible for writing questions for each area. If the student has a minor, then a portion of the comprehensive examination should focus on that minor. Students should meet individually with committee members to determine how best to prepare for the specific topics that will be covered by the examination. The examination must be partly written and party oral. Both portions must be passed satisfactorily in order to complete the Comprehensive Examination requirements.

The written portion of the Comprehensive Examination generally will consist of eight sections (each meant to be completed in 3-4 hours). The form of the written portion is flexible. If it is of a 'closed book' type, it should not be less than the equivalent of three (8 hour-long) days nor more than five (8 hour-long) days of actual writing time. Normally the written exams will be completed within the span of one week. Evaluation of each section of the written examination is on a pass/fail basis. The student must earn a passing evaluation on at least 75% of the sections to pass the written portion of the comprehensive examination. Failed sections may be repeated once, at a time designated by the student's Advisory Committee, but within a year of the original examination. The completed and graded written portion of the Comprehensive Examination is to be placed in the student's departmental file.

The purpose of the oral portion of the examination is to provide an opportunity to clarify and explore further implications of the written examination as well as to present the student with new questions in the same general subject areas as those covered by the written exams. The oral portion should not be given until after the written examination has been evaluated by all of the committee members, but no later than two weeks after completion of the written portion. The orals must be passed by simple majority vote of the advisory committee. In case of failure, the student may be allowed to retake all or part of the oral examination at the discretion of his/her advisory committee.

If the Graduate Faculty Representative (GFR) was chosen to provide specific expertise to support the student's graduate program, the GFR should participate in both the written and oral portions of the Comprehensive Examination.

9. Dissertation

Every student working toward the Ph.D. degree must submit a dissertation embodying the results of original and creative research. The dissertation must demonstrate the student's ability in independent investigation and must be an original contribution to scientific knowledge. It must display mastery of the literature of the subject field and must demonstrate an organized, coherent development of ideas, with a clear exposition of results and creative discussion of the conclusions.

The form and style of the dissertation should comply with the format prescribed by the national- or international-level journal(s) in which the student intends to publish the material and must meet the requirements of "Instructions for Preparing Theses, Dissertations, D.A. Papers, and Professional Projects," which is available from the Graduate School. Within the framework of these constraints, however, the format of the dissertation can vary, ranging from a series of stand-alone chapters to a single, comprehensive unit. In the former case, a preface that explains the overall layout should be included. After the dissertation has been approved for format and content by the major professor, and at least two weeks before the date of the final examination, the student must deliver a copy of the dissertation to each member of the Advisory Committee.

10. Dissertation Defense

The student's Advisory Committee, including the GFR, will conduct the final examination of the dissertation. The final defense must be completed at least two weeks before the date set for the commencement exercises at which the student expects to obtain a degree. Students are required to give a departmental seminar on the dissertation immediately preceding the final defense, and the student is required to publicize the seminar at least one week in advance (i.e., notice in the Departmental Newsletter and notices posted in the Life Sciences Building).

The examination is concerned primarily with the student's research as embodied in the dissertation, but it may be broader and extend over fields of study related to the dissertation. The final examination is entirely oral and is open to faculty invited by the advisor, Department Chair, or Dean of the Graduate School. Committee members may ask questions, and those visitors specifically invited to do so by mutual agreement of the student's Advisory Committee and the Dean of the Graduate School may also ask questions. A majority of the examining committee must approve the dissertation and the final defense.

Doctor of Arts (D.A.) in Biology

The Doctor of Arts degree in Biological Sciences is granted for proven ability and scholarly attainment in biological science instruction. The program stresses preparation for undergraduate teaching at colleges and universities and the development of research abilities that complement instruction at the college level. The program is concerned with the development of the candidate as a biologist, a scholar, and a professional educator. The program is designed to provide the student with a broad background in the biological sciences, the ability to conduct and interpret research, and excellent pedagogical skills.

Goals

All D.A. students must demonstrate:

1. a broad background in the biological sciences and an understanding of scientific inquiry;
2. the ability to synthesize concepts of biology and to effectively communicate these concepts;
3. the ability to conduct, analyze, and critique research in biological sciences and biological sciences instruction;
4. the ability to integrate current biological and educational research into their teaching;
5. an understanding of the history and philosophy of science and the impact of contemporary science on society;
6. expertise with teaching strategies appropriate for a variety of teaching and learning environments, including undergraduate research;
7. strong content knowledge in three of the departmental core coursework areas and competency in the remaining three core areas;
8. a well-developed philosophy of education.

Doctor of Arts Fellowships

Students admitted to the program with Fellowship Support can anticipate three years

of support, contingent upon satisfactory performance toward their degree. Typically, provisions will be made for a fourth year of support, but the student and his/her major advisor must submit a letter to the departmental Graduate Programs Committee requesting an extension of support and provide a rationale and timeline toward completion of the degree.

Master's Degree Requirement

All applicants for the program must have completed a Master's degree prior to entrance into the program. If a student enters the program without having completed a Master's-level thesis or research paper in biology or a related science, he/she must complete this requirement in addition to the degree requirements or design a dissertation project that incorporates biological research as a major component. This additional requirement may increase the length of time in the program and may limit the flexibility of the degree.

Diagnostic Examination

Incoming D.A. students are required to take an oral diagnostic examination. The purpose of the examination is to assess the student's potential to become an effective instructor by examining the depth of his/her background in biological science and communicative skills. The examination is meant to be primarily diagnostic, and the results are used by the student's Advisory Committee to help plan the Program of Study. The examination covers six core conceptual areas of biology (Cell Biology, Genetics, Ecology, Evolution, Physiology, Organismal Biology) and knowledge of pedagogy. The purpose of the oral examination is to validate the results of the Biology GRE and the coursework listed on the student's transcript, and to observe the student's oral communicative skills.

The oral examination is conducted no later than six weeks after the beginning of the first semester of the student's program (exception: for students taking the Biology subject GRE in November of their first semester, the oral exam may be delayed until the end of the student's first semester). The oral examining committee is appointed by the Chair of the Graduate Programs Committee. After completion of the examination, the oral examining committee will submit suggestions to the student and his/her Advisory Committee for planning the Program of Study. Normally, the student, in conjunction with the committee, will select three of the core areas to emphasize, however a student must demonstrate competency in the remaining three areas as well.

Although the diagnostic examination is used primarily for advising purposes, if the student's performance is generally unsatisfactory, the oral examining committee will select one of the following options: (1) the student may continue in the program but with certain specified additional requirements, (2) the student may take a second oral examination the following semester, or (3) the student will not continue in the program. If the performance on the second oral examination is unsatisfactory, the student will be dismissed from the program.

Advisory Committee

Graduate programs in the Department of Biological Sciences are directed by Advisory Committees selected by the student, in consultation with their advisor. The committee will consist of at least four faculty members, plus a Graduate Faculty Representative (GFR). At least three faculty must be from the Department of Biological Sciences, and at least two committee members should have expertise in the core areas of coursework chosen by the student.

Coursework Requirements

The D.A. degree program requires a minimum of 48 semester credits beyond the Master's degree. A program of coursework is established jointly by the student and his/her committee. The program should reflect previous coursework, previous teaching experiences, results of the diagnostic examination, the interests and professional goals of the student, and the goals of the D.A. in Biological Sciences instruction as previously listed in this document. All D.A. students are required to take Advanced Studies in College Teaching (4 credits) and a minimum of two Seminars in College Teaching (4 credits). D.A. students are encouraged to participate in topical seminars, professional organizations, grant writing, and to submit their work to education and scientific journals.

Internship Requirements

Internships are a very important part of the D.A. program. Each internship should be a rigorous, thoroughly planned pedagogical activity that provides an opportunity for development of skills in traditional and innovative teaching methods and for utilizing techniques, etc. developed during the program. Students must follow the Guidelines for the Supervised Teaching Internships. The internship requirement is flexible to accommodate the needs of each student.

Written proposals for each internship must be discussed and approved by the student's committee before the internship begins. Exact procedures for evaluating the internship will depend on the nature of what is done and where it occurs. However, evaluation is considered to be an integral and important part of the internship, and students must develop an evaluation system in concert with the internship supervisors. It is expected that this evaluation will at least include provisions for substantive feedback from students, the major advisor, committee members, and supervising faculty. Students must complete an internship report within one semester of teaching.

Typically, students will be expected to focus on coursework and their scholarly research during their first two semesters in residence, and not begin internships until after their second or third semester in the program. Internships must be completed prior to the last semester of residency. A minimum of 9 credits of internship are required, but no more than 16 can be counted toward the degree. A comprehensive report of each internship, including evaluation, must be submitted to the student's committee prior to the final seminar and examination. This comprehensive internship report should be prefaced by a Statement of Teaching Philosophy. A copy of this report will be retained separately in the student's departmental file unless it is part of the dissertation.

Dissertation Proposal and Defense

During the first three semesters in residence, the student will prepare a written dissertation proposal. The dissertation can be designed to include multiple components such as:

- biological research;
- application of biological research to the classroom;
- pedagogical research related to biological sciences instruction at the college level;
- assessment of student learning;
- in-depth analysis and evaluation of internship teaching;
- multi-media or other curricular development, use, and evaluation;
- conducting research and involving undergraduates in such research, and evaluating the efficacy of such involvement.

The written proposal will include: (1) a survey of the literature to develop a rationale for the research, (2) a statement of the problem(s) or hypothesis(es) to be addressed, (3) detailed descriptions of methods including the experimental design and planned statistical analyses, (4) preliminary data (optional, but strongly encouraged), (5) a time line, (6) a bibliography, and (7) a budget (optional).

When the research proposal has been approved by the major professor and the remainder of the Advisory Committee, the student will prepare and present a one-hour seminar on the proposed research to the Department. This presentation will occur no later than the end of the student's third semester in residence. Immediately after the seminar, the student will be given an oral examination by his/her Advisory Committee. This examination will focus on the proposed research. The student's Advisory Committee will evaluate the student's performance and may (1) admit the student to further work toward the D.A., (2) recommend that the student revise the proposal and/or improve her/his background before attempting to continue graduate work, (3) recommend limitation of the program to the M.S. degree, or (4) in rare cases, recommend dismissal from the graduate program. In the event of the first two decisions, the committee will provide the student with specific recommendations or requirements. In the case of the second decision, the committee also will schedule a second evaluation after not less than one semester.

Once the student has successfully defended the research proposal, the student is advanced to candidacy.

Comprehensive Examination

The comprehensive examination consists of a written and an oral portion. The written examination tests the student's knowledge of the core areas of biology and the topics covered in the education seminars. Depth and breadth of the examination on these topics should be commensurate with the recommendations from the diagnostic examining committee, and the three selected core areas as represented in the student's program of study. The oral examination assesses the student's capability to communicate answers effectively and areas of weakness indicated by the written examination.

Each member of the student's committee will submit a section of the examination on which the student will be expected to write for 4 to 6 hours. Each committee member will individually determine whether the student passed his/her section of the examination; the student must pass at least 75% of these sections. If the written examination is not passed, the committee may recommend that the student not proceed further in the program, or that the student re-take those portions of the written examination that were not passed.

The oral examination should be scheduled within two weeks of satisfactory completion of the written examination. Failure to pass the oral examination can result in the recommendation that the student not proceed further in the program, or that the oral examination should be re-taken at a later date. Failure to pass the comprehensive examination twice results in automatic termination from the program.

Doctoral Dissertation

Every student working toward the D.A. degree must submit a dissertation embodying the results of original and creative research. The dissertation must demonstrate the student's ability in independent investigation and must be a contribution to scientific or science education knowledge. It must display mastery of the literature of the subject field and must demonstrate an organized, coherent development of ideas, with a clear exposition of results and creative discussion of the conclusions.

The form and style of the dissertation should comply with the format prescribed by the journal in which the student intends to publish the material and must meet the requirements of "Instructions for Preparing Theses, Dissertations, D.A. Papers, and Professional Projects," which is available from the Graduate School. Within the framework of these constraints, however, the format of the dissertation can vary, ranging from a series of stand-alone chapters, to a single, comprehensive unit. In the former case, a preface that explains the overall layout should be included. After the dissertation has been approved for format and content by the major professor, and not later than two weeks before the date of the final examination, the student must deliver a copy of the dissertation to each member of the Advisory Committee (including the GFR).

Dissertation Defense

The student's Advisory Committee, including the GFR, will conduct the final examination of the dissertation. The final defense must be completed at least two weeks before the date set for the commencement exercises at which the student expects to obtain a degree. Students are required to give a departmental seminar on the dissertation immediately preceding the final defense. The examination is concerned primarily with the student's research as embodied in the dissertation, but it will also include the Teaching Internships. A majority of the examining committee must approve the dissertation and the final defense.

Master of Science in Biology (Botany or Zoology Emphasis) or Master of Science in Microbiology

A program of study leading to the Master of Science (M.S.) Degree is designed to enable students to develop an advanced understanding of the biological sciences and the capability to teach or conduct biological research. Programs are flexible and can be tailored to satisfy the professional and personal needs of each student.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with the following department requirements. Acceptance to an M.S. program is contingent upon a biology faculty member agreeing to serve as the applicant's advisor. Students interested in pursuing an advanced degree in the biological sciences at Idaho State University are encouraged to contact the faculty member(s) with whom they wish to study, prior to making formal application to the department. Applicants must have at least a 3.0 GPA for all upper-division credits taken in the previous degree program. Scores on the verbal, quantitative, and analytical portions of the GRE must be submitted.

Certain courses are prerequisite for admission to the M.S. degree programs, and any student who has not met these requirements through previous course work must take them as part of his/her M.S. program. These courses are:

1. One semester of calculus
2. One year of inorganic chemistry

3. One semester of organic chemistry
4. One semester of physics
5. Six additional credits in physics, chemistry, or mathematics that differ from those courses listed in 1-4 above
6. Quantitative analysis and/or analytical chemistry (M.S. in Microbiology only)

Note: Because these are undergraduate courses, these credits do not count toward the 30-credit hour requirement for the M.S. degree.

General Requirements

A substantial, original research project is required that culminates in a written thesis and oral presentation of the findings at a Biological Sciences department seminar. A minimum of 30 credits (including research and thesis) are required in graduate courses and seminars that provide mastery in core conceptual areas in the biological sciences.

The core areas for the M.S. in Biology are:

1. genetics and evolution
2. animal or plant physiology
3. cell biology, biochemistry, or molecular biology, and
4. ecology or morphology

The core areas for the M.S. in Microbiology are:

1. biochemistry and molecular biology
2. physiology of microorganisms
3. immunology
4. microbial genetics, and
5. virology

Students may gain expertise in the core areas through a variety of mechanisms, including graduate courses, seminars, special projects, or readings. Although there are no specific credit hour requirements for the core areas, it is expected that the total effort expended in each area would be at least equivalent to that required in a rigorous course in that subject area, and that any credits earned as part of the graduate program will be at the graduate level (i.e., at the 500-level or above). The credit hours earned in such classes will count toward the 30-credit requirement for the degree.

The ability to utilize a research tool is required, which can be satisfied by taking classes in biometry, electron microscopy, or a related field outside the biological sciences, such as geology, engineering, economics, or computer science. Graduate credits that satisfy the tool requirement count toward the 30-credit requirement for the degree.

Specific Requirements for the M.S. Degree

Of the required 30 credits for the M.S. degree, at least 15 credits must be earned at the 600-level, which include:

BIOL 648	Graduate Problems	1-4 cr
BIOL 650	Thesis1-	6 cr
BIOL 691 and 692	Graduate Seminars	2 cr
BIOL 610	Principles of Molecular Biology	3 cr

(Required for M.S. in Microbiology only)

In additional, all M.S. students must take a statistics course approved by their graduate committee.

Note: A student may take an unlimited number of credits of BIOL 650 and BIOL 648, although a maximum of only 6 credits of BIOL 650 and 4 credits are BIOL 648 may be counted toward the required 30 credit hours for the degree.

Advisory Committee

The Advisory Committee consists of a minimum of three faculty members who are members of the Idaho State University graduate faculty. The student, in consultation with the major advisor, selects at least one additional faculty member from the Department of Biological Sciences. An additional faculty member from outside the Department of Biological Sciences, designated as the Graduate Faculty Representative (GFR), also must serve on the committee. The GFR is appointed by the Dean of the Graduate School, who is open to recommendations from the major advisor. The GFR need only participate in the thesis defense, but may be involved throughout the student's program. The initial committee meeting should be held during the first semester of the student's graduate program.

Written Proposal, Proposal Seminar, and Proposal Defense

M.S. students are required to present a seminar on their proposed thesis research in the first year of their program. The purpose of this proposal seminar is to have each student develop and present formal statements of the objectives (hypotheses), design, and importance of their proposed research. Students must submit an abstract to the seminar organizer at least one week prior to their presentation. Students also must write a research proposal and have the proposal approved by the Advisory Committee by the end of the semester in which they present. This proposal will: (1) be at least 5 pages in length, with citations appended, (2) address comments that resulted from the seminar presentation, and (3) be retained in the student's departmental file.

Thesis, Thesis Seminar, and Thesis Defense

Each M.S. applicant must submit a thesis embodying the results of original and creative research. The thesis must demonstrate the student's ability in scientific investigation. The thesis must include a comprehensive review of literature on the topic, and must demonstrate an organized, coherent development of ideas, with a clear exposition of results and creative discussion of the conclusions. The form and style of the thesis should comply with the format prescribed by the national- or international-level journal in which the student intends to publish the material and must meet the requirements of "Instructions for Preparing Theses, Dissertations, D.A. Papers, and Professional Projects," which is available from the Graduate School. Within the framework of these constraints, however, the format of the thesis can vary in the number and arrangement of chapters.

Following completion of the written thesis, the student will present the research findings in a seminar. The thesis presentation will be followed by an oral defense conducted by the Advisory Committee. The student is responsible for scheduling the defense with the Graduate School and advertising the thesis seminar, with notices posted in the Life Sciences Building and in the Department newsletter, at least one week in advance of the seminar date. After the thesis has been approved for format and content by the major professor, and not later than two weeks before the date of the final examination, the student must deliver a copy of the thesis to each member of the Advisory Committee.

Please refer to http://www.isu.edu/graduate/pdf//Thesis_Dissertation_Instructions.pdf for the manual, *Instructions for Preparing Theses, Dissertations, Doctor of Arts Papers, and Professional Projects,* for thesis clearance instructions.

BS/MS Option

The goal of this option is to allow academically strong students to begin work towards an M.S. degree after completing the Junior year. This will allow students to complete an M.S. degree, as well as a B.S. degree, with only one additional year in school. This option is only available to students who have demonstrated an interest in independent research before the end of the Junior year, who can meet the

Biological Sciences GPA and GRE requirements for admission to the M.S. program, and who have worked with a member of the Graduate Faculty who has agreed to serve as the student's Graduate Advisor. After being accepted into the M.S. program, students who pursue this option will have to spend at least two summers doing research and/or coursework. Given its compressed timeline and academic intensity, this option is only available to students who have demonstrated a high level of academic ability.

The student will be required to complete all of the graduation requirements for a B.S. degree in the Department of Biological Sciences. That degree will be awarded when those requirements are met, typically at the end of the 4th year. In completing the graduation requirements for a B.S. degree, these students should have met all of the coursework requirements for admission to the M.S. program.

The student will be admitted Classified with Performance Requirements (w/PR) to the MS Program after completing the Junior year. Admission requires that the student meet the existing GPA requirement (at least 3.0 for the Sophomore and Junior years).

The M.S. degree will be awarded only after the student has completed all of the requirements for the M.S. program.

Requirements

These requirements are for undergraduate students admitted to the BS/MS Option ONLY. BS/MS students are restricted to a maximum of six graduate-level credits until after completion of the B.S. degree.

Summer following Junior Year:
BIOS 581 Independent Problems 2 cr

Spring Semester of Senior Year:
BIOS 692 Seminar 1 cr

Other undergraduate and graduate credits, as required by the Department of Biological Sciences.

Master of Natural Science in Biology

The Master of Natural Science (MNS) degree is designed to strengthen an individual's background in biological sciences for secondary school teaching or for work in nature interpretation or environmental education centers. The student must possess or be working toward a standard teaching certificate, or, under exceptional circumstances, be employed or have specific career objectives that would not require teacher certification (as approved by the Graduate Programs Committee). This degree emphasizes subject matter and is a non-thesis program. It is not designed to prepare students for a doctoral program with a research emphasis or requirement. The degree is granted upon successful completion of a minimum of 30 graduate-level credits and satisfactory performance on a comprehensive written and oral examination.

General Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with the following department requirements. The MNS degree is primarily a coursework degree and therefore differs from the MS degree in Biology in several important ways. It does not require course prerequisites for admission. To complete the program, MNS students: (1) need not demonstrate breadth through coursework in each of the Core Areas, (2) are exempt from the Experimental Design/Statistics requirement, and (3) do not complete a Thesis. MNS students must meet Admission, Residency, Transfer of Credit requirements, and minimum Performance Levels.

A minimum of 30 graduate credits is required to complete the MNS degree program. Courses numbered 500 and above, and those completed with a grade of B or better, are the only courses which may be applied toward the degree. It is expected that the courses will enhance both the breadth and depth of the student's biological content knowledge. At least 20 of the credits must be taken in Biological Sciences. Biology Teaching Methods (BIOS g513) is strongly recommended. A proposed plan of study should be submitted to, and approved by, the student's advisory committee by the end of the first semester.

Advisory Committee

The student must select a major advisor, and, in consultation with the advisor, select at least one additional faculty member from the Department of Biological Sciences to serve on an advisory committee. Additionally, a Graduate Faculty Representative (GFR) from outside the Department of Biological Sciences must serve on the committee. The GFR is approved by the Graduate School, though students may recommend to the Dean of the Graduate School a faculty member from another department to serve as GFR. The initial committee meeting should be held in the first semester of the program. However, the GFR need only attend the final oral comprehensive examination.

Written and Oral Comprehensive Examination

The comprehensive examination consists of a written and an oral portion. The written examination tests the student's knowledge of biological and educational topics commensurate with the student's program of study. The oral examination assesses the student's capability to communicate answers effectively to areas of weakness indicated by the written examination.

The written comprehensive examination must be completed no later than six weeks before the end of the student's last semester. Each member of the student's committee (excluding the GFR) will submit a section of the examination on which the student will be expected to write. The entire examination should be designed to require no more than 10 hours for completion. Each committee member will individually determine whether the student passed his/her section of the examination; the student must pass at least 75% of these sections. If the written examination is not passed, the committee may recommend that the student not proceed further in the program, or that the student re-take those portions of the written examination that were not passed.

The oral comprehensive examination should be scheduled within two weeks of satisfactory completion of the written examination, and no later than three weeks prior to the end of the semester. The oral examination will consist of questions posed by the student's advisory committee after they have reviewed the results of the written examination. Failure to pass the oral examination can result in the recommendation that the student not proceed further in the program, or that the oral examination be re-taken at a later date. Failure to pass the comprehensive examination twice results in automatic termination from the program.

Master of Science in Clinical Laboratory Science

The M.S. program in Clinical Laboratory Science requires an original research project that culminates in a thesis, a minimum of 32 credits earned in graduate courses (including research and thesis), and expertise in core conceptual areas of Clinical Laboratory Science.

Admission Requirements

Applicants must have a 3.0 GPA for upper division credits taken at the undergraduate level. Graduate School Admission GPA is calculated based on the last 60± semester undergraduate credits (90± quarter credits) and may differ from this requirement. The student must apply to, and meet all criteria for admission to the Graduate School.

In addition, admission into the M.S. program will require the student meeting one of the two following conditions:

1. Professionals already credentialed as Clinical Laboratory Scientists or Medical Technologists: completion of a B.S. or B.A. degree in a related science from an accredited university or college and certification by either NCA or ASCP as a Clinical Laboratory Scientist or Medical Technologist. Categorical certification by either of these registries does not wholly satisfy this requirement.

OR

2. Professional entry-level M.S. completing certification requirements while pursuing the M.S. degree: completion of a B.S. or B.A. degree from an accredited institution and completion of the following requirements either prior to entry or during the M.S. program:

   a. at least 16 semester hours of chemistry to include inorganic chemistry and some combination or organic, biochemistry and analytical chemistry;

   b. 16 semester hours of biology, to include at least one semester in microbiology;

   c. one semester of calculus.

The core curriculum in the Clinical Laboratory Science program is accredited by NAACLS (National Accrediting Agency for Clinical Laboratory Science). Successful completion qualifies the applicant to take the national credentialling examinations offered by NCA and ASCP.

Core Curriculum Areas

The three core areas for Clinical Laboratory Science that all students must include in their programs of study are:

Scientific subject core area including pathology, hematology, immunohematology, clinical chemistry, genetics microbiology and molecular biology.

Management core area including information management, statistics, Westgard rules, predictive value theory, personnel, financial organizational and regulatory concepts.

Educational core area including educational design and adult learning for professionals within and outside the clinical laboratory setting.

Students are expected to have significant exposure to these core areas by the time they complete their degree requirements. Students coming in with NCA or ASCP credentials have already demonstrated mastery of the core scientific subject area; those who do not have these credentials will be expected to demonstrate mastery by an examination administered by the program before they finish their M.S. studies.

Students may opt to gain expertise through a variety of mechanisms including independent readings, formal course work, seminars or special projects. For those students who are not already credentialed, an additional 6 credits at the undergraduate level, BIOL 411N Clinical Experience, must be taken. This is usually during the summer semester. This does not count toward the 32 graduate credit requirement.

Required Courses for the M.S. in CLS used to satisfy the core areas described below:

BIOL 411N	Clinical Laboratory Site Experience	6 cr
OR		
NCA/ASCP certification (does not count for graduate credit)		
BIOL 511S	Laboratory Analysis and Management	3 cr
BIOL 691-692	Seminar	2 cr
BIOL 648	Graduate Problems (research)	4 cr
BIOL 650	Thesis	6 cr

The remaining credits are to be taken from graduate-level courses (a minimum of 16 at the 600 level) in one or more of the core areas with the approval of the applicant's committee.

Three graduate-level courses (6 to 9 credits) approved by the graduate student's committee may be taken from outside the department (to be taken at Boise State University, Idaho State University, or another approved university) and may include adult education, management, and/or medical informatics.

The thesis project may be in a core scientific subject, management or education or a combination thereof.

Biological Sciences Graduate Courses

BIOL g500 Oral Histology and Embryology 3 credits. The microanatomy and formative processes of the teeth and their surrounding structures.

BIOL g504 Plant Physiology 4 credits. Study of plant physiological processes including water relations, mineral nutrition, photosynthesis, respiration, translocation of photosynthate, secondary compounds and phytohormones. PREREQ: BIOL 101 AND BIOL 102, AND ONE YEAR OF COLLEGE CHEMISTRY.

BIOL g505 Plant Form and Function 3 credits. Integrated studies of anatomical and physiological adaptations of plants to their natural environment. Data collection and analysis will be emphasized. PREREQ: BIOL 102 OR BIOL 203.

BIOL g506 Plant Diversity and Evolution 4 credits. Study of the reproduction, structure, development, evolution, and classification of the fungi, algae, bryophytes, and vascular plants. Lectures, laboratories. PREREQ: BIOL 101 AND BIOL 102.

BIOL g508 Plant Ecology 3 credits. Major factors limiting plant growth and distribution with emphasis on adaptation and response at the individual, population, and community levels. PREREQ: BIOL 101 AND BIOL 102.

BIOL g509 Plant/Animal Interactions 3 credits. Coevolution of plant and animal form and function emphasizing pollination, herbivory, parasitism, frugivory/seed dispersal, and optimal foraging. PREREQ: BIOL 209

BIOL g511D Clinical Microbiology I 3 credits. Study and identification of medically important bacteria, viruses, fungi, chlamydiae, rickettsiae, and parasites as applicable to laboratory and infection control settings. PREREQ: BIOL 235 OR 221 OR EQUIVALENT, AND PERMISSION OF INSTRUCTOR.

BIOL g511E Clinical Microbiology II 3 credits. Advanced topics in clinical microbiology, including application of laboratory techniques to the identification and evaluation of medically important pathogens, and correlations with disease states. PREREQ: BIOL 411D, ADMITTED TO MED TECH INTERNSHIP.

BIOL g511F Clinical Hematology 3 credits. Theoretical and applied aspects of clinical hematology and hemostasis with emphasis on recognition and correlation of abnormal laboratory observations with pathological conditions. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g511G Critical Analysis of Laboratory Values 3 credits. Evaluation of clinical laboratory values with emphasis on advanced methods, specialized statistics, algorithm building, and clinical correlations. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g511I Immunology/Serology/Immunohematology II 3 credits. Advanced topics in immunology/serology/immunohematology. Application

of laboratory techniques to the identification and evaluation of antibodies and antigens. Emphasis on transfusion therapy. PREREQ: BIOL 411H, ADMITTED TO MED TECH INTERNSHIP.

BIOL g511J Clinical Chemistry 3 credits. Theoretical and applied aspects of chemistry with emphasis on test development, validation, and use in diagnosis and management of pathological conditions. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g511K Molecular Biology Laboratory Methods 3 credits. Molecular biological techniques necessary for the understanding of research and diagnostics. Specific skills include DNA purification, amplification, cloning, manipulation, analysis, sequencing expression of cloned genes, and computer bioinformatic analysis of this information. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g511M Clinical Laboratory Research 3 credits. Individual theory and application of related topics associated with the clinical laboratory. PREREQ: PERMISSION OF INSTRUCTOR, ADMITTED TO MED TECH INTERNSHIP.

BIOL g511S Laboratory Analysis and Management 3 credits. Advanced principles of current quality control, personnel, financial and regulatory issues laboratory information systems, management and education. Student presentations required. Students taking the course for graduate credit will develop, complete and present a project.

BIOL g512 Systematic Botany 4 credits. Study of classification and evolution of flowering plants; techniques of phylogeny reconstruction based on molecular and morphological characters. Collection/identification of local flora. Field trips. PREREQ: BIOL 101 AND BIOL 102.

BIOL g513 Biology Teaching Methods 3 credits. Planning, teaching and evaluating teaching activities. Practical experience in methods used in science classrooms and enhancing professional development. Required for secondary education major in biology. PREREQ 16 CREDIT HOURS OF BIOLOGY AND EDUC 302, OR PERMISSION OF INSTRUCTOR.

BIOL g515 Human Neurobiology 4 credits. Cellular-to-organismal structure and function of the human central nervous system (CNS), and CNS pathologies. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g515L Human Neurobiology Lab 1 credit. Detailed examination of the gross anatomy and pathways of the human central nervous system. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g516 Population/Community Ecology 4 credits. Introduces quantitative analysis of populations and communities, emphasizing demography, distribution, abundance, spatial and temporal dynamics, biodiversity, coexistence, and applications to conservation and land use decision-making. Includes data collection and analysis. PREREQ: BIOL 209.

BIOL g517 Organic Evolution 3 credits. An integrated study of evolution as a unifying concept in biology. An examination of patterns and processes that affect the origin and diversification of species through time. PREREQ: BIOL 358.

BIOL g518 Ecological Topics 1 credit. Flexible use of seminars, lectures, and laboratory/field work dealing with current issues in ecology. Topic/emphasis varies. May be repeated until a maximum of 3 credits is earned. PREREQ: BIOL 209 OR PERMISSION OF INSTRUCTOR.

BIOL g519 Mammalian Histology 4 credits. Study of human animal tissues, including structural and functional characteristics of tissues and organs. PREREQ: BIOL 206, BIOL 207, OR BIOL 303 OR BIOL 301 AND BIOL 302.

BIOL g520 Musculo-Skeletal Anatomy 2 credits. Study of human body structure emphasizing muscular system and its relationship to axial and appendicular skeleton. Focus on extremities, thorax, and pelvis with applications toward normal, diseased and rehabilitative functions. PREREQ: BIOL 301 AND BIOL 302.

BIOL 521 Ecological Concepts 3 credits. Major concepts in ecology in relation to environmental degradation, pollution, hazardous materials, and environmental management. Credit may not be used for a graduate degree in biology.

BIOL g523 General Parasitology 3 credits. Study of the parasitic symBIOLes of animals, plants and other organisms focusing on concepts, principles, and consequences of such interactions and the coevolutionary processes by which they are created. PREREQ: BIOL 101 AND BIOL 102.

BIOL g526 Herpetology 3 credits. The biology of amphibians and reptiles: lecture topics include evolutionary history, functional morphology, physiological ecology, biogeography, reproductive, and population ecology. Laboratories and field trips cover systematic, natural history, and collecting/sampling techniques. PREREQ: BIOL 209.

BIOL g527 Ichthyology 3 credits. The biology of fishes; lecture topics include evolutionary history, functional morphology, physiological ecology, and biogeography. Laboratory and weekend field trips cover identification, life history and collecting techniques. Emphasis on Idaho species. PREREQ: BIOL 209.

BIOL g528 Medical Parasitology and Entomology 3 credits. Study of animal parasites, with an emphasis on protists, helminths and arthropods affecting human health and welfare by their presence or indirectly via pathogens they transmit. PREREQ: BIOL 101 AND BIOL 102.

BIOL g529 Regional Anatomy and Histology 4 credits. Regional approach to gross human anatomy emphasizing the use of prosected materials and microscopic anatomy. Designed primarily for students in the Physician Assistant Program. PREREQ: BIOL 301, BIOL 302.

BIOL g531 General Entomology 3 credits. Study of structure, development, classification, and life histories of insects, including ecological, economic and management considerations. An insect collection may be required. Field trips. PREREQ: BIOL 101 AND BIOL 102.

BIOL g532 Biochemistry 3 credits. Comprehensive discussion/presentation of structure, function and metabolism of biological macromolecules and their constituents, including energetics, regulation, and molecular biology, with emphasis on critical analysis of biochemical issues PREREQ: CHEM 301 OR PERMISSION OF INSTRUCTOR.

BIOL g533 Microbial Physiology 3 credits. Comparative physiology of microorganisms, including structure//function, metabolic diversity, enzyme mechanisms of microbial metabolism, and physiology of extreme organisms. Lectures, Class Exercises. PREREQ: BIOL g532 OR PERMISSION OF INSTRUCTOR.

BIOL g534 Microbial Diversity 3 credits. Enrichment, cultivation, and isolation of prokaryotes from various metabolic groups and environments. Microorganisms will be identified using classical microbial techniques and modern molecular methodologies. PREREQ: BIOL g533 OR PERMISSION OF INSTRUCTOR.

BIOL g535 Vertebrate Paleontology 4 credits. Phylogenetic history of the vertebrates outlined in the light of morphology, classification, evolution, paleoecology, and the significance of fossils. Field trips. Cross-listed as GEOL g535. PREREQ: GEOL g531 OR BIOL 314 OR EQUIVALENT.

BIOL g538 Ornithology 3 credits. Study of the origin, evolution, structure, habits, adaptations, distribution, and classification of birds. Field trips. PREREQ: BIOL 101 AND BIOL 102.

BIOL g539 Principles of Taphonomy 3 credits. Effects of processes which modify organisms between death and the time the usually fossilized remains are studied. Emphasis on vertebrates. Cross-listed with ANTH g539 and GEOL g539. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g540 Human Gross Anatomy 4 credits. Comprehensive regional study of gross human anatomy with emphasis on the upper limb, thorax, abdomen, pelvis and perineum. Designed for the first year dental students and complements BIOL g550. Lecture and laboratory.

BIOL g541 Mammalogy 3 credits. General study of mammals including classification, identification, habits, ecology, economics, and techniques of study, with emphasis on North American forms. Field trips. PREREQ: BIOL 209.

BIOL g543 Endocrinology 3 credits. Study of the anatomy and physiology of the ductless glands and the properties and uses of natural and synthetic hormones. PREREQ: BIOL 303.

BIOL 544 Molecular Biology 3 credits. Fundamental principles of molecular biology: DNA replication, repair, and recombination, transcriptional and post-transcriptional regulation of gene expression, RNA metabolism, protein synthesis, targeting and turnover, post-translational modifications, signal transduction, regulation of the cell division cycle, and molecular genetics of development. PREREQ: BIOL 101, BIOL 102, CHEM 302.

BIOL 544L Molecular Biology Laboratory 1 credit. Laboratory techniques in molecular biology, including cloning, PCR and DNA sequencing. COREQ: BIOL 544.

BIOL g545 Biochemistry I 3 credits. Introduction to basic aspects of biochemical systems, including fundamental chemical and physical properties of biomolecules. Enzymology including allosterism, metabolic regulation, bioenergetics, and carbohydrate metabolism. PREREQ: CHEM 302 OR PERMISSION OF INSTRUCTOR.

BIOL g546 Selected Topics in Physiology 1 credit. Selected topics in physiology for dental students: blood coagulation-complement-kinin systems, prostaglandin and related substances, vitamins, steroids, mucopolysaccharides, collagen and other extracellular matrix molecules and cyto- and molecular genetics.

BIOL g547 Biochemistry II 3 credits. Functional continuation of g545. Lipid, amino acid and nucleotide metabolism. Emphasis is on metabolic regulation, metabolic dysfunction, biochemical mechanism of hormone action, biochemical genetics, protein synthesis, and metabolic consequences of genetic defects.

BIOL g548 Advanced Experimental Biochemistry 2 credits. Advanced laboratory projects designed to emphasize techniques of qualitative and quantitative biochemical analysis. PREREQ: CONCURRENT ENROLLMENT IN BIOL g547 OR PERMISSION OF INSTRUCTOR.

BIOL g549 Human Physiology I 4 credits. First of a two-course sequence. Physiology of the nervous, muscular, circulatory, respiratory, and excretory systems. PREREQ: BIOL 202; CHEM 111, CHEM L111, CHEM 112, CHEM L112; COREQ: BIOL g525.

BIOL g550 Head and Neck Anatomy 4 credits. Comprehensive presentation of the anatomy of the head and neck as it applies to the practice of dentistry. Lecture and laboratory.

BIOL g551 Immunology 3 credits. Fundamental concepts of antibody-mediated and cell-mediated mechanisms of immunity. In-vivo and in-vitro antigen-antibody interactions are discussed. PREREQ: BIOL 235 OR PERMISSION OF INSTRUCTOR.

BIOL g551L Immunology Laboratory 1 credit. Selected laboratory experiments to accompany BIOL g551 Immunology. PREREQ OR COREQ: BIOL g551. OPEN TO NON-MAJORS BY SPECIAL PERMISSION.

BIOL g554 Advanced Immunology 3 credits. Detailed study of selected areas of immunobiology. Course content will vary with current demand. Students will lead discussions and present current literature. PREREQ: BIOL g551 AND PERMISSION OF INSTRUCTOR.

BIOL g555 Pathogenic Microbiology 3 credits. How the medically important bacteria, viruses and fungi interact with the host to produce disease, including microbe characteristics, pathogenesis, pathological processes, prevention, and treatment methods. PREREQ: BIOL g551 AND PERMISSION OF INSTRUCTOR.

BIOL g555L Pathogenic Microbiology Laboratory 2 credits. Will emphasize procedures for the isolation and identification of pathogenic bacteria. Clinical specimens will be provided for use in identification of unknowns. PREREQ OR COREQ: BIOL g555.

BIOL g556 Human Physiology II 4 credits. Physiology of gastrointestinal, endocrine, and reproductive systems. Includes studies of acid-base balance, peripheral circulation, shock, and temperature regulation. PREREQ: BIOL g549 OR EQUIVALENT.

BIOL g559 Fish Ecology 3 credits. Study of the behavior, habitat use, population dynamics, and management of freshwater fishes, especially salmon and trout. Laboratory and weekend field trips emphasize sampling techniques and data analysis. PREREQ: BIOL 209, BIOL 315, BIOL g527.

BIOL g560 Neuroscience 4 credits. Comprehensive presentation of the anatomy of the central nervous system, the brain and spinal cord. Combined lecture and laboratory demonstration. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g560L Neuroscience Lab 1 credits. Detailed examination of the gross anatomy and pathways of the human central nervous system. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g561 Advanced Genetics 3 credits. Detailed and critical consideration of selected genetic topics with emphasis of recent advances. PREREQ: BIOL 358 AND PERMISSION OF INSTRUCTOR.

BIOL g562 Freshwater Ecology 3 credits. Study of the interaction of physical and biotic factors in aquatic communities. Field trips. PREREQ: BIOL 209.

BIOL g563 Human Pathophysiology 4 credits. The study of basic processes underlying diseases with an emphasis on correlating anatomical, functional, and biochemical alterations with clinical manifestations. Laboratory required. PREREQ: BIOL 301 AND BIOL 302, OR PERMISSION OF INSTRUCTOR.

BIOL g564 Lectures in Human Physiology 4 credits. Physiology of the nervous, muscular, circulatory, respiratory, and excretory systems. PREREQ: BIOL 301, BIOL 302, AND ONE YEAR OF COLLEGE CHEMISTRY.

BIOL g565 Microbial Genetics 3 credits. Principles of heredity and variation with application of these principles to bacteria and viruses. PREREQ: BIOL 236; CHEM 302.

BIOL g566 Medical Mycology 3 credits. Lecture/laboratory course addressing medically important fungi. Taxonomy, clinical disease, pathogenesis, immunological diagnosis and laboratory identification of contaminants, opportunists, superficial, cutaneous, subcutaneous and systemic mycoses. PREREQ: BIOL 221 OR 235.

BIOL g567 Microbial Genetics Laboratory l credit. Laboratory investigations of the principles of heredity, variation and genetic exchange in bacteria and bacterial viruses. PREREQ: BIOL 235 OR BIOL 221 AND 223.

BIOL g568 Oral Microbiology 1 credit. Study of microbiology of plaque, caries, periodontal disease, immunobiology of oral disease and control of microorganisms with antimicrobial agents. Four periods devoted to laboratory study of medically important oral microbes. PREREQ OR COREQ: BIOL g555.

BIOL g569 Special Topics in Microbiology 1-4 credits. Study of selected topics in microbiology. Course contents will vary with topics selected. May be repeated with departmental approval for non-repetitive course content. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g570 Cross-Sectional Anatomy 2 credits. Applied regional anatomy as viewed in sectional planes, emphasizing topographic relationships of organs and surface anatomy, with interpretation of correlated CT and MRI imaging. PREREQ: BIOL 301 AND BIOL 302.

BIOL g573 Industrial Microbiology 4 credits. Microbiological and biochemical aspects of fermentative and oxidative processes of industrial importance such as yeast, mold, and bacterial fermentation. PREREQ: BIOL g533.

BIOL g574 Human Anatomy (Occupational Therapy/Physical Therapy) 5 credits. Applied regional anatomy emphasizing the development, histology and gross anatomy of the musculoskeletal, peripheral nervous, and cardiopulmonary systems. Includes laboratory with cadaver dissection. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g575 General Virology 3 credits. Introduction to the general principles of virology through consideration of structure, genetics, replication and biochemistry of animal and bacterial viruses. PREREQ: COMPLETION OF 90 CREDITS.

BIOL g576 Ecology of Water Pollution 3 credits. Study of the causes of pollution and their effects on the aquatic environment and its inhabitants. Special consideration will be given to the biological and chemical assessment of pollution in streams and to its control. Field work. PREREQ: BIOL g562 OR PERMISSION OF DEPARTMENT.

BIOL g577 Bacterial Virology Laboratory 1 credit. Designed to acquaint students with the techniques and experimental principles used in the study of bacterial viruses. Must be accompanied by BIOL g575.

BIOL g578 Animal Virology Laboratory 1 credit. Introduces tissue culture methods and other techniques employed in the study of animal viruses. Must be accompanied by BIOL g575.

BIOL g579 Survey of Electron Microscopy 2 credits. Introduction to the potentialities, theory, techniques, and limitations of electron microscopy. The field will be surveyed as a whole, but primary emphasis will be on biological applications. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g581-g582 Independent Problems 1-4 credits. Individual problems will be assigned to students on the basis of interest and previous preparation. May be repeated. PREREQ: A MINIMUM OF TWO COURSES IN BIOLOGICAL SCIENCES AND PERMISSION OF INSTRUCTOR.

BIOL g586 Human Systemic Physiology 5 credits. One semester human physiology course emphasizing the function and regulation of the muscular, skeletal, circulatory, respiratory, urinary, reproductive, and immune systems. PREREQ: CHEM 111, CHEM L111, CHEM 112, CHEM L112; BIOL 301 AND BIOL 302 OR EQUIVALENT.

BIOL g588 Advanced Radiobiology 3 credits. An advanced-level class covering aspects of molecular radiobiology, teratogenesis, oncogenesis, and acute radiation illnesses. It also considers nonstochastic radiation effects and the epidemiology of radiation exposures. Cross-listed as PHYS g588. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL g589 Field Ecology 3 credits. An intensive field of study of at least one biogeographical region to increase students' knowledge of and skill with field sampling techniques, field-study design, data collection and analysis, and report preparation. PREREQ: BIOL 209.

BIOL g595 Ethology 3 credits. Behavior of animals and the evolutionary mechanisms that dictate behavioral patterns. PREREQ: UPPER DIVISION OR GRADUATE STATUS.

BIOL 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

BIOL 601 Animal Behavior 3 credits. Behavior and social organization of animals with particular attention to the vertebrates. Lecture, laboratory, and field work. PREREQ: GRADUATE STANDING AND PERMISSION OF DEPARTMENT.

BIOL 602 Advanced Plant Physiology 3 credits. Study of interrelationships of soil, water, and minerals in the nutrition of plants. PREREQ: BIOL g504.

BIOL 603 Comparative Physiology 3 credits. Study of the ways in which organisms meet their functional requirements. Lecture and laboratory. PREREQ: GRADUATE STANDING AND PERMISSION OF DEPARTMENT.

BIOL 604 Advanced Limnology: Streams and Biotic Production 3 credits. Study of the ecology of streams; chemical, physical, and geological aspects in relation to biota. The production of organic matter in flowing water is emphasized, including the tracing of food chains and food webs and the construction of energy budgets. Field trips. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL 605 Biometry 4 credits. Application of descriptive and analytical statistical methods to experimental design and biological research. PREREQ: MATH 143 OR EQUIVALENT OR PERMISSION OF INSTRUCTOR.

BIOL 606 Scientific Writing 3 credits. Review of basic principles of grammar, organization, style, and persuasive argument as applied to specific areas of scientific writing. Each student will write proposals, technical reports and review manuscripts, and reviews of proposals and manuscripts.

BIOL 607 Environmental Physiology 3 credits. Study of the physiological mechanisms and interrelated behavioral patterns by which animals respond to environmental factors. PREREQ: GRADUATE STANDING AND PERMISSION OF INSTRUCTOR.

BIOL 610 Principles of Molecular Biology 3 credits. Introduction to subcellular biology and molecular genetics. DNA replication, cell division, the genetic code, transcription, translation, enzyme function, and control mechanisms in procaryotic and eucaryotic cells. PREREQ OR COREQ: BIOL g532.

BIOL 613 Biogeography 3 credits. Discussion of patterns of distribution of species and their historical and ecological causes. Includes research project.

BIOL 614 Evolutionary Ecology 3 credits. Evolutionary theory applied to ecological processes, including selection theory, ecological genetics, life-history evolution and coevolution. PREREQ: BIOL 209, BIOL 358, BIOL g517.

BIOL 616 Advanced Community Ecology 4 credits. Historical and contemporary concepts and methods in community ecology and its interface with other fields, including molecular biology, informatics, conservation, social sciences, and landscape and ecosystem ecology. Emphasizes quantitative models and data analysis.

BIOL 621 Advanced Methods in Microbiology 3 credits. PREREQ: GRADUATE STANDING AND PERMISSION OF INSTRUCTOR.

BIOL 623 Soil and Ground Water Bioremediation 3 credits. Theoretical and applied aspects of biological treatment for contaminated subsurface systems. PREREQ: BIOL 587.

BIOL 624 Microbial Ecology 3 credits. Ecological principles applied to microorganisms. PREREQ: GRADUATE STANDING AND A COURSE IN MICROBIOLOGY.

BIOL 628 Cytology and Cell Physiology 4 credits. Advanced study of the functions and structural components of cells. Lecture and laboratory. PREREQ: GRADUATE STANDING AND PERMISSION OF INSTRUCTOR.

BIOL 629 Basic Concepts in Biology 3 credits. Considerations of fundamental concepts of biology, their origin and development. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL 631-632 Advanced Systematic Botany 3 credits. Classification of plants as it rests on morphological, chemical, ecological, and genetic bases. PREREQ: BIOL g512.

BIOL 633 Advanced Microbial Physiology 3 credits. Advanced topics in microbial physiology and biochemistry. PREREQ: BIOL g532 AND PERMISSION OF INSTRUCTOR.

BIOL 634 Intermediary Metabolism 3 credits. Theory, reactions, and methods pertinent to research in intermediary metabolism. PREREQ: BIOL g532 AND PERMISSION OF INSTRUCTOR.

BIOL 636 Experimental Intermediary Metabolism 2 credits. Must be accompanied by or preceded by BIOL 634.

BIOL 640 Advanced Topics in Hematology 1-4 credits. Current research and practice in hematology including molecular approaches to diagnosis and treatment and stem cell therapy. May be repeated for a maximum of 4 credits.

BIOL 641 Advanced Topics in Immunology and Immunohematology 1-4 credits. Current research and practice in immunology and immunohematology (transfusion medicine) including molecular approach to diagnosis and treatment. May be repeated for a maximum of 4 credits.

BIOL 642 Advanced Topics in Clinical Chemistry 1-4 credits. Current research and practice in clinical chemistry including innovative instrumentation and molecular diagnostics. May be repeated for a maximum of 4 credits.

BIOL 643 Advanced Topics in Clinical Laboratory Education 1-4 credits. Curriculum design and evaluation in the clinical laboratory setting May be repeated for a maximum or 4 credits.

BIOL 648 Graduate Problems 1-9 credits per semester (may be repeated). Thesis related research. PREREQ: GRADUATE STANDING AND PERMISSION OF INSTRUCTOR. Graded S/U.

BIOL 650 Thesis 1-6 credits. Graded S/U.

BIOL 651 Advanced Studies in Ecology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with ecological relationships.

BIOL 652 Advanced Studies in Physiology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in physiology.

BIOL 653 Advanced Studies in Vertebrate Zoology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in vertebrate zoology.

BIOL 654 Advanced Studies in Invertebrate Zoology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in invertebrate zoology.

BIOL 655 Advanced Studies in Vertebrate Paleontology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in vertebrate paleontology.

BIOL 656 Advanced Studies in Systematic Biology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in systematic biology.

BIOL 657 Advanced Studies in Plant Biology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in plant biology.

BIOL 658 Advanced Studies in Limnology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in limnology.

BIOL 659 Advanced Studies in Genetics 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in genetics.

BIOL 660 Selected Topics in Biochemistry 3 credits. Detailed study of selected areas of biochemistry. Course content will vary with current demand. PREREQ: BIOL g532 OR PERMISSION OF INSTRUCTOR.

BIOL 661 Advanced Studies in Environmental Physiology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in environmental physiology.

BIOL 662 Advanced Studies in Developmental Biology 2-6 credits. Flexible use of seminars, lectures, and laboratory work dealing with problems in developmental biology.

BIOL 670 Selected Topics in Microbiology 1-4 credits. Detailed study of selected areas of microbiology. Course content will vary with current demand. PREREQ: PERMISSION OF INSTRUCTOR.

BIOL 675 Advanced Bacterial Virology 3 credits. Detailed study of selected areas of bacterial virology. Course content will vary with current demand. PREREQ: BIOL g575 AND PERMISSION OF INSTRUCTOR.

BIOL 676 Advanced Animal Virology 3 credits. Detailed study of selected areas of animal virology. Course content will vary with current demand. PREREQ: BIOL g575 AND PERMISSION OF INSTRUCTOR.

BIOL 679 Electron Microscopy 5 credits. Introduction to uses of the electron microscope in biological research. Designed to develop proficiency in use and operation of the electron microscope, specimen preparation for electron microscopy, and photographic skills as applied to electron microscopy. In addition, students will develop a special project for individual study. Enrollment limited to students who have a demonstrated need to learn electron microscopy techniques. PREREQ: BIOL g579, GRADUATE STANDING, AND PERMISSION OF INSTRUCTOR.

BIOL 687 Environmental Science and Pollutants 3 credits. Structure and function of ecosystems, sources and characteristics of hazardous materials, mechanisms and pathways of pollutant transport and degradation, mechanisms of pollutant impact on ecosystems and human health. PREREQ: BIOL 521, AN UNDERGRADUATE ECOLOGY COURSE, OR EQUIVALENT.

BIOL 691 Seminar 1 credit. Review of current research and literature. May be repeated until a maximum of 4 credits is earned. Graded S/U .

BIOL 692 Seminar 1 credit. Review of current research and literature. May be repeated until a maximum of 4 credits is earned. Graded S/U .

BIOL 693 Seminar in College Teaching 2 credit. Review of current research and literature. Rotation of topics will include professional development, theory and practice of science education, and current issues in biology instruction. May be repeated for up to 6 credits. Graded S/U .

BIOL 694 Advanced Studies in College Teaching 2-6 credits. Rotating topics on practical approaches to teaching college-level biology and conducting research in science education. May be repeated for up to 6 credits.

BIOL 700 Supervised Teaching Internship variable to 9 credits per semester. Graded S/U .

BIOL 850 Doctor's Dissertation variable credit. Graded S/U .

Department of Chemistry

Chair and Professor: Holman
Professors: Castle, DeJesus, Kalivas, Rodriguez, J. Rosentreter
Associate Professors: Goss, Pak
Assistant Professors: Evilla, Holland, Krumper
Instructor: Braun
Senior Lecturers: Omar, R. Rosentreter
Assistant Lecturers: Jolley, Quarder
Emeritus Faculty: Braun, Faler, B. Ronald, Strommen, Sutter, Wiegand

Master of Science in Chemistry

The M.S. program inlcudes both thesis and non-thesis options.

Thesis Option

The M.S. program, thesis option, requires a substantial, original research project that culminates in a thesis, a minimum of 30 credits (including thesis credit) earned in graduate courses and seminars.

Non-Thesis Option

A non-thesis option exists in which students are required to take 15 credits of approved 600-level chemistry courses, including CHEM 601 (Seminar, 2 credits), and 15 credits of graduate electives.

Goals

1. Graduates will attain a broad knowledge in the four major areas of Chemistry.
2. Graduates will conduct novel research in Chemistry.
3. Graduates will be prepared to continue their education in pursuit of a Ph.D.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School in addition to department requirements.

Applicants must have at least a 3.0 GPA for all upper-division credits taken in the previous degree program (a B.S. or a B.A. in Chemistry). Graduate Record Examination (GRE) scores must be reported.

Several courses are prerequisite for the M.S. degree programs; any student who has not met these requirements through previous course work must take them as part of his/her M.S. program. These are: one semester of calculus, one year of physics, one semester of inorganic chemistry, one year of organic chemistry, one semester of analytical chemistry, and one year of physical chemistry. Because these are undergraduate course prerequisites, any credit earned in taking these courses does not count toward the 30 credit requirement for the M.S.

General Requirements

The Master of Science in Chemistry (Thesis Option) requires a minimum of 30 total credits approved by the Department of Chemistry and the Graduate School. Required courses include three of the following:

CHEM 609	Advanced Inorganic Chemistry	3 cr
CHEM 630	Advanced Analytical Chemistry	3 cr
CHEM 655	Advanced Physical Chemistry	3 cr
CHEM 671	Advanced Organic Chemistry	3 cr
AND		
CHEM 601	Seminar	2 cr (min)
CHEM 650	Thesis	6-10 cr

Combined BS/ MS Program in Chemistry

1. Students will obtain a broad knowledge in the four major areas of Chemistry.
2. Graduates will conduct research in a narrow part of one of the above.
3. Graduates will be prepared to continue their education in pursuit of a Ph.D.

Students may be admitted to the program after having completed 64 credit hours. Application for admission must be made to the Chemistry Department. In addition, the student should have completed the following courses or the equivalent:

CHEM 111-112	General Chemistry I & II	9 cr
CHEM 114	Cations and Anions	1 cr
CHEM 211	Inorganic Chemistry I	2 cr
CHEM 232	Quantitative Analysis	2 cr
CHEM 234	Quantitative Analysis Laboratory	2 cr
CHEM 301-302	Organic Chemistry I & II	6 cr
CHEM 303-304	Organic Chemistry Laboratory I & II	2 cr
MATH 170	Calculus I	4 cr
MATH 175	Calculus II	4 cr
PHYS 211-212	Engineering Physics	8 cr
PHYS 213-214	Engineering Physics Laboratory	2 cr

General Requirements (See the suggested schedule)

During the first semester each student is expected to select three faculty members to serve as his/her advisory committee subject to the approval of the Department Chair. In the second semester, each student will form his/her planned program of study with the research advisor, write a research overview of the project, apply and be admitted to the Graduate School. The student is expected to begin his/her research no later than the beginning of the summer session. Thereafter, individual sections of the research paper will be required as students progress through the program.

The student must apply to, and meet all criteria for, admission to the Graduate School prior to their fourth year. Continuation in the program requires that the student maintain a minimum GPA of 3.0 from date of admission and annual approval of his/her committee. It will be recommended that students who are not making adequate progress discontinue the program.

The student must complete a total of 158 credit hours. This corresponds to 128 credit hours for the BS degree and 30 credit hours for the MS degree. The final course selection must be approved by the Chemistry Graduate Program Committee. Students are required to have completed all general education requirements by the end of their second year in the combined BS/MS program. It is the intent that all students will finish within the period of 3 years after admission to the program. Successful completion of the program requires that the student write and defend a research paper embodying his/her research before his/her research committee.

Suggested Schedule

The following schedule will show how a typical student might progress through the BS/MS program. Even though courses are listed as suggested, each student is required to meet all course requirements for the BS degree in chemistry (except independent problems CHEM 481 and CHEM 482). Each student is also required to complete all four advanced chemistry courses (CHEM 609, CHEM 630, CHEM 655, and CHEM 671). These courses are taken during the second and third years of the program.

Third Year (Junior)

Fall/Spring

*CHEM 305	Organic Chemistry Laboratory III	2 cr
*CHEM 331	Instrumental Analysis	2 cr
*CHEM 334	Instrumental Analysis Laboratory	2 cr
*CHEM 351	Physical Chemistry	3 cr
*CHEM 352	Physical Chemistry	3 cr
MATH 230	Linear Algebra	2 cr
MATH 360	Differential Equations	3 cr
	Electives	11 cr
		TOTAL 28 cr

**Must be completed by the end of the junior year.*

Summer

CHEM 485	Senior Research	6 cr

Fourth Year (Senior)

Fall/Spring

BIOL g532	Biochemistry	3 cr
CHEM g507	Inorganic Chemistry II	2 cr
CHEM g508	Preparative Inorganic Chemistry	1 cr
CHEM g553	Modern Experimental Physical Chemistry	2 cr
CHEM g566	Structural Analysis in Chemistry	2 cr
CHEM 485	Senior Research	2 cr
CHEM g591	Seminar	1 cr
CHEM 609	Advanced Inorganic Chemistry	3 cr
CHEM 655	Advanced Physical Chemistry	3 cr
Electives		8 cr
		TOTAL 27 cr

Summer

CHEM 635	Master's Research	6 cr

Fifth Year

Fall/Spring

CHEM 630	Advanced Analytical Chemistry	3 cr
CHEM 671	Advanced Organic Chemistry	3 cr
CHEM 601	Seminar	2 cr
CHEM 635	Master's Research	4 cr
Electives		13 cr
		TOTAL 25 cr

Master of Natural Science in Chemistry

The student must apply to, and meet all criteria for, admission to the Graduate School

The Master of Natural Science (MNS) in Chemistry is designed primarily for teachers and prospective teachers who want to improve their understanding of the subject matter of chemistry. Emphasis is upon the subject matter and it is generally a non-thesis program. Individuals interested in this degree should hold a teaching certificate or be working towards one. The program of study will be determined in consultation with the student's advisor and committee. The program requires a minimum of at least 30 credits, 22 of which must be taken in residence. A final oral examination is required.

Chemistry Graduate Courses

CHEM g500 Practicum in Physical Science 2 credits. Practical problems associated with equipping, setting up, and operating laboratories in chemistry. PREREQ: PERMISSION OF INSTRUCTOR.

CHEM g507 Inorganic Chemistry II 2 credits. Structure and reactivity of inorganic compounds including coordination compounds; acid-base chemistry and nonaqueous solvent systems; organometallic chemistry and other special topics of current interest. PREREQ: CHEM 211, CHEM 352, OR PERMISSION OF INSTRUCTOR.

CHEM g533 Environmental Chemistry 2 credits. This course applies chemical principles and calculation to investigate environmental issues. Natural systems, environmental degradation and protection, and the methodology of chemical detection and monitoring, PREREQ: CHEM 232 AND CHEM 234, OR PERMISSION OF INSTRUCTOR.

CHEM g537 Environmental Chemistry Laboratory 1 credit. This laboratory course utilizes both structured and self-designed field and classroom experiments to emphasize principles of environmental chemistry. COREQ: CHEM g535, OR PERMISSION OF INSTRUCTOR.

CHEM g553 Modern Experimental Physical Chemistry 2 credits. Magnetic, optical, and electrical properties of materials, calorimetry, voltammetry, optical and laser spectroscopic techniques. PREREQ: CHEM 334 AND CHEM 352.

CHEM g581-482 Independent Problems in Chemistry 1-4 credits each. Directed library and laboratory research. Courses may be repeated to a maximum of 6 credits. PREREQ: CHEM 352.

CHEM g591 Seminar 1 credit. A formal introduction to the chemical literature including

electronic methods of literature searching. A detailed treatment of methods for presenting scientific seminars including a full-length student presentation on selected library or laboratory research. COREQ: CHEM g581, g582, 485, OR PERMISSION OF INSTRUCTOR.

CHEM 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

CHEM 601 Seminar 1 credit. Oral reports of current literature and research in chemistry. This course may be taken multiple times as determined by degree requirements. Graded S/U.

CHEM 609 Advanced Inorganic Chemistry 3 credits. Synthesis, reactions, spectroscopic characterization methods, and application of transition metal complexes. Foci will vary and may include metal carbon bond transformations, bioinorganic chemistry, or materials chemistry. PREREQ: Chem g507 OR PERMISSION OF INSTRUCTOR.

CHEM 610 Special Topics in Chemistry 1-3 credits. Detailed consideration of a limited phase of chemistry; course content will vary with current demand and with the instructor; may be repeated with departmental approval for non-repetitive course content.

CHEM 615 Neutron Activation Analysis 4 credits. Theory and use of neutron activation methods for quantitative chemical analysis of natural and synthetic materials. Applications in geologic systems will be emphasized. Cross-listed as GEOL 615, PHYS 615. PREREQ: PERMISSION OF INSTRUCTOR.

CHEM 617 Environmental Geochemistry 3 credits. Geochemistry of environmental systems. Emphasis given to low-temperature water-rock interactions, including sorption processes, retardation, reaction kinetics and reaction-mass transport modeling. Cross-listed as GEOL 617. PREREQ: GEOL g520, OR CHEM 351 AND GEOL 109.

CHEM 621 Organic Reactions 3 credits. Advanced study of organic chemical reactions with emphasis on synthetic applications. PREREQ: CHEM 302.

CHEM 625 Quantitative Geochemistry Lab 3 credits. Applications of instrumental methods for geochemical analysis. Cross-listed as GEOL 625.

CHEM 630 Advanced Analytical Chemistry 3 credits. Advanced treatment of standards, sampling, special methods of analysis, and methods of separation. PREREQ: CHEM 304, CHEM 334 AND CHEM 352, OR PERMISSION OF INSTRUCTOR.

CHEM 635 Master's Research 2-6 credits. A continuation of CHEM 435 to improve ability of students to solve chemical problems independently and pursue research at an advanced level. May be repeated for up to 12 credits. PREREQ: CHEM 485.

CHEM 640 Research Techniques in Chemistry 2-6 credits. Designed to improve the ability of students to solve chemical problems independently in the laboratory; special emphasis on development of manipulative skills, instrumental methods and supporting library research; nature of the projects dictated by students' needs; may be repeated with departmental approval for non-repetitive course content. Limit 12 credits.

CHEM 650 Thesis 1-10 credits. Graded S/U.

CHEM 655 Advanced Physical Chemistry 3 credits. Introductory material from quantum chemistry and statistical mechanics with applications in chemical thermodynamics. PREREQ: CHEM 352, OR PERMISSION OF INSTRUCTOR.

CHEM 671 Advanced Organic Chemistry 3 credits. Kinetics and mechanisms in organic reactions. PREREQ: CHEM 302 AND CHEM 352, OR PERMISSION OF INSTRUCTOR.

Department of Communication and Rhetorical Studies

Chair and Professor DiSanza
Professors: Gribas, Legge, Loebs
Associate Professor: Partlow
Lecturers: Broadhead, Corrigan, Czerepinski, Dixon, Eckert, Hansen, Leek, Sowell, Underwood

Master of Arts in Organizational Communication

OR

Master of Arts in Rhetorical Studies

Goals

The primary objectives related to the graduate program in Communication and Rhetorical Studies are to help students develop the following competencies:

1. An understanding of the history and nature of the Communication discipline.
2. The ability to read, understand, and critique scholarly communication-related research and analysis.
3. The ability to design and conduct original communication-related research and analysis.
4. The ability to engage in critical thinking.
5. The ability to communicate effectively in writing.
6. The ability to communicate effectively through oral presentation.
7. The ability to construct and evaluate persuasive messages.
8. The ability to use effective information research strategies.
9. An understanding of the role of communication in interpersonal settings.
10. An understanding of the role of communication in group settings.
11. An understanding of the role of communication in organizational settings.
12. An understanding of the role of communication in historical/current events.
13. The program will facilitate the development of knowledge and skill applicable in graduates' professional lives.
14. The program will facilitate the development of knowledge and skill applicable to graduates' personal lives.

Admission Requirements

To be admitted to classified status, students must apply to, and meet all criteria for, admission to the Graduate School

Rhetorical Studies Degree

Required courses:

COMM 601	Introduction to Graduate Research Methods	3 cr
COMM 630	Seminar in Rhetorical/Communication Theory	3 cr

Organizational Communication Degree

Required courses:

COMM 601	Introduction to Graduate Research Methods	3 cr
COMM 635	Seminar in Organizational Communication	3 cr

Elective Courses for both degrees:

COMM g508	Communication Theory	3 cr
COMM g536	Rhetorical Criticism	3 cr
COMM g537	Rhetorical Theory	3 cr
COMM g540	Gender and Communication	3 cr
COMM g541	Interpersonal Communication	3 cr
COMM g542	American Rhetoric and Public Address	3 cr
COMM g547	Rhetoric of Hitler and Churchill	3 cr

COMM g551	Recent Rhetorical Issues	3 cr
COMM g552	Conflict Management	3 cr
COMM g554	Management Communication	3 cr
COMM g591	Independent Research Projects	1-6 cr
COMM 597	Professional Education Development Topics	variable cr
COMM 650	Thesis	1-6 cr
COMM 660	Graduate Degree Paper	1-2 cr
COMM 691	Independent Study in Speech	1-6 cr

Students must select one of the following two options:

Thesis Option

A minimum of 30 credits. One to six credits may be thesis credits.

Degree Paper Option

A minimum of 32 credits and one degree paper. Two credits may be degree paper credits.

Communication and Rhetorical Studies Graduate Courses

COMM g508 Communication Theory 3 credits. Examines models of social science and how these contribute to the development of communication theory. Examines a variety of communication theories in interpersonal, small group, organizational contexts. Focus on history of theory development in communication.

COMM g536 Rhetorical Criticism 3 credits. Study and application of various theories and methods of rhetorical criticism including Aristotelian and Burkeian principles. PREREQ: SPCH g537 OR PERMISSION OF INSTRUCTOR.

COMM g537 Rhetorical Theory 3 credits. Principal rhetorical theories from the Greeks through the 18th century and contemporary American theorists. Writings of Plato, Aristotle, Cicero, Quitilian, Campbell, Blair, Whately, and Burke are stressed.

COMM g540 Gender and Communication 3 credits. Course examines communication arenas from a perspective that focuses on gender and includes study of similarities and differences in female/male patterns. Topics include nonverbal, organizational, language, family and friendship.

COMM g541 Interpersonal Communication 3 credits. Largely theoretical course, drawing from research in social sciences as well as speech. Focuses on communication variables associated with interpersonal communication including awareness of self/others, nature/functions of language, nonverbal behavior, norms and roles.

COMM g542 American Rhetoric and Public Address 3 credits. Has a dual purpose: to study the impact of rhetoric (oral and written persuasion) on major events in American history; examine great speakers and rhetorical documents in their historical context.

COMM g547 Rhetoric of Hitler and Churchill 3 credits. Rhetorical theory and practice of these influential leaders and the impact of their persuasion. Topics include Hitler's oratory, Nazi propaganda, and Churchill's World War speeches.

COMM g551 Recent Rhetorical Issues 3 credits. Study of the rhetoric of contemporary issues such as the Vietnam war, the Black revolution, and other current political and social topics, including the rhetoric of ongoing election campaigns (taught alternate years).

COMM g552 Conflict Management 3 credits. Examines the dynamics of everyday conflicts across a variety of settings, from personal to organizational. Principles of conflict, similar across all communicative contexts, are emphasized. Theory and its applications are given equal importance.

COMM g554 Management Communication 3 credits. Examines the communication goals and functions unique to organizational managers and leaders. Topics studied include socialization and training, leader-member relationships, incentive-based systems of motivation, employee identification and commitment, and organizational development.

COMM g591 Independent Research Projects 1-6 credits. Under the supervision of professors in the various areas of communication, students will prepare reports and carry out projects designed to promote professional growth. May be repeated for up to 6 credits. PREREQ: Permission of instructor and department.

COMM 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

COMM 601 Introduction to Graduate Research Methods 3 credits. Orientation to departmental graduate program policies and expectations, overview of the communication discipline, and introduction to methods used for producing scholarly research in the field.

COMM 630 Seminar in Rhetorical/Communication Theory 3 credits. In-depth study and analysis of selected rhetorical and/or communication theories. See instructor for specific topics. May be repeated once with permission of instructor.

COMM 635 Seminar in Organizational Communication 3 credits. In-depth study and analysis of selected topics in organizational communication. See instructor for specific topics. May be repeated once with permission of instructor.

COMM 650 Thesis 1-6 credits. Graded S/U.

COMM 660 Graduate Degree Paper 1-2 credits. Graded S/U.

COMM 691 Independent Study 1 - 6 Credits. Under the supervision of departmental graduate faculty, students will engage in self-directed reading, exploration, and study focused on topics relevant to the communication discipline and to the students' planned academic program. May be repeated for up to 6 credits. PREREQ: Permission of instructor and department.

Department of Economics

Chair and Professor Stegner
Professors: Benson, Tokle
Associate Professors: Green, Hill
Professor Emeritus: Hofman

Economics Graduate Courses

(No graduate degrees are offered)

ECON g504 Game Theory 3 credits. A mathematical modeling technique used to describe the behavior of interdependent economic agents. We define Nash equilibria in games with varying information structures: normal and extensive form games of perfect, imperfect and incomplete information. PREREQ: ECON 210 AND ECON 202.

ECON g509 Industrial Organization 3 credits. Industrial organization extends the theory of the firm to examine firms' strategic behavior, including methods to differentiate products and aggressive prizing schemes, and the government's response to these activities. PREREQ: ECON 210 AND ECON 202.

ECON g511 Political Economy 3 credits. A critical introduction to the relationship between economic institutions and social analysis. The social implications of different views on economic concepts, such as the division of labor, capital, and value, are investigated from a classical, neoclassical and an institutional perspective.

ECON g533 Economic Development 3 credits. Theories and principles of economic development, characteristics, and problems of underdeveloped and developing countries, alternative techniques and policies for the promotion of growth and development.

ECON g539 State and Local Finance 3 credits. Study of taxation, borrowing and spending by state, city, county and other local governments. Taxing and spending patterns are evaluated and compared by states.

ECON g572 Comparative Economic Systems 3 credits. Study and comparison of the theories and practices found in various economic systems. Includes a study of both the free market and socialistic planning.

ECON g574 Senior Seminar 3 credits. Discussion driven capstone class that integrates selected topics in economics. Students will be required to do economic research, and write on and discuss current economic issues. PREREQ: AT LEAST SENIOR STANDING.

ECON g581 Independent Studies 1-3 credits. Individuals will be assigned independent problems for research under the supervision of a departmental faculty member. May be repeated up to 6 credits.

ECON g585 Econometrics 3 credits. The application of statistical and mathematical methods to the analysis of economic data, with a purpose of giving empirical content to economic theories and verifying them or refuting them. PREREQ: ECON 201, ECON 202, AND MATH 153.

ECON g591-g592 Seminar 1-3 credits.

ECON 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/ .

ECON 610 Applied Economics 3 credits. Applied principles and techniques of analysis in micro and macro economics. Cross-listed as MBA610.

ECON 620 Seminar: Philosophy of Social Science 3 credits. The application of mathematical and scientific methods to the study of social, economic, and political life will be considered through the reading of certain seminal writings. Attention will be given to the fundamental assumptions about the nature of scientific rationality. Required of all D.A. students.

ECON 621 Seminar: Interdisciplinary Topics in Social Sciences 3 credits. Examination of selected topics in the social sciences from the analytic orientations and perspectives common and peculiar to the disciplines of political science, economics and sociology. Required of all D.A. students.

ECON 650 Thesis 1-6 credits. The student will do research of an economic nature supervised by a faculty member in the Economics Department. The research project will be of an interdisciplinary nature and the student will be supervised by faculty members from the department(s) involved as well as from the Economics Department. Graded S/U.

Department of English and Philosophy

Chair and Associate Professor: Johnson
Director of Philosophy and Professor: Wahl
Director American Studies and Associate Professor: J. Adkison
Assistant Chair and Professor: Swetnam
Assistant Writing Center Director and Associate Professor: S. Adkison
Graduate Program Director and Associate Professor: Winston
Composition Director and Associate Professor: Hellwig
Professors: B. Attebery, J. Attebery, Baergen, Levenson, Schmidt, Westphal
Associate Professors: Engebretsen, Klein, Launspach, Montgomery, Skidmore, Whitaker
Assistant Professors: Wolter

The Department of English and Philosophy offers graduate curricula in English studies that include courses in language, literature, composition/rhetoric, and English pedagogy. The Department offers the Master of Arts and the Doctor of Philosophy degrees.

Admission Requirements for International Students

Students whose native language is not English must achieve at least one of the following minimum scores to be considered for admission into the M.A. or D.A. program in English: TOEFL 550/213; MTELP 84; IELTS 6.

Goals

The Department has articulated the following goals and student learning outcomes for students in graduate programs:

Learning Outcomes - Master of Arts

Stated Mission and Goals: *Masters-level English programs in the Department of English and Philosophy provide students advanced training in language, literature, and composition/rhetoric in preparation for varying personal and career goals. Such training will provide students with the sound foundations needed to teach in the secondary schools, to teach in two-year colleges, to enter fields in which verbal and analytical training is essential, and to prepare for further graduate work in MFA, DA, or PhD programs.*

Student Learning Outcomes

1. Masters-level English students will have an understanding of the history of British and U.S. literatures.
2. Masters-level English students will understand important theoretical approaches to the study of literature and culture.
3. Masters-level English students will design and carry out substantive research projects.
4. Masters-level English students will understand language as a medium of common linguistic principles; they will understand the relationship of these linguistic principles to communication and expression.
5. Masters-level English students will be prepared for future professional activity as teachers, advanced graduate students, or for professional activity within occupations outside academe.

Learning Outcomes - Doctor of Philosophy

Stated Mission and Goals: *The PhD. in English and the teaching of English is a terminal degree program that trains students for teaching careers in English at colleges and universities.*

Student Learning Outcomes

1. Ph.D. students will have a professional understanding of the history of British and American literatures.
2. Ph.D. students will understand and employ in their own work major theoretical approaches to literature and culture.
3. Ph.D. students will understand theories of college-level English teaching and will be able to effectively translate these theories into practice.
4. Ph.D. students will define, research, and complete a significant research project within English studies, and be prepared to conduct research independently once they graduate.
5. Ph.D. students will understand language as a medium of common linguistic principles; they will understand the relationship of these linguistic principles to communication and expression.
6. Ph.D. students will be prepared for future professional activities as college-level English teachers.

Doctor of Philosophy in English and the Teaching of English

The Doctor of Philosophy in English and the Teaching of English prepares students for teaching careers in English at colleges and universities. The program emphasizes the study of English and American literature, course work in content-specific pedagogy, and supervised teaching internships. Students also undertake directed, specialized research in a required dissertation.

Admission Requirements

For full consideration for admission and financial aid, applications for fall admission must arrive by February 15.

Applicants for classified admission and/or financial support must submit the following materials:

1. Undergraduate and graduate transcripts.
2. An M.A. in English (or appropriate related field) with an accumulative grade point average of 3.5 in M.A.-level English courses.
3. Three letters of recommendation from professors who can comment on the student's recent academic work.
4. Scores at or above the 50th percentile on the verbal section of the GRE general test. Scores on the analytical writing section will also be considered in admission decisions.
5. A writing sample (about 10-20 pages).
6. A brief statement (about 500 words) describing the applicant's academic background, reasons for applying to the program, research interests, and professional goals.

The Graduate Committee in consultation with the department Chair evaluates these materials to determine admission to the program. Priority will be given to experienced, successful teachers.

General Requirements

The Doctor of Philosophy in English requires a minimum of 39 semester credits beyond the M.A.

A course completed as part of a student's M.A. program may be approved by the Graduate Director to satisfy a particular requirement of the Ph.D. program, up to a maximum of 9 credits; however, the substitution of course work does not waive the minimum credit requirement for the Ph.D. program.

With the approval of the Graduate Director, students may transfer up to 9 credits of coursework beyond the M.A. from other institutions.

Three semesters of full-time residence study are required.

Students must maintain a 3.5 grade point average to advance to candidacy for the Ph.D. Three grades below B- during the entire program will automatically disqualify a student.

Graduate students must follow the policy on incomplete grades as it is listed in the Idaho State University Graduate Catalog.

Teaching assistantships and Ph.D. fellowships will not be renewed for students with incomplete grades on their transcripts.

Special Requirements

1. Student must complete at least 27 of the required 39 credits at the 600 level or higher.
2. Students must complete two supervised teaching internships. The student must submit a detailed proposal for each internship to the Graduate Committee for approval prior to the semester of the internship. The proposal must be endorsed by the member of the graduate faculty who has agreed to supervise the internship. An unacceptable Ph.D. internship will have the same consequences as a course grade of C.
3. Students will write a dissertation with a section exploring the implications of the research for the student's teaching of English.

   This dissertation project will be designed in consultation with a member of the English graduate faculty, who will serve as chair of the dissertation committee. The dissertation committee shall consist of three members of the graduate faculty, at least two of whom are English graduate faculty. In consultation with the dissertation director, the student is responsible for assembling the dissertation committee. The dissertation proposal must be approved by all members of the student's dissertation committee and then submitted, with the comprehensive exam lists attached, to the Graduate Director for review, according to the guidelines in the English Graduate Handbook. A Graduate Faculty Representative (GFR) will be appointed after review of the proposal and exam lists.
4. Students must present a colloquium on the topic of the dissertation research, given in the last semester of their degree work, which will allow them to obtain experience in presenting the results of their research to their peers.

Course Work

Required Core Course

ENGL 612 Introduction to Graduate Studies in English 3 cr

Pre- and Post-1800 Literature Component

A minimum of six credits, fulfilling the following requirements:

1. One seminar in the 62x series that is focused on pre-1800 literature
2. One seminar in the 62x series that is focused on post-1800 literature

Teaching Component

A minimum of 12 semester credits, fulfilling the following requirements:

1. ENGL 631 Seminar in Teaching Writing 3 cr
2. ENGL 700 Supervised Teaching Internship 3 cr
3. An additional seminar in the teaching of English, approved by the department 3 cr
4. An additional supervised teaching experience, chosen from:

ENGL 700 Supervised Teaching Internship 3 cr

ENGL 783 Practicum in Second Language Teaching 3 cr

Language Component

A minimum of 3 credits, chosen from the following list:

ENGL g501 Advanced Composition

ENGL g580 Varieties of American English

ENGL g581 Studies in Grammar

ENGL g584 Special Topics in Linguistics

ENGL g585 Linguistic Analysis

ENGL g586 Old English

ENGL g587 History of the English Language

ENGL g588 Introduction to Sociolinguistics

ENGL 680 Introduction to Linguistics

ENGL 685 Seminar in Linguistics

Electives

Students take 15 additional credits of electives (chosen in consultation with their advisor) that will contribute to knowledge and skills necessary for their dissertation topics and professional goals.

Course Work Limitations

A maximum of 6 semester credits taken outside of ENGL-prefixed courses may be counted toward degree requirements, with the approval of the Graduate Director.

Comprehensive Examination

Students are eligible to take the comprehensive exam after completing 36 credits beyond the M.A. Students must take the exam before defending the dissertation.

The comprehensive examination is both written and oral. The examination tests the student in the general areas listed below, but the student in consultation with his/her dissertation committee will design the specific subjects and reading lists on which he/she will be tested. The exam lists must be approved by all members of the student's dissertation committee and then submitted, along with the dissertation proposal, to the Graduate Director for review, according to the guidelines in the English Graduate Handbook.

The exam areas are:

a. the student's dissertation area

b. a broader field or literary period

c. an area in the teaching of English

The examining committee will consist of the three-member dissertation committee. In order to ensure that the examining committee has sufficient expertise to test the student in all three exam areas, the dissertation committee chair may propose to substitute a member of the dissertation committee with another member of the graduate faculty, so long as two members of the examining committee are English graduate faculty. The substitution must be approved by the Graduate Director.

The comprehensive examination may be repeated only once, and must be retaken within 12 months.

Foreign Language Requirement

Students must demonstrate proficiency in one foreign language, either modern or ancient, before the program of study is complete. The purpose of this requirement is for students to have a current knowledge of a language other than English and of its relation to the culture from which it originates.

Students may satisfy this requirement in one of the following ways:

1. By passing four semesters of one foreign language with an average grade of B, either during the course of study for the graduate degree or with an interval of no longer than two years between the completion of the last language course and the beginning of graduate study in English at Idaho State University.
2. By passing with a grade of B a two-part examination administered by the Foreign Language Department.
3. By having completed a major in a foreign language, as verified by a college transcript.
4. By having satisfied a foreign language requirement as part of having completed an M.A. in English with an interval of no longer than two years between the completion of the last language course and the beginning of graduate study in English at Idaho State University.

Students who have a first language other than English will be considered to have satisfied this requirement.

Doctor of Arts in English

Applications are no longer being accepted for this program.

The Doctor of Arts in English prepares graduates to teach in two-year and four-year colleges. Thus the program requires breadth of study in English and American literature, interdisciplinary course work, course work in pedagogy and supervised teaching internships. Students will undertake directed research in one or both required doctoral papers.

Admission Requirements

For classified admission to the D.A. program, applicants must satisfy the following criteria:

1. An M.A. in English (or appropriate related field) with an accumulative grade point average of 3.5 in English courses.
2. Scores at or above the 50th percentile on the verbal section of the GRE general test. Scores on the analytical writing section will also be considered in admission recommendations.
3. Three letters of recommendation, preferably from professors who know the student's recent academic work.
4. A brief writing sample (about 10 pages).
5. A brief statement (about 500 words) of academic and professional goals.

Priority will be given to experienced, successful teachers.

General Requirements

The Doctor of Arts in English requires a minimum of 48 semester credits beyond the M.A. degree in English. A course completed as part of a student's M.A. program may be approved to satisfy a particular requirement of the D.A. program, with the exception of the four required seminars in literature. However, the substitution of course work does not waive the minimum credit requirement for the D.A. program.

Not more than nine semester hours beyond the M.A. may be transferred from other institutions.

At least two consecutive semesters of full-time residence study are required.

Students must maintain a 3.5 grade point average to qualify for the D.A. degree. Three grades below B- during the entire program will automatically disqualify a student.

Graduate students must follow the policy on incomplete grades as it is listed in the Idaho State University Graduate Catalog.

Teaching assistantships and D.A. fellowships will not be renewed for students with incomplete grades on their transcripts.

Special Requirements

1. Students must complete two supervised teaching internships. The student must submit a detailed written prospectus for each proposed internship for approval by the Graduate Committee prior to the semester of the internship. An unacceptable D.A. internship will be interpreted the same as a course grade of C.
2. Students will write two Doctor of Arts papers, choosing from the following options:
   a. One pedagogical or interdisciplinary;
   b. One from the choice not taken above or a creative or critical literary paper.

The doctoral papers will be evaluated by at least three members of the graduate faculty, including a representative from outside the Department of English. An unacceptable D.A. paper will be interpreted the same as a course grade of C.

3. A colloquium presentation on a topic of their current research, given in the penultimate or ultimate semester of full-time study, allows students to obtain experience

in presenting the results of their research to their peers.

Course Work

Pedagogy Component

A minimum of 12 semester credits, including the following requirements:

ENGL 631	Seminar in Teaching Writing	3 cr
ENGL 700	Supervised Teaching Internship	6 cr
An additional pedagogy course approved by the department		3 cr

Interdisciplinary Component

A minimum of 12 semester credits.

Students will design an interdisciplinary component appropriate for their interests and professional needs. The Graduate Committee must approve a written prospectus for this component before the student begins the course work. In this component students are expected to explore relationships between English and another discipline (e.g., art, drama, rhetoric, psychology, history, philosophy).

Language and Literature Component

A minimum of 24 credits, including the following requirements:

ENGL 612	Introduction to Graduate Studies in English	3 cr
Course work in language studies		6 cr

Course work in language studies must include two courses chosen from the following list:

ENGL g501	Advanced Composition
ENGL g581	Studies in Grammar
ENGL g585	Linguistic Analysis
ENGL g586	Old English
ENGL g587	History of the English Language
ENGL 685	Seminar in Linguistics
SPCH g536	Rhetorical Criticism
OR	
SPCH g537	Rhetorical Theory

Seminars in literature 15 cr

One of these must be in literature before 1800 and one must be in literature after 1800.

Comprehensive Examination

The comprehensive examination, taken after the student has completed at least 32 semester credits beyond the M.A. degree, but before the student has defended either of the two D.A. papers, includes the following sections:

a. Pedagogy;

b. Genre;

c. Literature before 1800 or after 1800.

The comprehensive examination may be repeated one time, within 12 months.

Foreign Language Requirement

Students must demonstrate proficiency in one foreign language, either modern or ancient, before the program of study is complete. The purpose of this requirement is for students to have a current knowledge of a language other than English and of its relation to the culture from which it originates. Students may satisfy this requirement in one of the following ways:

1. By passing four semesters of one foreign language with an average grade of B, either during the course of study for the graduate degree or with an interval of no longer than two years between the completion of the last language course and the beginning of graduate study in English at Idaho State University.
2. By passing a two-part examination administered by the Foreign Language Department with a grade of B.
3. By having completed a major in a foreign language, as verified by a college transcript.
4. By having satisfied a foreign language requirement as part of having completed an M.A. in English with an interval of no longer than two years between the completion of the last language course and the beginning of graduate study in English at Idaho State University.

Master of Arts in English

The Master of Arts in English prepares graduates for careers and for doctoral study in English. The program emphasizes study in English and American literature and requires course work in the English language. A well-developed mentoring program provides supervised teaching experience in composition for students holding assistantships.

Admission Requirements

For classified admission to the M.A. program, the student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, applicants must satisfy the following criteria:

1. An accumulative grade point average of 3.0 over the last two years of undergraduate course work for the B.A.
2. Score at or above the 50th percentile on the verbal section of the GRE general test. Scores on the analytical writing section will also be considered in admission recommendations.
3. Three letters of recommendation, preferably from professors who know the student's recent academic work.
4. A brief statement (about 500 words) of academic and professional goals.
5. A brief writing sample (about 5 pages).

Students admitted Classified with Performance Requirements without GRE scores must take the general test the first time it is offered following their admission. Continuation in the program is subject to a student's meeting this requirement. Students admitted without at least 21 credits of undergraduate courses in English and American literature and language, excluding freshman composition, will be required to make up deficiencies in their undergraduate work. The Graduate Committee will specify the courses that the student must take to do so. For full consideration, materials should reach the department by March 1. Those applying for mid-year entry must submit materials by October 1, with the understanding that the department cannot assure aid. The Graduate Committee in the consultation with the department chair evaluates these materials to determine admission to the program.

General Requirements

The Master of Arts in English program provides both thesis and non-thesis options. Each option requires a minimum of 30 semester credits in courses approved by the Department of English, and students in each option must pass the General Literature Examination. Teaching assistants must take a minimum of 33 semester credits, including English 731. Students must take at least 18 of these credits in 600-level courses.

In place of the 6 credits granted for the thesis, students selecting the non-thesis option must take 6 credits of graduate course work. Students selecting the non-thesis option must also pass a Set Text Examination to qualify for the M.A. degree. Students selecting the thesis option must pass the General Literature Examination before defending the thesis.

Students selecting either option must demonstrate proficiency in one foreign language (see options for satisfying requirement under Doctor of Arts in English).

All students must maintain a satisfactory record of scholarship. Three grades below

B- during the entire program will automatically disqualify a student from continuing in the program.

Graduate students must follow the policy on incomplete grades as it is listed in the Idaho State University Graduate Catalog.

Teaching assistantships and D.A. fellowships will not be renewed for students with incomplete grades on their transcripts.

All students must take the following 6 required credits:

ENGL 612	Introduction to Graduate Studies in English	3 cr
One course in English language studies, chosen from the following group:		3 cr
ENGL g501	Advanced Composition	
ENGL g581	Studies in Grammar	
ENGL g585	Linguistic Analysis	
ENGL g586	Old English	
ENGL g587	History of the English Language	
ENGL 685	Seminar in Linguistics	

Students appointed to teaching assistantships must also take the following 6 required credits:

ENGL 631	Seminar in Teaching Writing	3 cr
ENGL 731	Practicum in Teaching Writing	3 cr

TESOL Certificate

Recommendations regarding admission will be made by the co-directors of the TESOL program in conjunction with the Graduate Director.

Admission Requirements

For admission into the TESOL Certificate program, applicants must satisfy the following criteria:

1. A bachelor's degree from an accredited institution.
2. An accumulative grade point average of 3.0 over the last two years of undergraduate course work for the B.A.
3. In addition to the Graduate School requirements, score at or above the 35th percentile on the verbal section of the GRE general test.
4. Three letters of recommendation, preferably from professors, or colleagues who know the applicant's recent academic or professional work.
5. Applicants whose first language is not English need to meet the following TOEFL requirements for Classified admission: (1) Internet-based test (iBT): a total score of 80 with a score of at least 20 on each Section (graduate assistants who teach courses must score 23 or above on the Speaking Section) on the iBT; or (2) Computer-based test: a total score of 213 with a score of at least 21 on Section 1 (Listening Comprehension) on the computer test; or (3) Paper-based test: a total score of 550 with a score of at least 55 on Section l (Listening Comprehension) on the paper test, or a score of 84 on the MTELP, or a score of 6 on the IELTS.

It is strongly recommended that applicants have some knowledge of a second language.

General Requirements

The certificate program is 18 credits and is granted alone or in addition to a graduate degree.

All students must take the following 12 credits:

ENGL 680	Introduction to Linguistics	3 cr
ENGL 681	Theory of Second Language Acquisition	3 cr
ENGL 682	TESOL Methodology	3 cr
ENGL 783	Practicum in Second Language Teaching	3 cr

In addition to the required courses, students must take two 3-credit electives chosen from the graduate-level linguistics offerings in either the Department of English and Philosophy or the Department of Anthropology.

ENGL g501 Advanced Composition 3 credits. An advanced course in which students develop an independent style in writing such types of essays as the personal, biographical, argumentative, and critical. May contain prose analysis. PREREQ: ENGL 301, ENGL 307, OR ENGL 308.

ENGL g506 Advanced Creative Writing Workshop 3 credits. Production and discussion of student writing. Study in a specific genre, with emphasis on longer works. May be repeated once for undergraduate credit. PREREQ: ENGL 306 OR PERMISSION OF INSTRUCTOR.

ENGL g531 Teaching and Writing Projects: Special Topics 3 credits. Aids teachers of all grade levels and all academic subjects in developing skills in teaching writing. Combines composition theory and practical classroom exercises with ongoing writing and critiques.

ENGL g540 Philosophy and Literature 3 credits. Reflections on the relation between poetic and speculative discourse. Topics include forms of consciousness, temporality and narrative, metaphysics of genre. Cross-listed as PHIL g540.

ENGL g555 Studies in a National Literature 3 credits. Studies in important literatures and cultures not otherwise covered in the curriculum. Will include literatures in translation and literature written in English outside of America and the British Isles. Cross-listed as LANG g515.

ENGL g556 Comparative Literature 3 credits. The analysis of ideas, problems, and techniques common to important writers of various national literatures.

ENGL g561 Classical Literature 3 credits. Study of the major literature of the classical Greek and Roman periods, especially in relationship to its cultural backgrounds.

ENGL g562 Medieval Literature 3 credits. Study of the major literature of the Middle Ages and its background, with emphasis upon the development of English literature.

ENGL g563 Renaissance Literature 3 credits. Study of the major literature of the Renaissance and its background, with emphasis upon the development of English literature.

ENGL g564 Seventeenth-Century Literature 3 credits. Study of the major literature of the seventeenth century and its background, with emphasis on English or American or other literature of the period.

ENGL g565 Eighteenth-Century Literature 3 credits. Study of the major literature of the eighteenth century and its background, with emphasis on English or American or other literature of the period.

ENGL g566 Early Nineteenth-Century Literature 3 credits. Study of the major literature of the early nineteenth century and its background, with emphasis on English or American or other literature of the period.

ENGL g567 Late Nineteenth-Century Literature 3 credits. Study of the major literature of the late nineteenth century and its background, with emphasis on English or American or other literature of the period.

ENGL g568 Early Twentieth-Century Literature 3 credits. Study of the major literature of the early twentieth century and its background, with emphasis on English or American or other literature of the period.

ENGL g569 Contemporary Literature 3 credits. Study of recent major literature and its background, with emphasis on English or American or other literature of the period.

ENGL g570 Post-Colonial Literature 3 credits. Study of post-colonial literary texts, with attention to the role of literature in history, political resistance, and social movements of one or more colonized cultures.

ENGL g572 Proseminar in a Major Literary Figure 3 credits. Intensive study in a single major author other than Chaucer, Milton, and Shakespeare, demanding some independent study and small group participation.

ENGL g573 Chaucer 3 credits. Intensive study of selected works of Chaucer.

ENGL g574 Milton 3 credits. Intensive study of selected works of Milton.

ENGL g576 Shakespeare 3 credits. Intensive study of selected works of Shakespeare.

ENGL g577 Shakespeare in Performance 2 credits. Intensive study of selected works by Shakespeare, with emphasis placed upon performance issues. Includes field trip to attend live dramatic productions of Shakespearian plays.

ENGL g581 Studies in Grammar 3 credits. Focus on the study of transformational-generative grammar and its application to sentence level problems. PREREQ: ENGL 280.

ENGL g584 Special Topics in Linguistics 3 credits. Rotating topics in different areas of linguistics. Consult current schedule of classes for exact course being taught. Cross-listed as ANTH 484 and LANG 484. PREREQ: ANTH/LANG/ENGL 107.

ENGL g585 Linguistic Analysis 3 credits. Advanced topics course in the techniques of language analysis. Examples are phonology and morphology, semantics, or rhetorical grammar. May be repeated for up to 6 credits. PREREQ: ENGL 281.

ENGL g586 Old English 3 credits. Intensive study of the Old English language, with attention to its intrinsic structure and its relation to Middle and Modern English.

ENGL g587 History of the English Language 3 credits. Linguistic and historical study of the major changes and developments in the English Language.

ENGL g588 Introduction to Sociolinguistics 3 credits. Study of the patterned covariation of language and society, social dialects and social styles in language; problems of bilingualism, multilingualism, creoles and language uses. Cross-listed as ANTH g550. PREREQ: ANTH 107, ENGL 280 OR 281, OR PERMISSION OF INSTRUCTOR.

ENGL g589 American Indian Literature 3 credits. Considers literary works by and about North American native people, especially in relationship to history, genre, and culture, including oral traditions.

ENGL g590 Topics in Folklore 3 credits. Focused study of an issue in folkloristics or a particular genre of folklore, including history of the scholarship concerning that issue or genre. Rotating topics. May be repeated up to 9 credits with different topics. Cross-listed as ANTH g590.

ENGL g592 Folklore and Literature 3 credits. Study of cross-influences between oral and written literatures. Emphasis may be on a written genre that imitates and draws upon oral genres, a movement or period in which oral tradition strongly influences written forms, or a particular writer who incorporates motifs and storytelling patterns from folklore. Rotating topics. May be repeated up to 9 credits.

ENGL 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U

ENGL 610 Careers in English 1 credit. Preparation for English job searches and teaching careers. Graded S/U. Does not count toward degree requirements.

ENGL 611 Literary Theory and Criticism 3 credits. Focused study of selected literary theories/critical approaches and their applications. Repeatable with different topics.

ENGL 612 Introduction to Graduate Studies in English 3 credits. Introduces students to major literary theories and approaches and trains them in scholarly research methods. Requires development of a substantial research proposal.

ENGL 613 Literary Bibliography/Manuscripts/ Editing 3 credits. Training in bibliographical, manuscript, and/or editing methodologies relevant to English. Repeatable with different topics.

ENGL 621 Seminar in a Major Literary Genre 3 credits. Focused study of the theory and conventions of a major form (such as lyric poetry or novel) or a broader genre (such as realism, pastoral, or the fantastic). Repeatable with different topics.

ENGL 623 Seminar in Literary Themes 3 credits. Focused study of literature cohering around thematic content (such as religion, exploration, or diaspora). Repeatable with different topics.

ENGL 625 Seminar in a Literary Period 3 credits. Focused study of a literary period and issues in periodization. Repeatable with different topics.

ENGL 627 Seminar in Major Literary Figures 3 credits. Focused study of the writings of one or two major writers. Critical and biographical topics and historical significance may be considered. Repeatable with different topics.

ENGL 631 Seminar in Teaching Writing 3 credits. Systematic application of contemporary composition theory to the teaching of writing; includes readings in and discussion of theories, research, issues, and practices relevant to effective teaching and learning in composition classrooms.

ENGL 631L Teaching Composition Lab 1 credit. Lab for English 631. Experiential training for new M.A. T.As. Requires attending graduate faculty mentor's English 101, regular meetings with mentor, teaching five times, and supervised grading. Graded S.U with written report by mentor. Required of first-semester M.A. TAs. PRERQ OR CORREQ ENGL 631. Does not count toward degree requirements.

ENGL 632 Seminar in Teaching Literature 3 credits. Theoretical and practical approaches to teaching literature and literary interpretation at the undergraduate level, with attention to issues in course design and implementation, such as designing syllabi, leading discussion, and grading papers.

ENGL 633 Seminar in Teaching Business and Professional Writing 3 credits. Preparation to teach undergraduate business and technical writing courses, including the nature and history of business and technical writing, as well as attention to practical issues in teaching, such as pedagogical strategies, textbook choice, and research design.

ENGL 635 Special Topics in the Teaching of English 3 credits. Focused study of topics in English pedagogy that are not regularly covered in ENGL 631, ENGL 632, ENGL 633, ENGL 681, or ENGL 682. Repeatable with different topics.

ENGL 640 Interdisciplinary Seminar 3 credits. Focused study of a literary or literary-related problem or subject using the theories and methods of literature and other closely-related disciplines such as folklore, communications, rhetorical studies, history, linguistics, or anthropology. Repeatable with different topics.

ENGL 642 Seminar in Oral/Popular Culture 3 credits. Focused study of a body of oral and/or popular cultural expression in related historical and cultural contexts with emphasis on literary connections. Repeatable with different topics.

ENGL 650 Thesis 1-6 credits. Research or creative project. M.A. program only. Optional. Graded S/U.

ENGL 662 Seminar in Creative Writing 3 credits. Advanced study of creative writing. Course involves intensive readings in one or more selected genres (poetry, prose, drama), analyzed from the perspective of criticism and craft, and the development of course-related writing projects. PREREQUISITE: ENGL g506 or equivalent. Repeatable with different topics.

ENGL 680 Introduction to Linguistics 3 credits. Introduction to fundamental concepts and methodologies of modern linguistics, including phonetics, phonology, morphology, syntax, semantics, sociolinguistics, programmatics, and language acquisition. May include opportunities to explore the practical application of course topics.

ENGL 681 Theory of Second Language Acquisition 3 credits. The course will: 1) address theories describing the processes underlying second language acquisition, as well as relevant research, 2) consider what conditions increase the likelihood of successful second language acquisition, and 3) review the implications of 1 and 2 for second language learning and teaching.

ENGL 682 TESL Methodology 3 credits. Building on the theoretical framework of ENGL 681, students develop effective ESL materials and curricula, taking into account SLA research as well as the characteristics, needs, and motivation of learners. The class will involve a large practical component. PREREQ OR COREQ: ENGL 681.

ENGL 685 Seminar in Linguistics 3 credits. Advanced studies in selected topics in linguistics. Course includes application of linguistic theories to specific forms of communication within the discipline of English. Repeatable with different topics.

ENGL 690 Graduate Reading 3 credits. Supplementary reading course, arranged on an individual basis, to cover course content not otherwise avail-

able in the graduate program. Requires conferences with a faculty supervisor, written assignments or examination, and approval of a prospectus by the Graduate Committee. Repeatable with different topics. Does not count toward degree requirements.

ENGL 694 Dissertation and Comprehensive Exam Preparation 3-6 credits. Student prepares a dissertation proposal and comprehensive exam lists and studies for qualifying exams in consultation with his or her dissertation director. Requires dissertation director's approval of projected dissertation research area, exam areas, and committee members. Limited to Ph.D. students only. Does not count toward degree requirements. Repeatable up to 6 credits. Graded S/U.

ENGL 700 Supervised Teaching Internship 3 credits. Practical experience in classroom or laboratory teaching. Enrollment limited to Ph.D. students. Repeatable to up to 9 credits. Graded S/U.

ENGL 731 Practicum in Teaching Composition 3 credits. Teaching composition under supervision. Required of, and limited to, second semester M.A. teaching assistants. PREREQ: ENGL 631. Graded S/U.

ENGL 750 Doctoral Thesis 1-6 credits. Doctoral thesis, consisting of two papers, each the equivalent of a well-developed article. D.A. program only. May be repeated for a maximum of 12 credits. Graded S./U.

ENGL 783 Practicum in Second Language Teaching 3 credits. Supervised practicum in ELS teaching or tutoring. Required for TESOL certificate. PREREQ: ENGL 681, 682 AND 12-15 CREDITS TOWARD TESOL CERTIFICATE.

ENGL 850 Doctoral Dissertation 1-9 credits. Research project with a section exploring implications for the teaching of English. Ph.D. program only. Repeatable. Graded S/U.

Philosophy Graduate Courses

PHIL g500 Philosophy of Art 3 credits. Study of philosophic problems encountered in perceiving, interpreting, and evaluating works of art. Topics include the nature of a work of art, aesthetic response, expression, symbol; the nature and role of representation; the nature of interpretive and evaluative claims.

PHIL g510 Philosophy of Language 3 credits. Study of theories of language, with emphasis on contemporary thinkers such as Frege, Heidegger, Russell, Wittgenstein, Piaget, and Chomsky. Topics include the nature and origin of meaning, the temporal dimension of discourse, the significance of syntax, animal languages, computer languages.

PHIL g520 Philosophy of Mind 3 credits. Inquiry into the mind-body problem and representative solutions, such as dualism, philosophical behaviorism, central-state materialism. Related topics include the self, personal identity, immortality, claims of parapsychology, mystical consciousness.

PHIL g525 Existentialism 3 credits. A survey of major works of Kierkegaard, Nietzsche, Heidegger, Sartre, and Camus. Topics may include the origins of values, the death of God, the varieties of despair, the inevitability of love's failure and the absurdity of life.

PHIL g530 Philosophy of Science 3 credits. A critical analysis of the philosophical presuppositions of the empirical sciences with attention given to the wider expressions of the presuppositions in contemporary life.

PHIL g535 Metaphysics 3 credits. A study of some of the main questions of metaphysics including such topics as being, substance, universals, space and time, appearance and reality, identity, freewill and determinism, causality and the nature and possibility of metaphysics itself.

PHIL g540 Philosophy and Literature 3 credits. Reflections on the relation between poetic and speculative discourse. Topics include forms of consciousness, temporality and narrative, metaphysics of genre. Cross-listed as ENGL g540.

PHIL g550 Ethical Theory 3 credits. Study of the nature of value claims, stressing ethical value claims; examination of the scope of reason in ethical decision-making. Applications to normative ethical theories. Related topics include human rights, justice, ethical and legal systems.

PHIL g560 Theory of Knowledge 3 credits. A survey of reflections on the question, "What, if anything, can we know?" Topics include knowing, believing, meaning, truth, and certainty.

PHIL g570 Symbolic Logic and Foundations of Mathematics 3 credits. A comprehensive study of formal methods of determining validity and of systems of symbolic logic, with attention to the philosophy of logic and the relationship between logic and mathematics.

PHIL g590 Philosophy Seminar 1-3 credits. Advanced reading and discussion on selected topics in philosophy. May be taken for credit more than once with permission of the department.

PHIL 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U .

PHIL 600 Ethics in Health Care 3 credits. Application of ethical principles and theories to current issues in health care. Topics include allocation of scarce resources, informed consent, duty to treat, research on human subjects, organ transplants, death and dying.

Department of Languages and Literatures

Chair and Professor Fogelquist
Professors: Dolsen, Park, Sieber
Associate Professors: Hunt
Assistant Professors: Manopoulos, Tarp
Instructor and Lab Director: McCurry
Adjunct Faculty: Alvarez, Anderson, Ballard, Dillon, Fukuoka, Heath, Johnsen, Mussler, Nagata, Omar, Robredo, Stewart, Tatarova, Yonk, Zaltzman

Goals

To increase knowledge and understanding of languages and cultures other than English through the development of foreign language skills in speaking, writing, reading, listening, and cultural competence.

Foreign Languages Graduate Courses

(No graduate degrees are offered)

LANG g515 Studies in Major National Literatures 3 credits each. Studies in important literatures and cultures not covered by regular course offerings. Will include literatures in translation and literature written in English outside of America and the British Isles. Also listed as ENGL g555.

LANG g537 The Teaching of Foreign Languages 2-3 credits. Study of the various methods used in teaching foreign languages, the extent and scope of language courses; the selection of suitable textbooks; audio-visual techniques and their contribution to language instruction. PREREQ: PERMISSION OF INSTRUCTOR.

LANG g555 Introduction to Phonetics 3 credits. Introduction to descriptive linguistics focusing on phonetics and phonetic phenomena of English and the other languages of the world. Extensive practice in perception and production of such phenomena. Cross-listed as ANTH g555. PREREQ: LANG/ANTH 107.

LANG g556 Introduction to Phonology and Morphology 3 credits. Phonological theory and analysis; current theories in morphology. Phonological rules, representations, underlying forms, derivation, justification of phonological analyses; morphological structure, derivational and inflectional morphology; relation of morphology to phonology. Cross-listed as ANTH g556. PREREQ: LANG/ANTH 107.

LANG g577 Phonology 3 credits. Study of articulatory phonetics and practice in phonetic transcription of a broad survey of languages; phonological

analysis and theory. PREREQ: PERMISSION OF INSTRUCTOR.

LANG g588 Foreign Language Seminar 3 credits. Advanced studies in selected topics from language, culture, literatures or methods of research. May be conducted in English. May be repeated up to 6 credits with different content. PREREQ: PERMISSION OF INSTRUCTOR.

LANG 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U .

Comparative Literature Courses

CMLT g535 Topics in World Film Studies 3 credits. Rotating topics in world film studies. Consult schedule of classes for topic being taught. May be repeated with different content. PREREQ: PERMISSION OF INSTRUCTOR.

French Graduate Courses

FREN g500 French Advanced Grammar 3 credits. Survey of selected grammar and composition topics on the advanced level. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g510 Seventeenth Century French Literature 3 credits. Study of representative works of the 17th century, with particular emphasis on the works of Corneille, Moliere, and Racine. Conducted in French. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g520 Eighteenth Century French Literature 3 credits. French thought as reflected in the literature from 1715 to the Revolution. Special emphasis on the works of Montesquieu, Voltaire, Diderot, and Rousseau. Conducted in French. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g530 French Romanticism 3 credits. Study of the Romantic prose, poetry, and drama of the period: Lamartine, Musset, Vigny, Hugo, and others. Conducted in French. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g540 French Realism and Naturalism 3 credits. Study of the main currents in French literature, as reflected in the works of Balzac, Flaubert, Zola, Maupassant, and other writers of the latter 19th century. Conducted in French. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g550 Twentieth Century French Literature 3 credits. Study of the main currents of contemporary French literature including symbolism, surrealism, existentialism, objectivism, etc. Conducted in French. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g555 Dissidence in French Literature 3 credits. The study of French writings of a variety of genres that criticize political , social and religious practices spotlighting questions of moral values and human rights. Conducted in French. PREREQ: PERMISSION OF INSTRUCTOR

FREN g560 Post-Colonial Francophone Literature 3 credits. Concentrates on the question of identity in a post-colonial context. Through the study of representative works, including literature, literary criticism, music and film, this course focuses on the impact of the Francophone World on contemporary French culture. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g570 Readings in French 2 credits. Reading, discussion, and preparation of reports on selected topics in French literature. May be repeated once with different content. Conducted in French. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g580 Independent Studies in French 3 credits. A directed project, under the guidance of an instructor, emphasizing individual study or research according to the needs of the student. PREREQ: PERMISSION OF INSTRUCTOR.

FREN g590 French Senior Seminar 3 credits. Advanced studies in selected topics from language, culture, literatures or methods of research. May be repeated up to 6 credits with different content. Conducted in French. PREREQ: PERMISSION OF INSTRUCTOR.

German Graduate Courses

GERM g505 Introduction to German Poetry and Drama 3 credits. Study of representative works of German Poetry and Drama, with emphasis on works from the Enlightenment to the present. Conducted in German. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g515 Introduction to the German Novel 3 credits. Comprehensive overview of the German novel from the Enlightenment to the present. Conducted in German. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g520 The Age of Goethe 3 credits. A survey of the major works and movements of the preclassical and classical periods in German literature. Conducted in German. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g525 The Holocaust in German Literature, Film and Art 3 credits. Examination of the representation of the Holocaust in literature, film, and art. Conducted in German. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g535 German Culture through Film 3 credits. Examination of German politics, culture and identity through German film**.** Conducted in German. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g545 Social Problems in German Literature 3 credits. Study of the representation of social problems in German literature from the Enlightenment to the present. Conducted in German. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g555 GDR and Post-GDR Literature 3 credits. Examination of East German culture and politics through literature written from 1960-1989 and in the nostalgic texts of the post-unification period. Conducted in German. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g560 German Translation and interpretation 3 credits. Theory and principles of translation and /or interpretation and their application in the fields of literature, business, law, and medicine. Topics may vary, may be repeated once with different content. PREREQ: GERM 301 AND 302, 341 AND 342, OR BY

PERMISSION OF INSTRUCTOR.

GERM g570 Readings in German 1-2 credits. Reading, discussion, and preparation of reports on selected topics in German literature. May be repeated once with different content. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g580 Independent Studies in German 3 credits. A directed project, under the guidance of an instructor, emphasizing individual study or research according to the needs of the student. PREREQ: PERMISSION OF INSTRUCTOR.

GERM g590 German Senior Seminar 3 credits. Advanced studies in selected topics from language, culture, literatures or methods of research. May be repeated up to 6 credits with different content. Conducted in German. PREREQ: PERMISSION OF INSTRUCTOR.

Japanese Graduate Courses

JAPN g570 Readings in Japanese 2 credits. Reading, discussion, and preparation of reports on selected topics in Japanese literature. May be repeated once with different content. Conducted in English or Japanese, depending on each student's skills. PREREQ: PERMISSION OF INSTRUCTOR.

Latin Graduate Courses

LATN g570 Readings in Latin 2 credits. Reading, discussion, and preparation of reports on selected topics in Latin literature. May be repeated once with different content. PREREQ: PERMISSION OF INSTRUCTOR.

Russian Graduate Courses

RUSS g570 Readings in Russian 2 credits. Reading, discussion, and preparation of reports on selected topics in Russian literature. May be repeated once with different content. PREREQ: PERMISSION OF INSTRUCTOR.

Spanish Graduate Courses

SPAN g500 Spanish Advanced Grammar 3 credits. Survey of selected grammar and composition topics on the advanced level. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g512 Medieval Spanish Literature 3 credits. Study of representative works of Medieval Spanish literature with an emphasis on the major trends that shaped Spanish thought and letters. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g514 Golden Age Spanish Literature 3 credits. Study of representative works of Renaissance and Baroque Spanish Literature with an emphasis on the major trends that

shaped Spanish thought and letters. PREREQ: SPAN 301 OR SPAN 302 OR PERMISSION OF INSTRUCTOR.

SPAN g515 Cervantes and His Age 3 credits. Study of Cervantes' artistic creation and relation to the 16th and 17th centuries. The course includes Don Quixote and the Novelas Ejamplares. May be offered in English. PREREQ: PERMISSION OF INSTRUCTOR.

SPAN g522 Colonial Spanish American Literature 3 credits. Study of major writers and their historical contexts from the conquest to the eve of independence, including indigenous and colonial prose, poetry and drama. Conducted in Spanish. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g525 Nineteenth Century Spanish American Literature 3 credits. Study of major writers and their historical contexts in the nineteenth century, including prose, poetry and drama. Conducted in Spanish. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g530 Spanish Enlightenment and Romanticism 3 credits. Consideration of literary currents from the beginning of the Bourbon Monarchy in Spain (1700) until 1868. Conducted in Spanish. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g540 Spanish Realism through Generation of '98 3 credits. Examination of major literary works beginning with the realist and naturalist authors and concluding with the Generation of 1898. Conducted in Spanish. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g550 Twentieth Century Spanish Literature 3 credits. Examination of modern Peninsular letters as evidenced in poetry, the short story, the novel, and the essay. Conducted in Spanish. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g560 Spanish Translation and Interpretation 3 credits. Theory and principles of translation and /or interpretation and their application in the fields of literature, business, law, and medicine. Topics may vary. May be repeated once with a different content. PREREQ: SPAN 301 AND 302, 341 AND 342, OR BY PERMISSION OF INSTRUCTOR.

SPAN g562 Early Twentieth Century Spanish American Literature 3 credits. Study of major writers and their historical contexts from "modernism" to the World War II, including prose, poetry and drama. Conducted in Spanish. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g565 Contemporary Spanish American Literature 3 credits. Study of major writers and their historical contexts from World War II until the present, including prose, poetry and drama. Conducted in Spanish. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g568 US Latino Literature 3 credits. Examination of major works and authors in historical perspective, with emphasis on literary and cultural contexts. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g570 Readings in Spanish 2 credits. Reading, discussion, and preparation of reports on selected topics in Spanish literature. May be repeated once with different content. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g580 Independent Studies in Spanish 3 credits. A directed project, under the guidance of an instructor, emphasizing individual study or research according to the needs of the study. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

SPAN g590 Spanish Senior Seminar 3 credits. Advanced studies in selected topics from language, culture, literatures or methods of research. May be repeated up to 6 credits with different content. Conducted in Spanish. PREREQ: SPAN 301 OR 302 OR PERMISSION OF INSTRUCTOR.

Department of Geosciences

Interim Chair and Professor: Rodgers
Professors: Hughes, Link, McCurry, Thackray
Associate Professor: Ames
Assistant Professors: Crosby, Tapanila
Research Associate Professor: Glenn,
IGS Supervisory Research Geologist: Welhan
GIS TReC Director Weber
Affiliate Faculty: Akersten, Cecil, Kuntz, Mahar, McGinnis, Panda, Smith, Stephens, Winterfeld

Goals - All Programs

1. Graduates will think critically and comprehend written and verbal communications about geoscience topics.
2. Graduates will have specific skills for careers in geoscience and related industries, licensure, or to continue in graduate study.
3. Graduates will attain employment in geology or related fields or gain admission to graduate programs.

Graduate Degree Programs

Goals

1. Graduates will be prepared to communicate effectively at the professional level.
2. Graduates will be prepared to define, implement, and complete geologic investigations.
3. Graduates will have professional skills for employment or further graduate study.

Objectives

1. Provide graduate students with coursework, laboratory experiences, field exercises and research opportunities in order to achieve all goals set forth above.
2. Provide graduate students with a professional interactive environment that improves their opportunities to enter successful careers in geoscience.
3. Increase graduate students' probability of obtaining employment in academia or industry, or of being accepted for doctoral studies.

Admission Requirements

A complete graduate application for classified status in the Idaho State University Geosciences Department consists of:

1. The student must apply to and meet all criteria for admission to the Graduate School. In addition to the general requirements of the Graduate School. Applicants must hold the degree of Bachelor of Science or Bachelor of Arts in geology or the equivalent as determined by the department. An Idaho State University Graduate School application form andofficial copies of transcripts from all previous coursework are required.
2. GRE aptitude scores - 50th percentile or above in two of the three categories, or strengths clearly demonstrated in other components of the application
3. A letter of intent and statement of goals in Graduate School
4. Three letters of recommendation
5. Notification to the department: geology@isu.edu

Doctor of Philosophy in Engineering and Applied Science

A Ph.D. program in Engineering and Applied Science, administered through the College of Engineering, is available to Geoscience

students who wish to emphasize Subsurface Science. The complete program description is provided under the College of Engineering section of the *Graduate Catalog*.

Master of Science in Geology

The M.S. degree is offered to those students who have degrees in geology who have demonstrated the potential for research and a professional career. Classified (degree-seeking, fully accepted) admission to the program is recommended by the graduate faculty of the Geosciences Department.

The student's course of study will be determined by consultation and possibly an entrance examination. Students will normally be required to complete deficiencies at the undergraduate level any courses required for the B.S. in geology at Idaho State University that they have not already taken. Continued enrollment in the program is contingent upon maintaining a 3.0 grade point average and making satisfactory progress toward the degree.

Unclassified status is used for students with large numbers of deficiencies or with low undergraduate GPAs. Unclassified students may apply for classified status when their performance warrants.

General Requirements

A student who wants to earn an M.S. in Geology must complete at least 30 credits of course work. These credits must be earned under the following conditions:

1. The student must earn at least 17 credits (including six Thesis credits) at the 600 level in Geology.
2. The remaining 13 credits may be earned at the 500 or 600 level, of which eight credits may come from a related discipline.

In addition to the 30 required credits, each student must take two approved courses from outside the Geosciences Department (e.g., technical writing, anthropology, etc.) or may opt to take the foreign language challenge exam at the elementary level.

The department requires that the following core courses be completed. These classes are normally taken during the first and second semesters of graduate study:

GEOL 591	Seminar	1 cr
GEOL 601	Advanced Physical Geology	2 cr
GEOL 603	Geologic Writing Seminar	1 cr

Graduate students may not sign up for GEOL 650 (Thesis) until their thesis prospectus has been submitted and approved by the Thesis Committee. Additionally, all graduate students are required to present at least one geology colloquium dealing with their thesis topic prior to taking their oral examination.

Master of Science in Geology with Emphasis in Environmental Geoscience

A Geology M.S. degree may be awarded with the annotation "Emphasis in Environmental Geoscience" added, if the student completes the requirements for an M.S. Geology degree plus at least 9 credits in approved graduate-level courses in the general area of Environmental Geoscience. Students who wish their M.S. degree to contain the added designation "With Emphasis in Environmental Geoscience", need to file an amended program of study form with the Graduate School. The curriculum may be developed in, but is not limited to, the following areas: surface and groundwater hydrology; environmental geochemistry; surficial geological processes; geomorphology; volcanic, earthquake and other geologic hazards; environmental geophysics; assessment and remediation of hazardous waste sites; Neogene and Quaternary geology. Courses in related sciences and engineering disciplines may also be included.

The curriculum must be approved by the student's graduate committee, and may include components taken at Boise State University and/or the University of Idaho. Inter-university graduate committees are encouraged.

Master of Science in Geographic Information Science

The M.S. in GISc degree is offered to students who wish to become competent as researchers and as Geographic Information Systems (GIS) analysts and developers. The program focuses on advancing knowledge to acquire, store and manage, visualize, model, and analyze information about spatial features and phenomena, with strong emphasis on real-world geospatial applications. The M.S. in GISc is designed as an interdisciplinary study of the nature and function of spatial information systems and the application of these systems in research. Students will be involved in the technical study of the design and evaluation of methods, tools, and techniques that will involve formulating hypotheses, collecting spatial information, and developing techniques for spatial analysis.

Applicants must hold a degree of Bachelor of Science or Bachelor of Arts in any discipline that allows research focus on geotechnologies including, but not limited to: Geosciences, Anthropology, Biology, Business, and Engineering. Students can focus on either (1) the development of new GIS tools and analytical procedures, or (2) the application of established and new tools and procedures to scientific problems. Each student in this program will have a member of the current Geotechnology Faculty as his/her major advisor. Applicants will be requested to state an advisor preference at the time of application, otherwise a preliminary advisor will be assigned upon acceptance to the program.

NOTE: Due to the interdisciplinary nature of this program, applicants should initially contact a faculty member or the Graduate Program Director in the department in order to match their interests with those of potential faculty advisors.

Admission Requirements

The student must apply to and meet all criteria for admission to the Graduate School.

General Requirements

A minimum of 30 credit hours is required for completion of the M.S. in Geographic Information Science, with a minimum of 15 credit hours (including six Thesis credits) completed in 600-level courses. The student's graduate advisory committee (major advisor and co-advisor) will establish specific research goals, thesis topic, and the course electives in the program of study.

A 600-level graduate seminar and eight credits taken as core courses are required of each student. Generally these will be taken during the first year of study. Prerequisites for core courses are designed to permit students entering the M.S. program

from all disciplines. Students entering with some or all of the core courses taken at the undergraduate level may, with permission from the student's advisory committee, substitute other graduate-level courses in the program of study.
Program requirements are summarized as follows:

Graduate Seminar, 600-level (taken in appropriate department): BIOL 691, ANTH 600, GEOL 601	1 cr
Core Geotechnologies Courses	8 cr
Electives (ANTH, BIOL, GEOL, etc.)	15 cr
Thesis (ANTH 650, BIOL 650, GEOL 650, etc.)	6 cr
Total (includes 15 hours at 600-level)	30 cr

Section A - Core Courses

GEOL 504	Advanced GIS	3 cr
GEOL 507	GPS Applications in Research	3 cr
GEOL 508	Geotechnology Seminar	2 cr
GEOL 509	Remote Sensing	3 cr

Section B - Electives

ANTH 523	Anthropology of International Health	3 cr
ANTH 582	Independent Problems in Anthropology	3 cr
ANTH 593	Interdisciplinary Anthropology	3 cr
ANTH 641	Research Project	1-6 cr
ANTH 649	Independent Studies	1-4 cr
BIOL 518	Ecotopics: Ecological Applications of GIS	2 cr
BIOL 648	Graduate Problems	1-9 cr
CIS 580	Database Management Systems	3 cr
GEOL 555	Geologic Data Methods	3 cr
GEOL 527	Information Technology for GIS	3 cr
GEOL 528	Programming for GIS	3 cr
GEOL 581	GeoTechnology Internship	1-3 cr
GEOL 628	Advanced GIS Programming	3 cr
GEOL 606	Geostatistical Spatial Data Analysis and Modeling	3 cr
GEOL 607	Spatial Analysis	3 cr
GEOL 609	Advanced Image Processing	1 cr
GEOL 648	Research Problems	1-6 cr

Electives may also include extra core courses taken as electives beyond the required minimum number of core credits. Certain graduate courses not shown in the list above may be acceptable with approval of the student's advisory committee. All courses in the program of study require approval by the student's advisory committee and final approval by the Graduate School. Students are expected to complete a thesis that will be original and encompass all stages of scientific work, including project design, implementation, and communication.

Graduate students may sign up for Thesis credits only after their thesis prospectus has been submitted and approved by the advisory committee. Additionally, all graduate students are required to present at least one colloquium dealing with their thesis topic prior to taking their oral examination.

Master of Natural Science in Geology

The Master of Natural Science (MNS) degree in Geology is designed primarily for teachers and prospective teachers who wish to broaden their understanding of geologic processes, the nature of natural resources, and the effect of humans on their environment. This is a non-thesis program of study with an emphasis on subject matter that will enhance the ability of the teacher to give students an interesting, up-to-date class in earth science or geology. Those interested in the program should possess or be working toward a standard teaching certificate. Requirements include completion of a prescribed program of study of 30 credits approved by a departmental committee selected by the student in consultation with the student's major professor and approved by the Dean of the Graduate School, and satisfactory performance on final written and oral examinations. See Master of Natural Science in the General information section of this catalog for details of the M.N.S. degree.

Cooperative Idaho State University-Boise State University Master's Degree in Geology

Graduate students admitted to the Idaho State University M.S. program in Geology may, subject to the approval of their thesis committee, may transfer up to 12 credits of graduate credit from Boise State University (BSU). The thesis committee consists of three or more people: an Idaho State University Geosciences faculty member, a graduate faculty representative from Idaho State University , a Geology and Geophysics faculty member from BSU (must be member of Idaho State University graduate faculty), and perhaps an additional Geosciences graduate faculty as desired by the student.

Thesis research can be conducted under the auspices of faculty at BSU or Idaho State University, but registration must be for Idaho State University GEOL 650 (Thesis) totaling six credits. Students can register for GEOL 650 only after a thesis prospectus has been approved. Normally, students must spend at least one semester at Idaho State University. Students may apply credits of GEOL 648 (Research Problems-ISU credit), taught by BSU faculty, to their degree. These are Idaho State University credits, not BSU transfer credits.

The total credits required are the same as for a normal Idaho State University M.S. degree in Geology (at least 17 at 600 level; at most 13 at 500 level.) The requirement of two approved courses from outside the field of geology can be met at either Idaho State University or BSU. Presentation of at least one geology colloquium at Idaho State University is required.

Cooperative Idaho State University-Boise State University Master's Degree in Applied Geophysics

Graduate students admitted to the Boise State University M.S. Program in applied geophysics may, subject to the approval of their thesis committee, transfer up to 12 credits of graduate credit from Idaho State University . For details of this cooperative program, the student should consult the BSU Graduate Catalog and the BSU Department of Geology and Geophysics.

University of Idaho-Boise State University-Idaho State University Master's Degree in Hydrology

Access to the University of Idaho (of I) M.S. program in hydrology is provided to Idaho State University and BSU graduate students via the offering of University of Idaho hydrology classes at Boise State University. Students interested in the University of Idaho hydrology degree should consult the of I Graduate Studies Catalog and the of I Department of Geology.

Post-Baccalaureate GeoTechnology Certificate

(19 credits required)

GeoTechnology Certificate

Goals

1. Graduates will have the knowledge and skills necessary to apply geotechnology in their chosen careers or fields of interest.
2. Graduates will have the background to compete successfully for industrial and academic positions.

Objectives

1. Learn and perform techniques in Geographic Information Systems, Global Positioning System, Remote Sensing, and related skills.
2. Increase knowledge of how geotechnical applications are incorporated into research, education, and industry.
3. Increase knowledge of geotechnical workforce needs and the future directions of geotechnological applications.

The Graduate Certificate in GeoTechnology is offered to students who wish to become proficient in the collection, management, and analysis of spatial data. Courses in three disciplines—geographic information systems (GIS), global positioning systems (GPS), and remote sensing—are used to teach the theory and application of GeoTechnology. Students may pursue the Certificate independently or in conjunction with another Idaho State University degree.

Admission Requirements

Classified admission is necessary to complete the Certificate and is recommended by the graduate faculty of the Geosciences Department in accordance with standards set by the Graduate School. Applicants must have a bachelor's degree from an accredited school and meet the Graduate School admission requirements. All applicants must submit an application to the Graduate School. In addition, applicants who wish to apply for a Graduate Assistantship should submit to the Geosciences Department a GA request form, 3 letters of recommendation, and a statement of goals for graduate study.

General Requirements

Students will complete 14 credits of required course work and 5 credits of elective course work to obtain the Certificate. The following courses are relevant:

Core Courses (14 credits required):

GEOL 503	Principles of GIS	3 cr
GEOL 504	Advanced GIS	3 cr
GEOL 507	GPS Applications in Research	3 cr
GEOL 508	GeoTechnology Seminar	2 cr
or		
BIOL 518	Ecological Topics	1 cr
GEOL 509	Remote Sensing Applications	3 cr

Electives (5 credits required):

ANTH 582	Independent Problems in Anthropology*	3 cr
BIOL 582	Independent Problems in Biology	1-3 cr allowed
CIS 580	Data Base Management Systems	3 cr
GEOL 527	Information Technology for GIS	3 cr
GEOL 528	Programming for GIS	2 cr
GEOL 580	Special Topics in GIS	1-3 cr
GEOL 581	GeoTechnology Internship	1-3 cr
GEOL 606	Geostatistics Spatial Data Analysis and Modeling	4 cr
GEOL 607	Spatial Analysis	3 cr
GEOL 628	Advanced GIS Programming	3 cr
GEOL 648	Research Problems	1-3 cr allowed
	TOTAL:	19 cr

* Topic: Geographical Information Systems and Anthropology (or GIS and Anthropology)

For current information regarding GIS Center and courses, see the website: http://giscenter.isu.edu

Geology Graduate Courses

GEOL g502 Geomorphology 4 credits. Process-response approach to landforms and landscapes. Historical perspectives, endo- and exogenetic processes, equilibrium and relict landforms. Emphasis on interrelations among various geologic sub-disciplines. Field trips, some lab exercises. PREREQ: GEOL 313 OR PERMISSION OF INSTRUCTOR.

GEOL g502L Geomorphology Laboratory 0 credits.

GEOL g503 Principles of Geographical Information System 3 credits. Study of GIS fundamentals, introduction to GPS, databases, and metadata. Practical application of ESRI ArcView®. Build, edit, and query a GIS; basic spatial analysis. Requires competence in computer operating systems. PREREQ: CIS 101 OR INSTRUCTOR APPROVAL; COREQ: GEOL g503L.

GEOL g503L Principles of GIS Laboratory 0 credits. Computer lab assignments to apply principles from GEOL g503.

GEOL g504 Advanced Geographic Information Systems 3 credits. Study of relational databases, including spatial analysis, and remote sensing. Practical application of Arc/Info and Idrisi. Exercises include digitizing, querying, digital terrain modeling, and image processing. PREREQ: GEOL g503, GEOL g503L OR PERMISSION OF INSTRUCTOR.

GEOL g505 Volcanology 3 credits. Aspects of physical and chemical volcanology: types of volcanoes; interpretation of volcanic deposits; properties of magma; generation, rise, and storage of magma; volcanic hazards and prediction. PREREQ: ONE OF GEOL 314. GEOL g502, GEOL 421, OR GEOL g552.

GEOL g506 Environmental Geology 3 credits. Humans and the environment. Topics include: industrial exploitation of fossil fuels, energy sources, soils, water and other materials, environmental health, pollution, waste disposal, hazards, disasters, and land use. PREREQ: GEOL 100 OR GEOL 101.

GEOL g507 GPS Application in Research 3 credits. Overview of satellite positioning systems usage. Topics include GPS theory, basic mapping concepts, use of mapping grade receivers for GIS data collection, and processing of carrier phase data for high precision applications.

GEOL g508 GeoTechnology Seminar 2 cr. GIS applications in natural and social sciences; ethical and legal issues, current status and recent advances in GeoTechnology. Lectures, discussion, readings. PREREQ: GEOL g503, GEOL g503L OR PERMISSION OF INSTRUCTOR.

GEOL g509 Remote Sensing 3 credits. Fundamentals and applications of single frequency, multispectral, and hyperspectral remote sensing for physical, natural, engineering, and social sciences. Emphasis on acquiring, processing, integrating, and interpretation of imagery. Requires competence in computer operating systems.

GEOL g510 Science in American Society 2 credits. Observational basis of science; technology's historical influences on scientific developments; perceptions of science in contemporary America; tools/strategies for teaching science. Cross-listed as PHYS g510. PREREQ: JUNIOR STANDING AND PERMISSION OF INSTRUCTOR.

GEOL g511 Planetary Petrology 3 credits. Chemistry, mineralogy, tectonic association and petrogenesis of the principal igneous and metamorphic rock types on Earth and other planetary bodies. PREREQ: GEOL 314.

GEOL g512 Petrology Lab 2 credits. Microscopic identification of igneous and metamorphic minerals and rocks. PREREQ: GEOL 313 AND GEOL 211. COREQ: GEOL g511.

GEOL g515 Quaternary Global Change 3 credits. Use and interpretation of landforms, sediments, and fossil life in the reconstruction of Quaternary events, environment, and climates. PREREQ: PERMISSION OF INSTRUCTOR.

GEOL g516 Global Environmental Change 3 credits. Analysis of the causes and effects of both natural and human-induced environmental change. Integrates knowledge from other Earth Systems Science Courses, and examines and analyzes relevant problems in global environmental change using scientific methods. PREREQ: GEOL 115, GEOL 115L, GEOL 210, GEOL g506, and BIOL 209.

GEOL g517 General Soils 3 credits. Formation, morphology, and distribution of soils, including developments in soil classification. PREREQ: GEOL 100 OR GEOL 101 OR GEOL 115, OR PERMISSION OF INSTRUCTOR.

GEOL g520 Principles of Geochemistry 3 credits. Chemistry of the earth; discussion of factors controlling abundance, distribution, and migration of chemical elements within the earth. PREREQ: GEOL 211, AND CHEM 111, CHEM L111, CHEM 112, CHEM L112, OR PERMISSION OF INSTRUCTOR.

GEOL g522 Planetary Geology 3 credits. Formation of planetary bodies (planets, moons, asteroids, and comets), internal and surficial processes, tectonics, and planetary exploration. PREREQ: GEOL 100 OR GEOL 101 OR PERMISSION OF INSTRUCTOR.

GEOL g527 Information Technology for GIS 3 credits. Study of servers, networks, system administration, relational database design and management, spatial database engines, and serving maps on the internet. The course uses traditional lectures along with demonstrations, and hands-on exercises. PREREQ: GEOL g503, GEOL g503L OR PERMISSION OF INSTRUCTOR.

GEOL g528 Programming for GIS 3 credits. Course introduces students to Visual Basic programming for GIS. Students will learn the fundamentals of object oriented programming, rapid application development, basic coding, help documentation, and compiling. Students will complete a project where they develop a GIS utility of their choice. PREREQ: MATH 147 AND GEOL 100 OR 101, OR PERMISSION OF INSTRUCTOR.

GEOL g530 Principles of Hydrogeology 3 credits. Surface and groundwater occurrence, movement and recovery, water quality and pollution, well construction principles, and computer modeling. PREREQ: GEOL 100 OR GEOL 101, OR PERMISSION OF INSTRUCTOR.

GEOL g531 Geobiology and the History of Life 4 credits. Principles of biology and geology applied to the study of fossil invertebrates; consideration is given to morphology, classification, evolution, paleoecology, and the stratigraphic significance of fossils. ;PREREQ: GEOL 202 (recommended); PERMISSION OF INSTRUCTOR.

GEOL g531L Invertebrate Paleontology Laboratory 0 credits.

GEOL g535 Vertebrate Paleontology 4 credits. Phylogenetic history of the vertebrates outlined in the light of morphology, classification, evolution, paleoecology, and the significance of fossils. Field trips. Cross-listed as BIOL g535. PREREQ: GEOL g531 OR BIOL 314 OR EQUIVALENT.

GEOL g539 Principles of Taphonomy 3 credits. Effects of processes which modify organisms between death and the time the usually fossilized remains are studied. Emphasis on vertebrates. Cross-listed as ANTH g539 and BIOL g539. PREREQ: PERMISSION OF INSTRUCTOR.

GEOL g540 Ore Deposits 3 credits. Nature, mode of occurrence, and origin of ores with each type related to a given rock association and as the product of a particular environment. PREREQ: ONE OF GEOL 314, GEOL g552 (RECOMMENDED), OR GEOL 421.

GEOL g545 Environmental and Engineering Geophysics 4 credits. Geophysical applications to environmental and geological engineering problems. Includes seismic, gravity, magnetic, electrical, and electromagnetic methods. (Includes lab.) PREREQ: MATH 144 OR 147, GEOL 100 OR 101, OR PERMISSION OF INSTRUCTOR.

GEOL g550 Field Geology 6 credits. Five-week summer field camp, applying standard geologic field instruments and geologic concepts to a series of field problems. PREREQ: GEOL 421 and GEOL g552, GEOL 314 (recommended) or GEOL 420.

GEOL g551 Field Methods in Environmental Sciences 3 credits. Practical application of field methods with an Earth systems focus. Analysis of topographic and vegetational data, hydrologic methods, riverine processes and habitat, and soil characteristics, emphasizing use of GIS, GPS, remote sensing and other geotechnologies. Two-week summer course at Lost River Field Station. PREREQ: GEOL g503 and GEOL g503L, and either GEOL g515 or GEOL g516, and BIOL 209.

GEOL g552 Sedimentation-Stratigraphy 4 credits. Principles of sedimentation from source to diagenesis. The basis of stratigraphic nomenclature, classification, and correlation of rock units. Laboratory covers unconsolidated sediment, hand specimens, subsurface, and field techniques. PREREQ: GEOL 210 AND ENGL 102 OR PERMISSION OF INSTRUCTOR. COREQ: CHEM 111.

GEOL g554 Basic Engineering Geology 3 credits. Geology applied to engineering projects; geotechnical problems in civil projects; site methods. Subsurface investigations including scope, logging, and in situ and geophysical methods. Cross-listed as CE g554. PREREQ: GEOL 314 OR CE 332.

GEOL g555 Geologic Data Methods 3 credits. Classification of geotechnical projects. Geologic mapping for civil engineering purposes. Development of engineering geologic profiles. Pre-bid geotechnical investigations and field instrumentation for civil works projects. Cross-listed as CE g555. PREREQ: GEOL 450.

GEOL g556 Geology of Idaho 2 credits. Geologic provinces and plate tectonic history of Idaho. Topics include basement, Belt Supergroup, Phanerozoic passive margin, Cordilleran orogen, accreted terranes, Idaho batholith, Challis volcanics, Idaho mineral deposits, Basin and Range, Snake River and Pleistocene floods. PREREQ: GEOL 100 OR GEOL 101.

GEOL g558 Geology of North America 3 credits. Regional stratigraphy and tectonics of North America emphasizing National Parks and the Intermountain West. Graduate students will do extensive additional reading in current literature. PREREQ: GEOL 100 OR GEOL 101.

GEOL g565 Subsurface Geology 3 credits. Principles of well log interpretation and correlation, core and cuttings description, cross section and subsurface map creation. Environmental geology, hydrogeology, mining, geological engineering, and petroleum applications. PREREQ: GEOL 210 OR PERMISSION OF INSTRUCTOR.

GEOL g571 Historical Geography of Idaho 3 credits. Influences of geography and geology on Idaho's economic, political and cultural history. May be team taught and include field trips, discussion sections. Cross-listed as HIST g571 and POLS g571.

GEOL g575 Essentials of Geomechanics 3 credits. Essentials of rock fracture relevant to geological engineering including stress and strain, properties and classification of rock masses, rock fracture mechanisms. Cross-listed as CE g575. PREREQ: GEOL 421 OR ENGR 350.

GEOL g576 Engineering Geology Project 1 credit. Team projects studying actual problems in engineering geology. Cross-listed as CE g576. PREREQ: GEOL g554 OR CE g554.

GEOL g580 Special Topics in GIS 1-3 credits. Visual Basic programming for GIS. PREREQ: GEOL g503 and GEOL g503L OR PERMISSION OF INSTRUCTOR.

GEOL g581 GeoTechnology Internship 1-3 credits. Choose a project with either natural resource or municipal GIS emphasis and work with real-world data at the internship's off-campus location. Projects focus on using/creating geotechnical data. PREREQ: GEOL g503 and GEOL g503L OR PERMISSION OF INSTRUCTOR.

GEOL g583 Earthquake Engineering 3 credits. Mechanism and characterization of earthquakes; seismic risk analysis; site and structural response; applications from points of view of engineer and geologist. Cross-listed as CE g580. PREREQ: GEOL 313 OR CE 332, OR PERMISSION OF INSTRUCTOR.

GEOL g591 Seminar 1 credit. Field trip or discussion of current geologic literature and geologic problems. May be repeated until 3 credits are earned. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

GEOL 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

GEOL 601 Advanced Physical Geology 2 credits. An advanced level course in physical geology required for all first year graduate students. A review of the principles of physical geology, and an overview of current hypotheses and research in the field.

GEOL 602 Advanced Geomorphology 3 credits. Seminar in the treatment of theoretical concepts in classical and modern geomorphology.

GEOL 603 Geologic Writing Seminar 1 credit. Review of quality geologic writing practices; extended field trip and introduction to regional

geology. Topics include databases, abstracts, stratigraphic terminology, grant proposals, thesis prospecti, and use of reference library. Required for all Geosciences graduate students.

GEOL 604 Watershed Modeling 3 credits. Use of geographic information systems and integrated simulation models to study the hydrologic cycle, water quality, agricultural and industrial impacts, environmental and related issues at the watershed scale. PREREQ: GEOL g404.

GEOL 606 Geostatistical Spatial Data Analysis and Modeling 4 credits. Description, analysis and modeling of spatial data in the geosciences, emphasizing hands-on application of geostatistical software tools for spatial analysis and probabilistic modeling in petroleum and groundwater reservoirs, environmental remediation, and mining or any application involving spatially-varying data. PREREQ: PERMISSION OF INSTRUCTOR.

GEOL 607 Spatial Analysis 3 credits. This course focuses on advanced techniques for spatial data analysis covering issues in sampling, characterizing, visualizing, exploring and modeling spatial data. Techniques for point patterns, continuous data, area data, and spatial interaction data will be emphasized. PREREQ: GEOL g503, MATH 170/175, AND A BASIC STATISTICS CLASS (e.g., MATH 253) OR PERMISSION OF INSTRUCTOR.

GEOL 609 Advanced Image Processing 1 credit. An advanced-level course in image processing techniques, such as using transforms, filters, and classifiers for data derived in the visible, infrared, and microwave. Specific topics include preprocessing, endmember analysis, classification (including spectral unmixing), and accuracy assessment. Practical application of theory for graduate student theses and dissertations. PREREQ: GEOL g509.

GEOL 615 Neutron Activation Analysis 4 credits. Theory and use of neutron activation methods for quantitative chemical analysis of natural and synthetic materials. Applications in geologic systems will be emphasized. Cross-listed as CHEM 615, PHYS 615. PREREQ: PERMISSION OF INSTRUCTOR.

GEOL 617 Environmental Geochemistry 3 credits. Geochemistry of environmental systems. Emphasis given to low-temperature water-rock interactions, including sorption processes, retardation, reaction kinetics and reaction-mass transport modeling. Cross-listed as CHEM 617. PREREQ: CHEM 112 AND GEOL g520 OR CHEM 351.

GEOL 618 Applied Geophysics 3 credits. Geologic interpretation of reflection seismic, refraction seismic, gravity, magnetic, and ground-penetrating radar data.

GEOL 621 Advanced Structural Geology 3 credits. Current aspects of structural geology or tectonics. May focus on regional structures, tectonic theories, orogenic mechanics, global tectonic model(s), or topics of special interest in structural geology.

GEOL 622 Orogenic Belts of the World 3 credits. Interdisciplinary analysis of Alpine and Cordilleran-type mountain belts including their infrastructure, tectonic evolution, and mechanisms of formation.

GEOL 623 Tectonics and Sedimentation 3 credits. Sedimentary basin analysis and mechanisms of subsidence. Extensional, compressional and strike-slip tectonics as related to depositional systems, facies architecture, and provenance.

GEOL 625 Quantitative Geochemistry Lab 3 credits. Practical application of theory involving use and operation of instrumental techniques. Cross-listed as CHEM 625.

GEOL 628 Advanced GIS Programming 3 credits. Course focuses on Visual Basic for Applications (VBA) programming for ArcGIS. Students will learn to navigate, interact, and utilize ArcObjects to customize ArcGIS and to create and distribute their own customizations (i.e., dll). PREREQ: GEOL g503, GEOL g528, AND PERMISSION OF INSTRUCTOR.

GEOL 630 Advanced Hydrogeology 3 credits. Advanced topics in hydrogeology, including precipitation and stream flow, soil moisture, principles and modeling of groundwater flow, migration of wastes in both saturated and unsaturated zones, design and impact of production wells, water chemistry. PREREQ: GEOL g530 OR EQUIVALENT.

GEOL 631 Sedimentology 3 credits. Provenance, dispersal, and environments of deposition; emphasis on various aspects of surface equilibria.

GEOL 641 Advanced Petrology 3 credits. Selected topics in igneous and/or metamorphic petrology, regional and/or global aspects of current interest, including relationship to major advances in other areas of solid earth sciences.

GEOL 646 The Sedimentary Record 4 credits. Earth history as revealed in sedimentary facies, provenance, chemical and isotopic excursions. Methods of analysis including sequence stratigraphy, geochronology, biogeochemistry, chemostratigraphy. Sedimentary petrology and field methods emphasized in lab.

GEOL 648 Research Problems 1-6 credits. Independent research on non-thesis subject matter, subject to approval of the staff before results receive credit. Course may be repeated until 10 credits are earned.

GEOL 650 Thesis 1-9 credits. Ordinarily a field-problem with supporting laboratory work undertaken by the student with approval of the geology graduate faculty, and after a thesis prospectus has been accepted. Graded S/U.

GEOL 850 Doctoral Dissertation (Ph.D. in Engineering and Applied Science) variable credits. Research toward and completion of the dissertation. May be repeated Graded S/U.

Department of History

Chair and Associate Professor Woodworth-Ney
Professors: Christelow, Christelow, Hale, Hatzenbuehler, Owens
Associate Professors: Kuhlman, Marsh
Assistant Professors: Hinman
Adjunct Faculty: Reinke
Emeritus Faculty: Marley, Ruckman, Swanson

Master of Arts in Historical Resources Management

This innovative program offers a curriculum in geographically-integrated history that combines an emphasis on the use of geographic information systems (GIS) and related information technologies to conduct historical research along with an internship that develops skills in analysis, collaboration, and written, oral, and visual communication. Students receive strong preparation that will enable graduates to compete successfully for a wide variety of jobs with businesses and educational, government, and private agencies and to prepare them for further graduate study.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition the student must comply with the following departmental requirements:

1. Applicants must have a 3.0 or above in the last two years of undergraduate work and a 3.5 or above in any graduate work in History or related subjects.
2. Applicants must submit three letters of recommendation at least two of which should be from individuals familiar with their academic work.
3. Applicants should have at least 18 credits of previous course work in History at the upper-division level.
4. Applicants must have taken *GIS for Social Sciences, Principles of Geographic Information Systems*, an equivalent class, or present evidence that such a course will

be completed prior to entering the Historical Resources Management master's program.

5. Applicants must submit, as part of their admissions application, a statement of interest in historical studies and personal goals. Particular attention should be given to explaining how these interests and goals relate to the Historical Resources Management master's program.

Note: to be successful, an applicant must receive the support of someone in the department willing to chair the applicant's graduate committee and of a second department member willing to serve on the graduate committee.

General Requirements

1. A minimum of 30 semester credits.

2. Core Courses

   Minimum requirements: 12 credit hours total; 9 at 600-level:

HIST 590	Cartography: History and Design	3 cr
HIST 600	Graduate Proseminar	3 cr
HIST 610	Geographic Information Systems in Historical Studies	3 cr
HIST 642	Conferences and Grants	3 cr

3. An internship (HIST 644) is required for a minimum of 3 credits. The internship will require the student to use GIS and related information technologies in a collaborative work environment to accomplish one or more of the following: to analyze and visualize historical resources, the interactions among them, and their relationship to space and time; to catalogue and disseminate historical resources; to develop public policy; to formulate questions for analysis; and to present the results of such work in response to research problems posed by individual researchers, community groups, public entities, and private institutions.

4. Electives: at least 15 credits of elective course work must be completed, beyond the required core courses and internship. At least 3 of these credits must be at the 600-level, usually either HIST 645 or HIST 650.

5. There will be a final oral examination. For students pursuing the thesis option, the examination will be based on the thesis. For those with the non-thesis option, the examination will be based on the internship work and/or on an independent research project. The format of the non-thesis option examination will be flexible in order to accommodate a wide variety of possible student experiences.

6. Because the program deals with a rapidly-changing field, a student must complete all requirements for the degree within four (4) years after beginning course work. The program is designed for completion within two years but can be extended to accommodate part-time students.

History Graduate Courses

HIST g505 Problems in History 3 credits. A thorough consideration of historical problems, particularly from a comparative perspective. Designed to give deeper insight into problems, issues, and topics which are treated more generally in other courses. May be repeated with different content.

HIST g518 U.S. History Survey for Education Majors 3 credits. U.S. history from indigenous cultures through modern America. Based on Idaho Department of Education Standards for High School Students. PERMISSION OF INSTRUCTOR.

HIST g521 Federal Indian Relations 3 credits. This course provides a legal-historical examination of the relationship between North American tribal peoples and the U.S. federal government between 1750 and the present. Special emphasis will be placed on Indian removal, assimilation policy, treaty negotiation, the Dawes Severalty Act, education policy, Indian reorganization policy, and termination.

HIST g523 Idaho History 3 credits. A survey of the social, cultural, environmental, and political history of Idaho from pre-contact indigenous cultures to the present, emphasizing Idaho's relation to other states and regions in the West.

HIST g525 Women in the North American West 3 credits. Comparative examination of the varied experiences of women in the North American West. Analyzes perceptions of women and women's views of themselves, women's activism, and women's cultural activities. Places special emphasis on the use of non-textual historical sources in uncovering the past lives of North American western women.

HIST g527 North American West 3 credits. History of the North American West from pre-contact indigenous cultures to the present, with an emphasis on exploration, settlement, ethnic groups, borderlands, environment, federal policy, and cultural depictions.

HIST g529 Foreign Relations since 1900 3 credits. An introduction to the history of international relations in the twentieth century. This course emphasizes the impact of wars on various peoples and cultures, anti-colonialism and the rise of the so-called 'Third World,' and the processes of political, cultural and economic 'globalization.'

HIST g530 Global Environmental History 3 credits. Comparative examinations of historical interactions between humans and environmental factors in various time periods and regions throughout the world, and an assessment of their impacts on historical change.

HIST g535 Colonial Frontiers in America and Africa 3 credits. A comparative examination of exploration, conquest, and resistance, and the interaction of cultures in frontier settings. Examines both the realities of the frontier and their impact on Western thought and imagination.

HIST g537 Families in Former Times 3 credits. Reconstructs the marriage patterns and domestic lives of people in pre-industrial Europe (1000-1700 AD).

HIST g538 Women in Pre-Industrial Europe 3 credits. Compares and contrasts the social, cultural and economic roles of women from 700-1700 AD, and analyzes the impacts of historical change on their lives.

HIST g539 Women in History 3 credits. Comparative study of the history of women in different world regions.

HIST g541 The Viking Age 3 credits. Studies the cultures and societies of Scandinavia, England and continental Europe from 700 to 1100 AD.

HIST g543 English History 3 credits. Survey of the more important British political, constitutional, economic, and cultural developments from Anglo-Saxon times to the Victorian Period.

HIST g544 Victorian England and After 3 credits. England, 1837 to the present. An examination of the cultural, social, political, and economic history of the most prosperous and productive period of English history including British national and imperial decline in the twentieth century.

HIST g546 Social and Economic History of Greece and Rome 3 credits. Investigates ways in which geography, demography and politics affected the mentalities and behaviors of social groups—women, patrons, clients and slaves—and the functioning of households, villages and cities.

HIST g548 Medieval Social and Economic History 3 credits. Analyzes the impact of political instability, migration and environment upon Europeans (AD 200 - 1400).

HIST g550 Golden Age Castile 3 credits. History of a major European country in an age of globalization, military revolution, religious conflict, and significant cultural development, 1450-1700.

HIST g553 Renaissance Creativity 3 credits. Examination of the conditions promoting individual creativity among Europeans in the first global age, 1400-1700. Special emphasis on geospatial research on the history of printing.

HIST g560 The Global Hispanic Monarchy 3 credits. The African, American, Asian, European, and Oceanic domains of the Iberian Habsburg dynasty, especially those of Castile and Portugal, whose officials and subjects created and maintained many of the communications routes that defined the first global age. Students prepare geospatial datasets on these routes.

HIST g561 Independent Study: U.S. 1-3 credits. Selected readings in areas and periods

not covered by the regular curriculum offerings. PREREQ: PREVIOUS UPPER-DIVISION COURSE WORK IN THE SUBJECT AREA, WITH A MINIMUM GRADE OF A-; GPA OF 3.5 IN ALL HISTORY COURSES; PERMISSION OF INSTRUCTOR; AND APPROVAL BY THE DEPARTMENT CHAIR.

HIST g562 Independent Study: Europe 1-3 credits. Selected readings in areas and periods not covered by the regular curriculum offerings. PREREQ: PREVIOUS UPPER-DIVISION COURSE WORK IN THE SUBJECT AREA, WITH A MINIMUM GRADE OF A-; GPA OF 3.5 IN ALL HISTORY COURSES; PERMISSION OF INSTRUCTOR; AND APPROVAL BY THE DEPARTMENT CHAIR.

HIST g563 Independent Study: World Regions 1-3 credits. Selected readings in areas and periods not covered by the regular curriculum offerings. PREREQ: PREVIOUS UPPER-DIVISION COURSE WORK IN THE SUBJECT AREA, WITH A MINIMUM GRADE OF A-; GPA OF 3.5 IN ALL HISTORY COURSES; PERMISSION OF INSTRUCTOR; AND APPROVAL BY THE DEPARTMENT CHAIR.

HIST g565 U.S. Political History 3 credits. Study of the political history of the United States involving a discussion of theories of popular voting behavior, critical elections, and political party systems.

HIST g571 Historical Geography of Idaho 3 credits. Influences of geography and geology on Idaho's economic, political and cultural history. May be team taught, and includes field trips, discussion sections. Cross-listed as GEOL g571 and POLS g571.

HIST g574 Islam and Nationalism in the Modern World 3 credits. A study of the interaction of Islam and national and ethnic identities in the Middle East including North Africa from 1800 up to the recent past.

HIST g578 Imperialism and Progressivism 3 credits. A study of the world 1880-1920. Movements of change within the West, Third World responses to the Western challenge, and global crisis.

HIST g590 Cartography: History and Design 3 credits. History of how map-makers represent geographic, spatial data. Special attention to the elements of successful cartographic design.

HIST g591 Seminar 3 credits. Reading, discussion, and preparation for research papers on selected topics.

HIST 597 Professional Education Development Topics. Variable credit. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

HIST 600 Graduate Proseminar 3 credits. Introduction to graduate studies. Focus on contemporary historiographical debates, with emphasis on understanding significant developments in the profession. May be repeated with different topics.

HIST 610 Geographic Information Systems in Historical Studies 3 credits. Introduction to the use of GIS in historical studies. Detailed examination of major projects around the world, of handling uncertainty and fragmentary data, and of problems of interoperability in integrating data about a place and sharing data from different studies. Practice in using primary sources in conjunction with GIS and related Information Technologies and in creating and using geographically integrated history databases. PREREQ: TRAINING IN GEOGRAPHICAL INFORMATION SYSTEMS.

HIST 621 Seminar: Interdisciplinary Topics in Social Sciences 3 credits. Examination of selected topics in the social sciences from the analytic orientations and perspectives common and peculiar to the disciplines of political science, economics, sociology, and history.

HIST 642 Conferences and Grants 3 credits. Emphasizes visual and oral skills for disseminating research to professional audiences. Students will develop and organize a campus-wide colloquium highlighting graduate research. Provides an introduction to grant writing with a focus upon funding sources for the social sciences and humanities..

HIST 645 Independent Research Project 1-6 credits. Individual research project employing Geographic Information Systems. Topic selected by the student. May be repeated up to six credits. PREREQ: PERMISSION OF INSTRUCTOR WHO WILL DIRECT THE PROJECT AND OF THE STUDENT'S HISTORICAL RESOURCES MANAGEMENT GRADUATE COMMITTEE.

HIST 650 Thesis 1-9 credits. Open to students seeking the M.A. in Historical Resources Management with the thesis option. May be repeated. Graded S/U.

HIST 664 Graduate Internship 3-12 credits. Supervised experience in the application of Geographic Information Systems (GIS) and other relevant Information Technologies to a historical project in a collaborative work environment. May be repeated. PREREQ: PERMISSION OF INSTRUCTOR WHO WILL DIRECT THE INTERNSHIP AND OF THE STUDENT'S HISTORICAL RESOURCES MANAGEMENT GRADUATE COMMITTEE.

Women's Studies Graduate Courses

WS g561 Independent Study 1-3 **credits.** Selected readings and research in areas of Women's Studies not covered by the regular curricular offerings. May be repeated for a maximum of six credits. PREREQ: 3.0 CUMULATIVE GPA AND W S 201 OR EQUIVALENT; PERMISSION OF INSTRUCTOR.

James E. Rogers Department of Mass Communication

Professors: Frazier, Jull
Assistant Professors: Beachboard-Robinson, Hallaq, Wells

Mass Communication Graduate Courses

(No graduate degrees are offered)

M C g518 Art of the Book 3 credits. Expands the traditional idea of book form with innovative structures and concepts. Textural and nontextual formats and methods for generating ideas for works are addressed. Traditional techniques for bookbinding will also be included. Cross-listed as ART g518.

M C g531 Teaching High School Journalism 2 credits. Current high school journalism practices. Includes newspapers, broadcast, advertising, photography as appropriate. Emphasis is on applying the content of other journalism courses in the high school.

M C g540 Media Law and Ethics 3 credits. Principles of the law of libel, privacy, obscenity, press freedom, responsibility and ethics as they apply to the news media.

M C g541 Intellectual Property Law 3 credits. Examination of principles and laws regarding intellectual property including copyright and trademark and examination of the regulation of commercial speech.

M C g552 Mass Communication and Society 3 credits. Interface between mass media (news, entertainment and advertising) and audiences. Analysis of public's right to know, press freedom, censorship, political and other leanings in the media, media effectiveness, and ethics. PREREQ: JUNIOR STANDING OR PERMISSION OF INSTRUCTOR.

M C g560 Corporate Video Production 3 credits. Producing for corporate, educational, home video, documentary and other nonfiction markets. Advanced production techniques. Major project required. PREREQ: M C 300.

M C g570 Communication Through Web Design 3 credits. Theory, ideology and practical application of interactive document design utilizing several different software applications. Emphasis placed on communication. Also taught within a practical and aesthetic context, ethics, current practices, purposes, styles, genres and directions in authoring for the world wide web. PREREQ: M C 260 OR PERMISSION OF INSTRUCTOR.

Department of Mathematics

Chair and Professor Fisher
Assistant Chair and Professor Laquer
Professors: Egger, Hanin, R. Hill, Kratz, Lang, Palmer-Stowe, Wolper
Associate Professors: Chen, Ford, Gironella, Gryazin, Kriloff, Payne
Assistant Professors: Derryberry, Zhu
Adjunct Faculty: Kress, Martin, Miller, Mills, Potter, Reed, Walker, Yost
Professor Emeritus: Cresswell, L. Hill, Parker

Goals

- M.S. students develop a broad knowledge of mathematics and a degree of competence in one field within mathematics.
- D.A. students develop a broad knowledge of mathematics; learn about the roles of instruction, service, and research in the mathematical profession; and study a mathematical topic in depth, reporting their findings in a thesis that meets professional standards.
- Graduate students find employment in teaching or industry.

Doctor of Arts in Mathematics

The Doctor of Arts program in mathematics is designed to prepare the student for a teaching career in institutions of higher learning. The program emphasizes broad competence in mathematics rather than specialization and makes provision for classroom teaching experience.

Admission Requirements

Admission to the D.A. program requires the completion of the requirements for a master's degree equivalent to the M.S. in mathematics at Idaho State University with a 3.5 GPA in all graduate work. The aptitude portion of the Graduate Record Examination is required with a minimum score at the 50th percentile. The aptitude percentile is determined by averaging the percentiles of the quantitative, verbal and analytical sections.

Applicants will be selected according to the following criteria:

1. Measure of success in completing the master's program;
2. Satisfactory GRE scores;
3. Teaching experience;
4. Three letters of recommendation;
5. Applicant's letter discussing reasons for wishing to pursue this specific program.

Residence

Six semester hours beyond the master's degree may be transferred into the program. Two consecutive semesters of full-time study are required in residence.

Committees and Advising

The student will be advised initially by the departmental graduate committee. This group will be the student's temporary advising committee and will assist in the selection of the student's permanent committee who will supervise the remainder of the student's program.

General Requirements

The program requires course work, a thesis, teaching internships, and examinations as described below. The program must include a minimum of 48 credits, and at least two 600-level sequences taken in residence. Approval for optional courses is granted by the Mathematics Department Graduate Committee.

A. Course Work

1. Mathematics Component

MATH 625-626	Real Analysis	6 cr
MATH 627-628	Complex Analysis	6 cr
MATH 631-632	Abstract Algebra	6 cr
MATH 671-672	Topology	6 cr

Twelve additional 600-level Mathematics credits, including one full-year sequence

2. Interdisciplinary and Applied Mathematics Component

MATH 550-551 Mathematical Statistics
Nine additional hours of approved interdisciplinary or applied mathematics course work

3. Education Component

An approved graduate course in Education

MATH 692	Doctor of Arts Seminar
MATH 693	Mathematical Exposition

An approved course in technical or expository writing if recommended by the departmental graduate committee in consultation with the student's permanent committee

B. Doctor of Arts Thesis

The Doctor of Arts Thesis is an expository or research paper in mathematics or mathematics education. Six hours of course credit are given for the completion of the thesis.

C. Teaching Internship

Each candidate must complete teaching internships under the supervision of the departmental Graduate Committee. Six hours of course credit must be earned in MATH 700 Supervised Teaching Internship.

D. Examinations

1. D.A. Written Examination: A written comprehensive examination on undergraduate-level mathematics.
2. Oral Examination: An oral examination on graduate-level mathematics including the four areas of competence described in Section A. previously, and the candidate's program of graduate course work.
3. Final Examination: The candidate will present to the public a lecture on the candidate's dissertation, and will answer any questions that arise. Following the lecture and question period, the candidate will be examined orally by the candidate's dissertation committee on topics related to the dissertation.

Doctor of Philosophy in Engineering and Applied Science

This Ph.D. program is available to students wishing to study mathematics applied to problems in subsurface science. The complete program description is provided under the College of Engineering section of the *Graduate Catalog*.

Master of Science in Mathematics

The Master of Science degree program is designed to provide a broad and in-depth background and prepare the student for further study at the doctoral level or for an industrial or academic career.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with the following departmental requirements.

For full admission to the M.S. degree program in mathematics, the applicant must have completed all requirements for a bachelor's degree in mathematics at an accredited institution. The applicant should have a grade point average of at least 3.0 in upper-division undergraduate course work and have taken the Graduate Record Examination, achieving at least the 50th percentile on the quantitative part of the general aptitude test. The student should have completed course work in modern algebra, differential equations, advanced calculus, and introductory analysis. Applicants not fully meeting these requirements may be allowed to make up deficiencies at Idaho State University.

General Requirements

The Master of Science program in Mathematics provides thesis and non-thesis options. Students choosing either option must take 15 credits in mathematics at the 600 level, including two full-year sequences. Of the remaining 15 graduate credits required for the degree, at least 9 must be in mathematics. The entire program of study must be approved by the departmental graduate committee.

Students must pass a written examination on one of the 600-level sequences in their programs of study. Those who choose the thesis option must also complete and defend an expository or research thesis, for which they will receive 6 credits of MATH 649. Those who choose the non-thesis option must pass a final oral examination over all courses in their program of study.

Master of Arts in Mathematics for Secondary Teachers

The degree Master of Arts in Mathematics for Secondary Teachers (MAMST) is designed for people with a bachelor's degree who hold a secondary school teaching certificate for the teaching of mathematics and have at least three years of full-time teaching experience. The objective of the program is to enhance the mathematical training of secondary teachers and to equip such teachers with a broad and modern background in mathematics.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with the following departmental requirements. For full admission to the MAMST program, the applicant (1) must hold a bachelor's degree and a standard secondary school teaching certificate in mathematics; (2) must have at least three years' full-time teaching experience; (3) must have a GPA of at least 3.0 for the last two years of undergraduate work; (4) must have taken the Graduate Record Examination (GRE), achieving at least the 50th percentile on the quantitative part of the general aptitude test; and (5) must have completed undergraduate work equivalent to that required for the Idaho State University Teaching Major in Mathematics.

General Requirements

The MAMST degree requires the following:

1. Possession of a bachelor's degree and a secondary teaching certificate in mathematics.
2. Completion of a program of study approved by the Graduate Committee of the Department of Mathematics and the Dean of the Graduate School.
3. Completion of a minimum of 30 credits beyond the bachelor's degree in courses numbered 500 or above.
4. Approval of semester papers as required by the Graduate Committee of the Department of Mathematics.
5. Satisfactory performance on comprehensive written and oral examinations on the student's program of study.

Mathematics Graduate Courses

MATH g506 Advanced Linear Algebra 3 credits. Advanced linear algebra with a strong emphasis on proof. Real and complex vector spaces, linear transformations, polynomials associated to matrices, determinants, canonical forms, inner product spaces. PREREQ: MATH 240.

MATH g507-g508 Modern Algebra 3 credits each. Rings, fields, groups, algebras, and selected topics in abstract algebra. PREREQ: MATH 240 AND MATH 287.

MATH g521 Advanced Engineering Mathematics I 3 credits. Analysis of complex linear and nonlinear engineering systems using advanced techniques, including Laplace transforms, Fourier series and classical partial differential equations. Cross-listed as ENGR g521. PREREQ: MATH 360.

MATH g522 Advanced Engineering Mathematics II 3 credits. Cross-listed as ENGR g522. Analysis of complex linear and nonlinear engineering systems using advanced techniques, including probability and statistics, advanced numerical methods and variational calculus. PREREQ: ENGR g521 OR MATH g521.

MATH g523-g524 Introduction to Real Analysis 3 credits each. The real number system, limits, sequences, series, and convergence; metric spaces; completeness; and selected topics on measure and integration theory. PREREQ: MATH 240, MATH 326, AND MATH 360.

MATH g535 Elementary Number Theory 3 credits. Diophantine equations, prime number theorems, residue systems, theorems of Fermat and Wilson, and continued fractions. PREREQ: MATH g507.

MATH g541 Introduction to Numerical Analysis 3 credits. Introduction to standard numerical techniques for solving problems dealing with nonlinear equations, systems of linear equations, differential equations, interpolation, numerical integration, and differentiation. PREREQ: MATH 240, MATH 326, AND MATH 360 OR PERMISSION OF INSTRUCTOR.

MATH g542 Introduction to Numerical Analysis 3 credits. Extension of MATH g541 for students who wish to pursue more advanced techniques with emphasis on analysis. Typical topics covered include numerical methods applied to partial differential equations, integral equations, and in-depth treatment of topics covered in MATH g541. PREREQ: MATH g541.

MATH g544 Modern Geometry 3 credits. Transformation groups. Topics from hyperbolic, projective, and other geometries.

MATH g550-g551 Mathematical Statistics 3 credits each. Probability, random variables, discrete and continuous distributions, order statistics, limit theorems, point and interval estimation, uniformly most powerful tests, likelihood ratio tests, chi-square and F tests, nonparametric tests. PREREQ: MATH 326 AND MATH 352.

MATH g553 Topics in Statistics 1-3 credits. Content varies. May be repeated for up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

MATH g557 Applied Regression Analysis 3 credits. Simple and multiple linear regression, polynomial regression, diagnostics, model selection, models with categorical variables. PREREQ: MATH 350 OR MATH 352 OR PERMISSION OF INSTRUCTOR.

MATH g558 Experimental Design 3 credits. The linear model for experimental designs, analysis of variance and covariance, block designs, factorial designs, nested designs, choice of sample size. PREREQ: MATH 350 OR MATH 352 OR PERMISSION OF INSTRUCTOR.

MATH g559 Applied Multivariate Analysis 3 credits. Matrix computation of summary statistics, graphical analysis of multivariate procedures, multivariate normal distribution, MANOVA, multivariate linear regression, principal components, factor analysis, canonical correlation analysis. PREREQ: MATH 240 AND ONE OF THE FOL-

LOWING: MATH 350, MATH g457, MATH g458, OR PERMISSION OF INSTRUCTOR.

MATH g565 Partial Differential Equations 3 credits. Equations of the first and second orders, methods of solution, Laplace's Equation, heat equation, and the wave equation. Emphasis on applications to problems in the physical sciences and engineering. PREREQ: MATH 275 AND MATH 360.

MATH g573 Introduction to Topology 3 credits. Metric spaces; convergence; notions of continuity; connected, separable and compact spaces. PREREQ: PERMISSION OF INSTRUCTOR.

MATH g581 Special Problems 1-3 credits. Reading and conference in an area not usually covered by a regular offering. Individual work under the supervision and guidance of a professor whose specialty includes the chosen area. Open to seniors and graduate students in good standing and with the consent of the instructor. May be repeated until 6 credits are earned.

MATH g591 Mathematics Seminar 1-3 credits. Advanced reading and discussion on selected topics in mathematics. May be taken for credit more than once. PREREQ: SENIOR STANDING OR EQUIVALENT.

MATH 526 Elementary Analysis 3 credits. Rigorous calculus on the real line. Completeness, compactness and connectedness. Continuity, images of compact and connected sets. Series, uniform convergence. Differentiability, inverse functions, chain rule. Integration, fundamental theorem, improper integrals. Enrollment restricted to students admitted to the MAMST program and approved by the departmental graduate committee.

MATH 527 Vector Analysis 3 credits. Calculus of vector functions of several variables, derivative matrix, chain rule, inverse function theorem, multiple integration. Change of variables. Integrals over curves and surfaces. Green's, Stokes' and Divergence Theorems. Applications to Physics. Enrollment restricted to students admitted to the MAMST program and approved by the departmental graduate committee.

MATH 543 Modern Geometry I 3 credits. Planar Euclidean geometry. Rigid motions and symmetry in the plane. Enrollment restricted to students admitted to the MAMST program and approved by the departmental graduate committee.

MATH 552 General Statistics 3 credits. Probability, random variables, discrete and continuous distributions such as the Binomial, Poisson, Geometric, Hypergeometric, Normal and Gamma, sampling distribution, point and interval estimation, hypothesis testing. Enrollment restricted to students admitted to the MAMST program and approved by the departmental graduate committee.

MATH 555 Operations Research I 3 credits. Deterministic problems in operations research oriented towards business. Includes linear programming, transportation problems, network analysis, PERT, dynamic programming, and elementary game theory. Enrollment restricted to students admitted to the MAMST program and approved by the departmental graduate committee.

MATH 556 Operations Research II 3 credits. Probabilistic models oriented towards business are treated. Selections from stochastic processes, Markov chains, queuing theory, inventory theory, reliability, decision analysis and simulation. Enrollment restricted to students admitted to the MAMST program and approved by the departmental graduate committee.

MATH 560 Differential Equations 3 credits. Theory and applications of ordinary differential equations. Enrollment restricted to students admitted to the MAMST program and approved by the departmental graduate committee.

MATH 562 Introduction to Complex Variables 3 credits. Introduction to the study of functions of a complex variable including the algebra and geometry of complex numbers, analytic functions, power series, integral theorems, and applications. Enrollment restricted to students admitted to the MAMST program and approved by the departmental graduate committee.

MATH 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

MATH 600 Supervised College Teaching Practicum 1 Credit. Supervised classroom teaching of mathematics at the remedial and freshman level. Includes classroom observation and periodic meetings to discuss course management, pedagogy, and other relevant topics with peers and a faculty supervisor. Open only to graduate teaching assistants with responsibility for classroom instruction. May be repeated. Graded S/U.

MATH 625-626 Real Analysis 3 credits each. Measures, the Lebesgue integral, Lp spaces and other normed vector spaces, approximation theorems. PREREQ: MATH g524.

MATH 627-628 Complex Analysis 3 credits each. Theory of functions of a single complex variable, including their differentiation, integration and representation by sums, products and integrals. The Cauchy integral formula and its consequences, conformal mappings, harmonic functions.

MATH 631-632 Abstract Algebra 3 credits each. Advanced theory and structural properties of groups, rings, modules, and fields, including topics such as group actions, universal maps, and Galois theory. PREREQ: MATH g508 OR PERMISSION OF INSTRUCTOR.

MATH 633 Matrix Analysis 3 credits. Eigenvalues, special matrices, normal forms, matrix polynomials, matrix functions, matrix norms, Kronecker products, stability, matrix equations, generalized inverses, nonnegative matrices. PREREQ: MATH g506 AND MATH g524.

MATH 636-637 Lie Groups and Lie Algebras 3 credits each. Lie groups, Lie algebras, and their representations. Structure of real and complex Lie algebras. Representations of semisimple Lie algebras and compact Lie groups. PREREQ: MATH g506 and MATH g507 OR PERMISSION OF INSTRUCTOR.

MATH 641-642 Numerical Analysis 3 credits each. Topics selected from approximation theory, optimization, numerical linear algebra, differential and integral equations, spline analysis, computer algorithms, and other areas of current research in numerical analysis. PREREQ: MATH g523 AND MATH g541.

MATH 650 Thesis (M.S.) 1-6 credits. Graded S/U.

MATH 652 Stochastic Processes 3 credits. Topics from Classified with Performance Requirements (w/PR) probability and expectation, martingales, Kolmogorov's Theorem, Markov processes, random walks, Brownian motion, diffusions, dynamic programming, stochastic differential equations. Applications to modeling physical and/or social dynamical systems. PREREQ: MATH g550.

MATH 653 Advanced Topics in Probability and Statistics 3 credits. Topics such as experimental design, regression analysis, multivariate statistical analysis. PREREQ: MATH 352 AND MATH g506, OR PERMISSION OF INSTRUCTOR.

MATH 655-656 Combinatorics 3 credits each. Theory and applications of: choice and enumeration techniques, generating functions, partitions, designs and configurations, graph theory including digraphs, algebraic graph theory and extremal problems. PREREQ: PERMISSION OF INSTRUCTOR.

MATH 662-663 Differential Equations 3 credits each. Existence, uniqueness, and dependence of solutions upon initial conditions; linear equations; autonomous equations; dynamical systems and stability; partial differential equations of first and second order, with applications. PREREQ: MATH 326, MATH 327, AND MATH 360.

MATH 664-665 Methods of Applied Mathematics 3 credits each. Transform, spectral, variational and perturbation methods applied to the analysis of equations involving differential and integral operators. Emphasis on equations arising in physical and biological sciences. PREREQ: MATH g506 AND MATH g565.

MATH 667-668 Functional Analysis 3 credits each. Major results of functional analysis, such as the Hahn-Banach, open mapping, and closed graph theorems; study of Hilbert and Banach spaces; spectral analysis. PREREQ: MATH g523 OR MATH 625 OR PERMISSION OF INSTRUCTOR.

MATH 671-672 Topology 3 credits each. Fundamental theorems and examples from point-set topology; emphasis on general and metric topologies and continuous mappings; introduction to topology of manifolds, covering spaces, homotopy, homology, and cohomology. PREREQ: MATH g573 OR PERMISSION OF INSTRUCTOR.

MATH 681-682 Differential Geometry 3 credits each. Differentiable manifolds and mappings; bundles, connections, geodesics, and curvature; Lie groups; topics from Riemannian, Hermitian, or symplectic geometry. PREREQ: MATH 327.

MATH 691 Directed Reading 1-3 credits. Reading and problems arranged on an individual basis with a faculty supervisor.

MATH 692 Doctor of Arts Seminar 2 credits. Topics include the nature and practice of mathematical research, grants, public speaking, professionally and classroom related software, information media, issues in mathematical pedagogy, standards, and curricula, university organization, history of mathematics. Graded S/U.

MATH 693 Mathematical Exposition 1 credit. Presentation of mathematics in a seminar setting. Small group practice in and critique of mathematical exposition. Requirements include presentation of a departmental colloquium on an assigned topic. Graded S/U.

MATH 694 Special Topics in Mathematics 1-3 credits. Each offering will deal with a topic selected from such fields of mathematics as algebra, analysis, geometry, number theory, topology, applied analysis, probability, and mathematical logic. May be taken for credit more than once.

MATH 700 Supervised Teaching Internship. Credit variable up to 9 credits. Graded S/U.

MATH 750 Thesis (D.A.) 1-6 credits. Graded S/U.

MATH 850 Dissertation (Ph.D. in Engineering and Applied Science) Variable credit. Graded S/ U.

Museum

Interim Director and Professor Lohse
Professor and Curator: Peterson
Associate Professor and Curator: Akersten
Assistant Professors and Curators: Delehanty, Tapanila

Mission Statement

The Mission of the Idaho Museum of Natural History is to acquire, preserve, study, interpret, and display objects relating to the natural history of Idaho and the Northern Intermountain West for research and education. The Museum seeks to enhance in the citizens of Idaho and visitors an understanding of and delight in Idaho's natural and cultural heritage. Specific areas of interest encompass the anthropology, botany, geology, paleontology, and zoology of Idaho and the Northern Intermountain West. Audiences served include citizens of Idaho, visitors, and the national and international community of students and scholars. Information is disseminated through exhibitions, public and professional presentations, publications, formal and informal education, telecommunications, and other interpretive programs.

Museum Graduate Courses

(No graduate degrees are offered)

MUSE g550 Independent Study in Museum Methods 1-3 credits. Individual projects based on student's background and interests. Could include, but not limited to, advanced work in collections management, exhibit design and construction, museum education, or administration. May be repeated up to 6 credits. PREREQ: MUSE 411 OR PERMISSION OF INSTRUCTOR.

Department of Music

Chair and Professor Earles
Professors: Anderson, Brooks, Lane
Associate Professors: Bond, Livingston-Friedley, Masserini
Assistant Professors: M. Grise, Hasenpflug, Schulte
Assistant Lecturer: Friedley
Adjunct Faculty: G. Adams, M. Adams, B. Attebery, Banyas, Drake, T. Grise, Hughes, LoPiccolo, Markley, Nelson, Neiwirth, O'Brien, Smith
Affiliate Faculty: Grayson
Emeritus Faculty: Stanek

Master of Education in K-12 Education

Music Education
36 Credits
(course work only option)

The M.Ed. in Music Education is designed to strengthen the student's understanding, knowledge, and skills in three major areas—Core Professional Studies, Specialty Studies, and Integrative Field Research Studies—as they relate to music education. The program is designed to meet the needs of music education specialists who work in the public school system (grades K-12) or who aspire to further graduate study and teaching in music education.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, individuals applying for admission to the Master of Education/Music Education, must meet the following admission requirements:

- Bachelor's degree in music from an accredited college or university.

It is expected that students will meet basic requirements for public school certification.

- Completion of entrance examinations in music history and music theory. Students whose examination indicate deficiencies will be granted Classified (w/PR) Status. Any course used to remove deficiencies does not count toward the degree. When deficiencies have been removed, the student may seek Classified Status.

General Requirements

Students complete a minimum of 36 semester credit hours for the Master's degree. Students seeking Idaho Certification in the area of their training must meet any requirements of the State Board of Education for certification. It is recommended that students have professional experience in an education context.

Education Core (12 credits)

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr
EDUC 616	Integration of Technology into School Curriculum	3 cr

Pedagogy and Content (24 credits)

MUSC 515	Seminar in Band Music OR	2 cr
MUSC 516	Seminar in Choral Music	2 cr
MUSC 517	Advanced Conducting	2 cr
MUSC 601	Foundations in Music Education	3 cr
MUSC 610	Practicum in Rehearsal Techniques	2 cr
MUSC 671	Music Education Seminar	3 cr
Graduate Performance Ensemble (2 semesters)		2 cr
Music History/Theory Elective		2 cr
Music History/Theory Elective		2 cr
Other Music Electives		6 cr
Total		36 credits

Music Graduate Courses

MUSC g506 Opera Literature 3 credits. Masterworks of operatic literature. PREREQ: MUSC 304, MUSC 305, MUSC 306.

MUSC g507 Symphonic Music Literature 3 credits. Masterworks of symphonic literature. PREREQ: MUSC 304, MUSC 305, MUSC 306.

MUSC g508 Chamber Music Literature 3 credits. Masterworks of chamber music literature. PREREQ: MUSC 304, MUSC 305, MUSC 306.

MUSC g511 Instrument Literature 2 credits. A study of instructional materials and literature for an orchestral instrument or guitar. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC OR PERMISSION OF INSTRUCTOR.

MUSC g512 Instrument Pedagogy 2 credits. A survey and comparative study of pedagogical

materials, principles and procedures. Application of pedagogical techniques in teaching situations. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC OR PERMISSION OF INSTRUCTOR.

MUSC g513 Piano Literature 2 credits. A study of instructional materials and literature for piano. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC OR PERMISSION OF INSTRUCTOR.

MUSC g514 Piano Pedagogy 2 credits. A survey and comparative study of pedagogical materials, principles and procedures for piano. Application of pedagogical techniques in teaching situations. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC OR PERMISSION OF INSTRUCTOR.

MUSC g515 Seminar in Band Music 2 credits. Analysis and study of instrumental works from the Baroque to the present era with particular attention to performance practice. PREREQ: MUSC 305-306 OR EQUIVALENT.

MUSC g516 Seminar in Choral Music 2 credits. Analysis and study of choral works from the Renaissance through the present era with particular attention to performance practice. PREREQ: MUSC 305-306 OR EQUIVALENT.

MUSC g517 Advanced Conducting 2 credits. Designed for secondary school music teachers, this course provides opportunity to discover and analyze technical conducting problems in music of the various historical eras. PREREQ: MUSC 319-320 OR EQUIVALENT.

MUSC g519 Voice Literature 3 credits. Instructional materials and literature for voice. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC OR PERMISSION OF INSTRUCTOR.

MUSC g520 Voice Pedagogy 3 credits. A survey and comparative study of pedagogical materials, principles, and procedures for voice, with application. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC OR PERMISSION OF INSTRUCTOR.

MUSC g524 Music in the Baroque Era 3 credits. Intensive study of music from Monteverdi through J.S. Bach. PREREQ: MUSC 304.

MUSC g525 Music in the Classical Era 3 credits. Intensive study of music in the Classical era, principally 1730 through Beethoven. PREREQ: MUSC 305.

MUSC g526 Music in the Romantic Era 3 credits. Intensive study of music in the Romantic era, principally 1800 to 1900. PREREQ: MUSC 305.

MUSC g527 Music in the Modern Era 3 credits. Intensive study of music in the Modern era, principally since 1900. PREREQ: MUSC 306.

MUSC g529 Advanced Music History Survey 3 credits. Study of music history topics, including vocal and instrumental forms and styles. PREREQ: MUSC 304, MUSC 305 AND MUSC 306.

MUSC g532 Instrumental Arranging 2 credits. Arranging music for different instrumental combinations and various textures. PREREQ: MUSC 204.

MUSC g533 Composition 2 credits. Individual instruction in the organization of musical ideas into logical and homogeneous forms with an emphasis on contemporary styles. May be repeated up to 12 credits. PREREQ: MUSC 204 OR PERMISSION OF INSTRUCTOR.

MUSC g535 Analysis of Musical Styles 2 credits. The techniques of stylistic analysis of music from the Baroque period through the 20th century. PREREQ: MUSC 311.

MUSC g538 Special Topics in Music Theory 2 credits. Advanced studies in selected topics in music theory. May be repeated up to 6 credits with change of topic. PREREQ: MUSC 311.

MUSC g539 Advanced Music Theory Survey 3 credits. Study of music theory methods, including harmonic and formal analysis. PREREQ: MUSC 311.

MUSC g591 Independent Study 1-4 credits. Supervised study in selected areas, primarily research, writing, or analysis. May be repeated to a maximum of 7 credits. PREREQ: PERMISSION OF INSTRUCTOR AND DEPARTMENT CHAIR.

MUSC 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

MUSC 601 Foundation in Music Education 3 credits. Historical, philosophical, and psychological foundations of music education, with their application to current instruction and evaluation.

MUSC 610 Practicum in Rehearsal Techniques 2 credits. Advanced techniques of ensemble rehearsal, including procedures, diagnostic and achievement evaluation, planning and pedagogy. PREREQ: MUSC 515 OR MUSC 516, MUSC 517.

MUSC 650 Thesis Project 1-4 credits. The student will present a public graduate recital, supervised by a faculty member in the music department. In addition to the recital, a paper will be submitted demonstrating extensive familiarity with research relative to the music performed in the recital. This paper will be written under the supervision of a faculty member from the College of Education and faculty members from the Music Department. The completed paper and recital are to be accepted by the examining committee and the paper filed with the dean of the College of Education. A recording of the recital will be filed with the music department. Graded S/U.

MUSC 671 Music Education Seminar 3 credits. Advanced examination of concepts, principles, models, and theories of instruction in music education. Seminar format requires active participation in readings, discussion, presentations, and written assignments. PREREQ: MUSC 601 AND MUSC 610.

MUSC 695 Graduate Recital 2 credits. Public recital culminating from applied music study at the graduate level. Graded S/U .

Graduate Performance Ensembles

MUSC g567 Opera Workshop 1 credit. Ensemble course devoted to the study and presentation of an opera. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC.

MUSC g568 Instrumental Ensemble 1 credit. Ensemble training in various instrument combinations, such as string quartet and various woodwind and brass ensembles. Section 1, Woodwind Ensemble; 2, Brass Ensemble; 3, Percussion Ensemble; 4, String Ensemble; 5, Keyboard Ensemble. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC.

MUSC g569 Orchestra 1 credit. Sight reading of representative orchestral literature; orchestral routine, study, and public performance of major symphonic compositions including orchestral accompaniments. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC.

MUSC g572 ISU Women's Choir 1 credit. Study, rehearsal and performance of traditional and non-traditional choral music for treble voices. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC.

MUSC g573 Concert Choir 1 credit. Study and performance of the entire body of choral music. Includes several performances and concerts. Emphasis on attaining high musical standards and levels of choral-vocal proficiency. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC.

MUSC g577 Symphonic Band 1 credit. Rehearsal and performance of traditional and contemporary wind literature in on- and off-campus concerts. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC.

MUSC g578 Jazz Band 1 credit. Rehearsal and performance of standard and contemporary big-band literature. One or two concerts are given each semester. PREREQ: JUNIOR LEVEL STANDING IN APPLIED MUSIC.

Applied Music–Private Lessons

MUSC g521 Piano 1 or 2 credits each.

MUSC g531 Voice 1 or 2 credits each.

MUSC g541 Organ 1 or 2 credits each.

MUSC g561 Strings 1 or 2 credits each. Section 1, Violin; 2, Viola; 3, Cello; 4, String Bass; 5, Classical Guitar.

MUSC g565 Brass Instruments 1-3 credits each. Section 1, Trumpet; 2, French Horn; 3, Euphonium; 4, Trombone; 5, Tuba.

MUSC g575 Woodwind Instruments 1-3 credits each. Section 1, Flute; 2, Clarinet; 3, Oboe; 4, Bassoon; 5, Saxophone.

MUSC g585 Percussion Instruments 1-3 credits each.

Department of Physics

Chair and Professor Dale
Professors: Brey, Gesell, Shropshire, Wells
Associate Professors: Cole, Keeter, Tatar
Senior Lecturer: Hackworth
Research Associate Professor: Hunt
Research Assistant Professors: Chandler, Forest
Adjunct Faculty: DeVeaux, Graham, Harker, Jones, Nieschmidt, Otis, Schrader
Affiliate Faculty: Cummings, Davidson, Hall, Harker, Langley, Nigg, O'Rear, Roney, White
Emeritus Faculty: Parker, Price, Vegors

Goals: All Programs

The objectives of our graduate degrees, which are the M.S., M.N.S., and a Ph.D. in Applied Physics, are to develop a core competence in the fundamental physical science that is appropriate for the level of the degree, to develop more generalized skills of quantitative reasoning that are applicable to any discipline, and to understand the nature and influence of physics in particular, and science in general, upon our society. Additional objectives for these students include the development of (1) broad, fundamental technical skills and knowledge, (2) strong communication skills, and (3) the capability to think critically and work independently. The expectations for each of these objectives has a "level" that is appropriate for the degree.

The Department offers two emphases in its Applied Physics programs. These are Health Physics, which is the science and practice of radiation protection, and Physics, which is the science and application of the physical laws of nature.

The learning objectives of the M.S. degree with an emphasis in physics, are mastery of the "core" subjects of electromagnatism, non-relativistic quantum mechanics, and theoretical methods of classical physics (principally mechanics) at the highest levels. This degree also requires completion of an original research thesis project with the objective of mastery of planning, completing, and publishing original research in physics.

The objectives of the Idaho State University Health Physics M.S. program are to produce health physicists with broad, yet fundamental, technical knowledge, written and verbal communication skills, professional judgement and capability to think critically, practical experience in solving applied health-physics problems, the ability to work independently, and a professional ethic of magnitude sufficient for students to productively and successfully work in a variety of health-physics settings.

The M.N.S. degree's purpose is to provide a broad spectrum of knowledge in physical science for teachers of secondary education. The technical learning objectives are flexible in order to accommodate the interests of the student, so long as the subject area is physical science. There is no thesis requirement or expectation for this degree. The communication objectives for these degrees are writing and speaking skills that are sufficient to represent themselves, their projects, and their organizations at regional, national, or international scientific meetings. Our expectations are that these students will obtain critical thinking skills and an ability to work independently at a level that will require minimal or no supervision of management or a more senior scientist.

The educational objectives of the Ph.D. degree in Applied Physics (emphasis on physics or health physics) include all of those of the M.S. programs, plus mastery of additional graduate-level classes of the student's choosing (in physics or health physics), plus completion of an original doctoral research thesis project with the objective of mastery of planning, executing, and publishing original research in physics or health physics at the highest level of the discipline. The communication objectives at this level are writing and speaking skills that are sufficient to teach in higher education, attract interest and funding to their projects, and to represent themselves, their projects and their organizations at regional, national, or international scientific meetings. Our expectations are that these students will develop critical thinking skills and an ability to work independently such that they are capable of initiating and leading their own scientific projects, and can work at a level that requires no supervision.

Doctor of Philosophy in Applied Physics

Goals

- Prepare graduates to conduct and disseminate independent scholarly research in applied physics.
- Prepare graduates for careers in academia, or related fields in the health professions, industry, or government.

Objectives

- Increase the knowledge of graduates in their chosen field of applied physics.
- Enhance the ability of graduates to contribute to their chosen field of applied physics.
- Enhance effective written and oral communication skills of graduates.

The Ph.D. program in Applied Physics is an interdisciplinary program offered by the Department of Physics that allows for a broad range of research topics. Areas of emphasis in the department include: nuclear physics applications, health physics, radiation effects in materials, biological systems and devices, accelerator physics and applications, materials science, homeland security applications, and other areas of applied nuclear science.

To attain a degree in this program, a student must demonstrate scholarly achievement and ability for independent investigation. The program will normally require approximately five years of full-time study beyond the bachelor's degree (or three years beyond the master's degree), including class work, research, and preparation of the dissertation.

Admission Requirements

All applicants must meet Idaho State University Graduate School admission requirements for doctoral programs. In addition, applicants must have attained a minimum of a bachelor's degree in physics, health physics, or a reasonably closely related field (engineering, chemistry, biology, etc.). Students with degrees in biology, for example, are excellent candidates for admission to the health physics program. The student's course of study will be determined by consultation with the department chair, the health physics program director, or the department's graduate advising committee. Students may be required to complete any missing course

material that is required for the B.S. degree in physics or health physics at Idaho State University. Continued enrollment in the program is contingent upon maintaining a 3.0 grade point average, and upon making satisfactory progress toward the degree.

A complete graduate application for classified status in the Idaho State University Physics Department Ph.D. program consists of:

1. GRE scores (normally, a minimum of 50th percentile on verbal, quantitative, or analytical is required for classified students);
2. An Idaho State University Graduate School application form, fee, and official copies of transcripts;
3. Three letters of recommendation;
4. A statement of career goals.

General Requirements

The Ph.D. degree requires completion of at least 84 credits. Of these, at least 32 credits, but no more than 44 credits, must be doctoral dissertation credits (PHYS 699). Of the remaining credits, at least 4 must be graduate seminar (or equivalent, as determined by the department), electives, and the required courses listed below. Students entering the program with a master's degree may receive credit for up to 30 credits toward the Ph.D., subject to the department chair's approval. Such students should have completed the required courses as listed below (or their equivalent, as determined by the department), at Idaho State University. The required courses depend upon whether the student is enrolled in the health physics option or the physics option.

Required Courses for the health physics option (or equivalent at other institutions):

PHYS 588	Advanced Radiobiology	3 cr
PHYS 601	Quantitative Methods in Physics	3 cr
PHYS 605	Radiological Environmental Monitoring and Surveillance	3 cr
PHYS 610	Radiation Regulations	3 cr
PHYS 649	Graduate Seminar	4 cr

Required Courses for the physics option (or equivalent at other institutions):

PHYS 602	Theoretical Methods of Physics	3 cr
PHYS 611-612	Electricity and Magnetism	6 cr
PHYS 621	Classical Mechanics	3 cr
PHYS 624-625	Quantum Mechanics	6 cr
PHYS 649	Graduate Seminar	4cr

Program of Study

A departmental advisory committee consisting of graduate faculty will guide each student in establishing his or her program of course and laboratory study based upon the student's background and research interest. The advisory committee has the responsibility of ensuring that the student has adequate knowledge to support research in his or her area of research.

At the end of a full-time student's first year, unless the student has academic deficits to make up, in which case the student will have an additional year, the student will sit for a written qualifying examination for either the physics or health physics option. These exams are offered in January and September. The student will be allowed two attempts to pass this examination, and the second attempt must be the next available exam. The student will be admitted to candidacy upon passing the qualifying examination.

Students who do not pass the qualifying exam after two attempts may complete an M.S. degree (see below).

A dissertation committee of four departmental members and a GFR, chaired by the candidate's major professor, will be appointed within six months of passing the qualifying examination. Within one year of passing the qualifying exam, the full-time candidate, with guidance from the major professor, will satisfactorily complete an oral presentation and defense of a proposal for dissertation research to the student's dissertation committee.

The research and dissertation preparation must be done under the close supervision of the committee and must include at least one full year of work performed under the supervision of Idaho State University graduate faculty.

Dissertation approval requires a public presentation of the dissertation and a satisfactory oral defense to the dissertation committee. Doctoral oral examinations are open to all regular members of the graduate faculty as observers. Further, oral presentations are open to the public until questioning by the dissertation committee begins.

Doctor of Philosophy in Engineering and Applied Science

This Ph.D. program is available to students wishing to study mathematics applied to problems in subsurface science. The complete program description is provided under the College of Engineering section of the *Graduate Catalog*.

Master of Science Programs

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with departmental requirements:

A complete graduate application for classified status in the Idaho State University Physics Department consists of:

1. GRE aptitude scores;
2. An Idaho State University Graduate School Application form, fees, and official copies of transcripts;
3. Three letters of recommendation.

Applicants must hold the degree of Bachelor of Science or Bachelor of Arts in Physics, or a closely related field for the physics emphasis, or a B.S. or B.A. degree in health physics, biology, chemistry, physics, engineering, or similar field for the health physics option, as determined by the department. The student's course of study will be determined by consultation and possibly an entrance examination. Students will normally be required to complete as deficiencies any courses required for the B.S. in Physics at Idaho State University which they have not already taken. Continued enrollment in the program is contingent upon maintaining a 3.0 grade point average and upon making satisfactory progress toward the degree.

Master of Science (Physics Emphasis):

A satisfactory score on physics examinations) may be required before admission to candidacy.

Required Courses

PHYS 602	Theoretical Methods of Physics	3 cr
PHYS 611	Electricity and Magnetism	3 cr
PHYS 624-625	Quantum Mechanics	6 cr

8-12 additional credits in courses approved by the student's advisor, department Chair, and the Graduate School.

PHYS 650	Thesis	6 cr

Also required are six credits for the thesis option or 6-10 credits in additional courses approved by the graduate faculty in the department for the non-thesis option. An oral examination is required for the thesis option.

In the Ph.D. program, a non-thesis option is available to students who do not pass the qualifying exam.

Master of Science (Health Physics Emphasis):

The Department of Physics additionally offers the M.S. option in Health Physics. Health physics, an applied science, is concerned with the protection of humans and their environment from the possible harmful effects of radiation while providing for its beneficial uses. It is a multi-disciplined profession that incorporates aspects of both the physical and biological sciences. M.S. students completing this degree program receive a Master of Science degree in Physics with Emphasis in Health Physics indicated on their transcripts.

Students may enter the M.S. program in Health Physics from several undergraduate majors including health physics, physics, chemistry, biology, and other science or engineering majors. Additional course work to correct deficiencies may be necessary.

Admission Requirements

For admission, the student must apply to, and meet all criteria for, admission to the Graduate School, including a baccalaureate degree in a physical or biological science or engineering.

General Requirements

The basic program requirements are 33 credits, of which 15 credits must be at the 600-course level. Six of the eighteen required credits may be thesis. The normal core program is listed below. Students who are prepared with some education and experience in health physics will likely not need all of the elective health physics courses. Therefore, the student's program will be determined in consultation with the student's advisor and committee and can include electives to meet his/her needs. An oral examination in defense of the thesis is required for the thesis option. In the Ph.D. program, a non-thesis option is available to students who do not pass the qualifying exam.

Required Courses

PHYS 588	Advanced Radiobiology	3 cr
PHYS 601	Quantitative Methods in Physics	3 cr
PHYS 605	Radiological Environmental Monitoring and Surveillance	3 cr
PHYS 610	Radiation Regulations	3 cr
PHYS 650	Thesis	6 cr
	TOTAL:	18 cr

Electives - may be required if not taken at the undergraduate level.

PHYS 509	Introductory Nuclear Physics	3 cr
PHYS 516	Introduction to Nuclear Measurements	3 cr
PHYS 531	Radiation Physics I	3 cr
PHYS 532	Radiation Physics II	3 cr
PHYS 533	External Dosimetry	3 cr
PHYS 534	Internal Dosimetry	3 cr
PHYS 555	Topics in Health Physics I	2 cr
PHYS 556	Topics in Health Physics II	2 cr
PHYS 592	Colloquium in Physics (may be repeated)	1 cr

Master of Natural Science in Physics

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School.

The Master of Natural Science (MNS) in Physics is designed primarily for teachers and prospective teachers who want to improve their understanding of the subject matter of physics. Emphasis is upon the subject matter and is generally not a thesis program. Individuals interested in this degree should hold a teaching certificate or be working toward one.

General Requirements

The student's program will be determined in consultation with the student's advisor and committee. The program requires a minimum of 30 credits, 22 of which must be in residence. A final oral examination is required.

Physics Graduate Courses

PHYS g503 - g504 Advanced Modern Physics 3 credits. Study of the elementary principles of quantum mechanics and an introduction to atomic, solid state and nuclear physics. Quantum mechanics will be used as much as possible. PHYS g503 is a PREREQ for g504. PREREQ: MATH 360 OR EQUIVALENT, AND PHYS 301.

PHYS g505 Advanced Laboratory 2 credits. Experiments in radiation detection and measurement, nuclear spectroscopy including x-ray and gamma spectroscopies, neutron activation and ion beam methods. Available to Geology, Engineering, Health Physics, and Physics majors. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g506 Advanced Physics Laboratory 2 credits. Senior projects providing a capstone to the physics major curriculum. Written and oral presentation of the project procedures and results are required. PREREQ: PHYS g505.

PHYS g509 Introductory Nuclear Physics 3 credits. A course in Nuclear Physics with emphasis upon structural models, radioactivity, nuclear reactions, fission and fusion. PREREQ: KNOWLEDGE OF ELEMENTARY QUANTUM MECHANICS AND DIFFERENTIAL EQUATIONS OR PERMISSION OF INSTRUCTOR.

PHYS g510 Science in American Society 2 credits. Observational basis of science; technology's historical influences on scientific developments; perceptions of science in contemporary America; tools/strategies for teaching science. Cross-listed as GEOL g510. PREREQ: JUNIOR STANDING AND PERMISSION OF INSTRUCTOR.

PHYS g511 Accelerator Health Physics 3 credits. Fundamentals of particle accelerator design and operation. Examination of the potential radiation environment associated with accelerators and health and safety issues of their operation. PREREQ: SENIOR STANDING IN HEALTH PHYSICS OR PERMISSION OF INSTRUCTOR.

PHYS g512 Environmental Health Physics 3 credits. State-of-the-art applied mathematical techniques for estimating the release, transport, and fate of contaminants in multimedia environmental pathways (air, groundwater, terrestrial). Both radiological and non-radiological contaminants will be addressed, with emphasis on radiological contaminants. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g513 Fundamentals of Industrial Hygiene 3 credits. Overview on the recognition, evaluation, and control of hazards arising from physical agents in the occupational environment. The exposure consequences associated with agents of major occupational health concerns are considered. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g515 Statistical Physics 3 credits. Topics covered may include kinetic theory, elementary statistical mechanics, random motion and the theory of noise. Choice of topics will depend upon the interest of the students and instructor. PREREQ: PHYS 212, MATH 360.

PHYS g516 Radiation Detection and Measurement 3 credits. Lecture/laboratory course emphasizing practical measurement techniques in nuclear physics. PREREQ: CHEM 111, CHEM L111, CHEM 112, CHEM L112, AND EITHER (PHYS 111 AND PHYS 113) OR (PHYS 211 AND PHYS 213).

PHYS g517 Industrial and Aerosol Physics 3 credits. This course focuses on two distinct subject areas: an elaboration on the details of the ACGIH method of local exhaust-system design, and a study of applied aerosol physics based upon trajectory analysis. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g518 Non-ionizing Radiation Protection 3 credits. Occupational safety and heath issues of human exposure to non-ionizing radiation. Topics include health concerns and safety strategies developed for extremely low frequency, microwave, ratio-frequency, ultraviolet, infrared, laser radiation, and sound waves. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g519 Radiological Emergency Planning 3 credits. Radiological emergency planning for facilities ranging from reactors and other major nuclear facilities to transportation accidents and smaller-scale nuclear accidents. Topics include planning, coordination, "exercises", exposure pathways, modeling, measurement, control, decontamination, and recovery. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g520 Reactor Health Physics 3 credits. Introduction to reactor physics; nuances peculiar to reactor health physics; reactor designs. Critiques of exposure pathways accidents, decommissioning, contamination control, and emergency planning examine radiation safety approaches within the nuclear fuel cycle. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g521-422 Electricity and Magnetism 3 credits. Intermediate course in fundamental principles of electrical and magnetic theory. Free use will be made of vector analysis and differential equations. PHYS g521 is a PREREQ for g522. PREREQ: PHYS 212 AND MATH 360.

PHYS g531 Radiation Physics I 3 credits. Atomic and nuclear structure, series and differential-equation descriptions of radioactive decay, physical theory of the interaction of radiation with matter suitable fore the discipline of Health Physics. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g532 Radiation Physics II 3 credits. Continuation of g531 considering dosimetric quantities/units, theory and technology of radiation detection and measurement, and radiobiology important to an advanced understanding of radiation protection. PREREQ: PHYS g531 OR PERMISSION OF INSTRUCTOR.

PHYS g533 External Dosimetry 3 credits. A lecture course emphasizing external radiation protection including study of point kernel techniques, monte carlo modeling, and NCRP-49 methods. Also discussed are external dosimetry measurement techniques. PREREQ: PHYS g532 OR PERMISSION OF INSTRUCTOR.

PHYS g534 Internal Dosimetry 3 credits. A lecture course emphasizing internal radiation protection including studies of ICRP-2, ICRP-26&30, ICRP-60&66, and MIRD methods of internal dosimetry. PREREQ: PHYS g533 OR PERMISSION OF INSTRUCTOR.

PHYS g542 Solid State Physics 3 credits. Introduction to the field of solid state physics emphasizing the fundamental concepts. Topics usually covered are crystal structure, X-ray diffraction, crystal binding energies, free electron theory of solids, energy bands. PREREQ: PHYS 301, PHYS g583, MATH 360 OR PERMISSION OF INSTRUCTOR.

PHYS g552 Intermediate Optics 3 credits. Wave theory, e/m waves, production of light, measurement of light, reflection, refraction, interference, diffraction, polarization, optical systems, matrix methods, Jones vectors, Fourier optics, propagation of e/m waives in materials, atmospheric optics. PREREQ: PHYS 212. COREQ: MATH 360

PHYS g553 Topics in Astrophysics 2 credits. Applications of physics to astronomy or cosmology. May include lab exercise. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g555 Topics in Health Physics I 2 credits. A lecture/seminar course covering special topics in Health Physics such as state and federal regulations, waste disposal methodology, and emergency procedures. PREREQ: PHYS g532 OR PERMISSION OF INSTRUCTOR.

PHYS g556 Topics in Health Physics II 2 credits. A continuation of g555. A lecture/seminar course covering special topics in Health Physics such as state and federal regulations, waste disposal methodology, and emergency procedures. PREREQ: PHYS g532 OR PERMISSION OF INSTRUCTOR.

PHYS g561-g562 Introduction to Mathematical Physics 3 credits. Introduction to the mathematics most commonly used in physics with applications to and practice in solving physical problems; includes vector analysis, ordinary and partial differential equations. PHYS g561 is a PREREQ for g562. PREREQ: PHYS 212 AND MATH 360.

PHYS g583 Theoretical Mechanics 4 credits. Detailed study of the motion of particles, satellites, rigid bodies and oscillating systems. Develop and apply Langrangian and Hamiltonian methods. PREREQ: PHYS 212 AND MATH 360.

PHYS g588 Advanced Radiobiology 3 credits. An advanced-level class covering aspects of molecular radiobiology, teratogenesis, oncogenesis, and acute radiation illnesses. It also considers nonstochastic radiation effects and the epidemiology of radiation exposures. Cross-listed as BIOL g588. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS g590 ABHP Review 3 credits. A course for practicing professionals aimed at the development and improvement of skills. PREREQ: PERMISSION OF INSTRUCTOR. May be graded S/U.

PHYS g592 Colloquium in Physics 1 credit. Faculty and student lectures in current research topics in physics. Open to upper division and graduate students in physics. May be repeated to a maximum of 4 credits.

PHYS 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

PHYS 601 Quantitative Methods in Physics 3 credits. A review of the principles of physics and quantitative methods used: calculus, elementary differential equations and statistics. Designed for graduate students in the biosciences, chemistry, geology and interdisciplinary sciences.

PHYS 602 Theoretical Methods of Physics 3 credits. Calculus of variations, Lagrangian and Hamiltonian formalisms of classical mechanics, some classical scattering theory, methods of solving PDEs, Green's functions, functions of complex variables, vector and tensor analysis, matrix, group and operator theory, and numerical methods integrated throughout each topic.

PHYS 603 Particle Physics 3 credits. Basic constituents of the standard model, experimental methods, particle interactions: weak, gravitational, strong and electromagnetic, conservation laws, hadron structure and interactions, unification of interactions, physics beyond the standard model. PREREQ: PHYS 624 OR PERMISSION OF INSTRUCTOR.

PHYS 605 Radiological Environmental Monitoring and Surveillance 3 credits. Advanced considerations in the design of monitoring programs. Sampling and analytical measurement programs for specific radionuclides and sources with emphasis in quality assurance.

PHYS 609 Advanced Nuclear Physics 3 credits. Nucleon-nucleon interaction, bulk nuclear structure, microscopic models of nuclear structure, collective models of nuclear structure, nuclear decays and reactions, electromagnetic interactions, weak interactions, strong interactions, nucleon structure, nuclear applications, current topics in nuclear physics. PREREQ: PHYS 624 OR PERMISSION OF INSTRUCTOR.

PHYS 610 Radiation Regulations 3 credits. Covers regulation of ionizing and non-ionizing radiation. Historical, biological, and legal foundations; federal regulations; state regulations; nuclear fuel cycle; emergency response; academic and medical facilities; transportation; accelerators; NORM/NARM; non-ionizing radiation. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS 611 Electricity and Magnetism 3 credits. Maxwell's equations and methods of solution, plane wave propagation and dispersion, wave guides, antennas and other simple radiating systems, relativistic kinematics and dynamics, classical interaction of charged particles with matter, classical radiation production mechanisms.

PHYS 612 Advanced Electricity and Magnetism 3 credits. Advanced topics in application of Maxwell's equations to wave guides, antennas and other simple radiating systems. Particular emphasis upon the relativistic interaction of charged particles with matter, energy loss, and classical radiation production and absorption mechanisms. PREREQ: PHYS 611 OR PERMISSION OF INSTRUCTOR.

PHYS 615 Neutron Activation Analysis 4 credits. Theory and use of neutron activation methods for quantitative chemical analysis of natural and synthetic materials. Applications in geologic systems with be emphasized. Cross-listed as CHEM 615, GEOL 615. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS 621 Classical Mechanics 3 credits. Lagrange equations, small vibrations; Hamilton's canonical equations; Hamilton's principal, least action; contact transformation; Hamilton-Jacobi equation, perturbation theory; nonlinear mechanics. PREREQ: PHYS g583, PHYS g561-g562, OR PERMISSION OF INSTRUCTOR.

PHYS 624-625 Quantum Mechanics 3 credits. Schrodinger wave equation, stationary state solution; operators and matrices; perturbation theory, non-degenerate and degenerate cases; WKB approximation, non-harmonic oscillator, etc.; collision problems. Born approximation, method of partial waves. PHYS 624 is a PREREQ for 625. PREREQ: PHYS g561-g562, PHYS 621 OR PERMISSION OF INSTRUCTOR.

PHYS 626 Advanced Quantum Mechanics 3 credits. Elementary quantum field theory and practical applications. Emphasis upon non-relativistic and relativistic quantum electrodynamics, radiative processes, bremsstrahlung, pair-production, scattering, photo-electric effect, emission and absorption. PREREQ: PHYS 625 OR PERMISSION OF INSTRUCTOR.

PHYS 630 Accelerator Physics 3 credits. The physics of direct voltage accelerators, betatrons, sychrotrons, linear induction acceleration; high current accelerators; electromagnetic particle optics, free electron lasers and synchrotron light sources. PREREQ: PHYS 612, PHYS 624 OR EQUIVALENT.

PHYS 631 Accelerator Technology 3 credits. Topics will include high voltage and pulsed power techniques, wave guide and R.F. structures, ion and electron beam sources and beam measurements as applied to particle beam machines. PREREQ: PHYS 612 OR EQUIVALENT.

PHYS 632 Particle Beam Laboratory 1-4 credits. Laboratory projects in particle beam and ion optics, radiation detectors, ion source operation, etc. May be repeated up to 4 credits. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS 640 Statistical Mechanics 3 credits. Statistical ensembles; the Maxwell-Boltzmann law; approach to equilibrium, quantum statistical mechanics; application of statistical mechanics to thermodynamic processes. PREREQ: PHYS g515 AND PHYS 621.

PHYS 641 Field Theory, Particles, and Cosmology I 3 credits. Topics may include Dirac theory, group theory, Feynman diagrams, superstrings, super gravity, relativity and cosmology. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS 642 Field Theory, Particles, and Cosmology II 3 credits. A continuation of 641. Topics may include Dirac theory, group theory, Feynman diagrams, superstrings, super gravity, relativity and cosmology. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS 643 Advanced Solid State Physics 3 credits. Electron many-body problem, crystal and reciprocal lattice, Bloch functions, pseudo potentials, semi-conductors, transition metals, crystal momentum and coordinate representations, electric and magnetic fields, impurities and defects in crystals and semi-conductors, radiation effects on solids, lattice vibrations, electron transport. PREREQ: PHYS 624 OR PERMISSION OF INSTRUCTOR.

PHYS 648 Special Topics in Physics 1-3 credits. Survey, seminar, or project (usually at an advanced level) in one area of physics. Content varies depending upon the desires of the students and faculty. May be repeated until 6 credits are earned. PREREQ: PERMISSION OF INSTRUCTOR.

PHYS 649 Graduate Seminar 1 credit. Advanced seminar topics in currently-active areas of applied physics. Students will be required to provide presentations and may be required to submit a paper. Four credits required.

PHYS 650 Thesis 1-10 credits. Graded S/U .

PHYS 850 Doctoral Dissertation Variable credit. Research toward and completion of the dissertation. Graded S/U.

Department of Political Science

Chair and Professor Gabardi
Professors: Adler, Anderson, McBeth
Associate Professor: Lybecker
Assistant Professor: Carlisle, Newman
Adjunct Faculty: Chambers, Eckert, Phippen
Emeritus Faculty: Burns, Hjelm, Maughan

Doctor of Arts in Political Science

This program is intended for students interested in careers teaching political science in a variety of higher education settings ranging from community colleges to universities. Doctor of Arts recipients are prepared to teach a variety of political science courses including those in American politics and in two additional specialties selected from among the fields of public law, political theory, comparative/international politics, and public administration. Doctor of Arts students will have three interdisciplinary options to choose from. Option #1: D.A. students will take 9 credits each in TWO of the following five cooperating social science departments: Anthropology, Economics, History, Psychology, and Sociology. Option #2: D.A. students will take 18 credits in ONE of the following five cooperating social science departments: Anthropology, Economics, History, Psychology, and Sociology. Option #3: D.A. students will take 18 credits from at least two of the five cooperating social science departments: Anthropology, Economics, History, Psychology, and Sociology built around an interdisciplinary theme such as methodology or theory (courses and theme must be pre-approved by the chair of the student's D.A. committee).

The D.A. in political science is generalist in nature. The emphasis is on a thorough grounding in political science supported by work in committee-approved social science disciplines. The program places emphasis on teaching political science rather than on the development of a narrow research specialty. A nine-credit-hour component of the program includes the development of pedagogical skills as well as sustained experience in the classroom.

Goals

1. Graduates will demonstrate literature-based knowledge in three subfields of political science.
2. Graduates will gain this knowledge of political science through an interdisciplinary approach that includes course work in one or two cognate social science disciplines.
3. Graduates will have extensive training in pedagogy, craft a distinct teaching philosophy, and demonstrate a variety of pedagogical techniques and skills.
4. Graduates will demonstrate their research skills by presenting their work at professional conferences and/or submitting their work for publication review.
5. Graduates will gain employment and establish their careers in higher education.

Admission Requirements

For full admission to the Doctor of Arts program, the applicant should have a cumulative GPA of 3.0 for the last two years of undergraduate study, an average score in the 50th percentile or above on any one of the three sections of the GRE exam, and a 3.5 GPA in all previous graduate study. The candidate must also submit to the Department of Political Science three letters of recommendation and a statement of his/her personal goals that will be weighted equally with the applicant's GPA and GRE scores.

The program also employs an admission scoring system which awards D.A. applicants points based on the evaluation and scoring of four components: (1) upper-division undergraduate GPA or GPA in an MA program; (2)

scores on the Graduate Record Exam (GRE); (3) the quality of letters of recommendation; and (4) the quality of the applicant's goal statement. Applicants who are slightly under official admission requirements may be admitted if they are given an overall favorable admissions score.

General Requirements

An applicant entering with a B.A. or B.S. degree must fulfill a minimum of 79 credit hours including the teaching internship and up to a maximum of six dissertation credits. No more than 18 interdisciplinary credit hours (exclusive of interdisciplinary seminars) count toward the 79 credit hour minimum requirement. Candidates have the option of completing the M.A. or M.P.A. in political science en route to the D.A.; if they choose the non-thesis M.A. or M.P.A. program, only 30 hours of course work from the M.A. or M.P.A. will apply to the Doctor of Arts program. Candidates entering the Doctor of Arts program with M.A. degrees must complete a minimum of 49 credit hours, including two full-time consecutive semesters in residence, including a maximum six hours of dissertation credit. The total length and number of credit hours of a student's program, above the minimum, is dependent upon the student's academic preparation and his/her committee's recommendations.

Political Science

Doctoral students are examined in three fields of political science. For all doctoral students, the major field of American politics is required.

1. American Politics, and
2. Any two of the following fields:
   a. Public Law
   b. Political Theory
   c. Comparative/International Politics
   d. Public Administration

Doctor of Arts students are required to take nine hours of 600-level seminar courses (not including POLS 694) selected from the following courses: POLS 611, 612, 613, 614, and 615. Students may repeat these courses, even from the same professor, as long as the subject matter is different. Each course can only be repeated once. D.A. students are required to complete the methodology course POLS 519, 519L. Doctor of Arts students are also required to take POLS 850, Dissertation, for a minimum of 3 credits.

Doctor of Arts students write a doctoral dissertation that may deal with either substantive disciplinary issues or pedagogical innovations or techniques. The D.A. student committee will consist of two political science faculty and a Graduate Faculty Representative (GFR). The student may request a professor from his/her interdisciplinary area to serve as the G.F.R.

After the successful completion of written comprehensive examinations, the D.A. student is required to present and defend a dissertation prospectus to the doctoral committee. The D.A. student may elect to have a public presentation of the dissertation prospectus (a colloquium) separate from the prospectus defense. When the candidate's committee determines that the dissertation is ready for a defense, there will be a public presentation by the student followed by a closed and balloted defense of the dissertation with the candidate and the committee.

Pedagogy

Students must complete a nine-credit component of pedagogy to include POLS 694, POLS 702, and POLS 703.

Interdisciplinary Component

Option #1:

D.A. students will take 9 credits each in TWO of the following five cooperating social science departments: Anthropology, Economics, History, Psychology, and Sociology.

Option #2:

D.A. students will take 18 credits in ONE of the following five cooperating social science departments: Anthropology, Economics, History, Psychology, and Sociology.

Option #3:

D.A. students will take 18 credits from at least two of the five cooperating social science departments: Anthropology, Economics, History, Psychology, and Sociology built around an interdisciplinary theme such as methodology or theory (courses and theme must be pre-approved by the chair of the student's D.A. committee).

Interdisciplinary Classes

D.A. students must take POLS 620, Philosophy of the Social Sciences, and POLS 621, Interdisciplinary Topics in the Social Sciences.

Examinations

Comprehensive written examinations are administered at the conclusion of the program of study that test the candidate's knowledge of three fields of political science. This occurs after all course work is completed and before the dissertation prospectus is defended.

Master of Arts in Political Science

The mission of the Master of Arts (MA) program is to prepare students for future graduate study in political science by helping them develop knowledge and skill in political science and research methodology. This program emphasizes general preparation in political science and research.

Specific outcomes of the program include:

Goals

1. Graduates will master literature-based knowledge in two areas of political science.
2. Graduates will develop an understanding of political science research methodology and the role of research in academia.
3. Graduates will further their graduate careers by pursuing a doctorate in political science.
4. Graduates pursuing a terminal degree will find professional employment in education, public service, and business.

Objectives

1. Graduates will pass comprehensive examinations.
2. Graduates will present papers at professional conferences.
3. Graduates will be accepted into doctoral graduate programs.
4. Graduates will find employment in education, public service, and business.

Thesis/non-thesis options are available.

Areas of emphasis in the M.A. program are limited, because of the research nature of the degree, to American governmental institutions and political behavior, public law, political theory, public administration and comparative/international politics.

M.A. students are required to present themselves for comprehensive examination on

their thesis and/or in two of the five areas of emphasis mentioned previously.

Admission Requirements

The student must apply to, and meet all criteria for admission to the Graduate School. In addition to the general requirements of the Graduate School, a student must have achieved a cumulative GPA of 3.0 in upper-division undergraduate study, and submit official GRE scores. The applicant must also submit to the Department of Political Science three letters of recommendation and a statement of his/her personal goals that will be weighted equally with the applicant's GPA and GRE scores.

The program employs an admission scoring system that awards M.A. applicants points based on the evaluation and scoring of four components: (1) upper-division undergraduate GPA; (2) scores on the Graduate Record Examination (GRE); (3) the quality of letters of recommendation; and (4) the quality of the applicant's goal statement.

Students may choose a thesis or non-thesis program. The requirements for these respective options are detailed below.

Thesis Program

Requirements include a total of 36 credits in graduate level courses approved by the Department of Political Science and the Graduate School. Internship credits are not counted as part of the 36 total credit requirement. Required courses are POLS 519 and POLS 519L (Political Research Methods, 4 credits) and POLS 650 (Thesis, 6 credits). Students must also complete course work in two subfields. Other requirements include a minimum of 15 credits (other than POLS 650) taken at the 600-level; a maximum of 9 credits of directed reading courses; a comprehensive oral examination that covers the student's graduate course work and the literature in two subfields; and the M.A. thesis. The thesis may be defended a second time if the first defense is not satisfactory and further revisions are required.

Non-thesis Program

Political Research Methods, POLS 519 and 519L, are required. Other requirements include a total of 36 credits in graduate level courses approved by the Department of Political Science and the Graduate School; a minimum of 15 credits taken at the 600-level; a maximum of 9 credits of directed reading courses; a comprehensive written examination that covers the student's graduate course work and the literature in two subfields; and a final oral examination, which, like the final written examination, may be taken no more than twice. Internship credits are not counted as part of the 36 total credit requirement.

Master of Public Administration

The Master in Public Administration degree is an inter-university cooperative graduate program offered jointly by Boise State University, Idaho State University and the University of Idaho. The purpose of the program is to provide present and prospective public administrators with the basic intellectual preparation necessary to understand and to adjust to a changing and challenging environment, through an introduction to the theories and practices of administration, management and social science research as these relate to effective performance in public organizations.

The inter-university MPA program has been designed in accordance with the Guidelines and Standards for Professional Master's Degree Programs in Public Affairs and Public Administration prescribed through the National Association of Schools of Public Affairs and Administration (NASPAA).

Goals

1. Graduates will develop an appreciation of serving the public interest.
2. Graduates will respect the law and the Constitution.
3. Graduates will demonstrate personal integrity.
4. Graduates will promote ethical organizations.
5. Graduates will develop distinctive public administration skills.
6. Graduates will strive for professional excellence and updating of skills throughout their professional careers.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with departmental requirements. Students may enroll in the MPA program by applying to one of the participating universities. Acceptance by any one of the three universities admits a student into the MPA program. A matriculated student should complete graduate studies at the institution that offers the area of specialization that she/he wishes to emphasize. Each student's program will be established by an advisory committee consisting of three faculty members. It is anticipated that students will come from widely differing academic preparations, since no specific undergraduate program is required in preparation for the MPA program. However, some course work in humanities and social sciences is essential to the foundation of the MPA program for all students.

In addition to the general requirements of the Graduate School, students seeking admission must have completed a baccalaureate degree from an accredited institution, demonstrate satisfactory academic competency by attaining a cumulative GPA of 3.0 in upper-division undergraduate course work, or a 3.5 GPA in previous graduate courses, submit official GRE scores, submit three letters of recommendation from individuals who are qualified to evaluate the applicant's academic potential, and submit a statement of the student's personal goals. The letters and statement of goals will be weighted equally with the applicant's GPA and GRE scores. Please contact the Department for specific guidelines for letters of recommendation and statement of goals.

The program employs an admission scoring system that awards MPA applicants points based on the evaluation and scoring of four components: (1) upper-division undergraduate GPA or GPA in an M.A. program; (2) scores on the Graduate Record Examination (GRE); (3) the quality of letters of recommendation; and (4) the quality of the applicant's goal statement.

General Requirements

The MPA degree may be achieved through the successful completion of at least 30 semester credit hours of approved course work plus 6 credits of public service internship. Eighteen credit hours must be completed in courses selected from prescribed "core areas" with 12 additional credit hours completed in designated optional areas of emphasis. Students may follow a thesis or non-thesis option in pursuing the MPA. Students choosing to write a thesis (POLS 650 - 6 credits) do so in addition to normal MPA course work and internship requirements. The thesis is

written in lieu of the comprehensive written examinations. All MPA applicants must complete final examinations. Those following the thesis option will complete an oral examination covering the thesis and program course work. The non-thesis option requires a written and an oral examination over program course work. The academic program of each student must satisfy the general requirements of an integrated program designed to meet career objectives of the student in public administration.

Core and Optional Area Requirements

The specific course requirements of the MPA program are set forth in a list of courses that has been approved by the inter-university committee. This list is available through each of the cooperating universities. Courses are available at each institution in the "core areas." The optional "areas of emphasis" may vary among the universities according to the resources and competence that exist in the respective departments. A description of those areas of emphasis that are presently operational at each institution and admission forms to the MPA program are available through the Political Science Department at Idaho State University or the Departments of Political Science at Boise State University or the University of Idaho.

I. Core Area Requirements

All students must take 18 credit hours of core area courses. Each student must choose at least one course from each area; Political Science 551 is required for **all** students.

Area 1 Management of Public Service Organizations

POLS 541	Administrative Law
POLS 552	Financial Administration and Budgeting
POLS 554	Public Personnel Administration
POLS 558	Public Administration Ethics

Area 2 Methodology and Policy Analysis

POLS 553	Public Policy Analysis
POLS 622	Public Administration Research Methods
POLS 623	Program Assessment

Area 3 Public Policy, Organizational Theory, and Grantwriting

POLS 505	The Administrative Process
POLS 551	Organizational Theory & Bureaucratic Structure
POLS 557	Grantwriting

II. Specialized Areas

All students must take 12 credit hours in a specialized areas listed below. Courses that are used to fulfill a core requirement cannot also be counted as a specialized course. (Students should follow instructions under each specialized area.)

Specialized Area 1 State, Local, and Non-Profit Administration

Choose four courses:

POLS 503	The Presidency
POLS 506	Intergovernmental Relations
POLS 509	Community and Regional Planning
POLS 541	Administrative Law
POLS 557	Grantwriting
POLS 567	State and Local Administration
POLS 612	Seminar: State and Local Politics
POLS 623	Program Assessment
POLS 669	Independent Problems
ECON 539	State and Local Finance
GEOL 503	Principles of GIS
SOC 566	Sociology of Community

Specialized Area 2 Environmental Administration

Required course:

POLS 555	Politics of Environmental Problems

Choose three courses:

POLS 541	Administrative Law
POLS 553	Public Policy Analysis
POLS 566	Public Lands Policy
POLS 623	Program Assessment
GEOL 503	Principles of GIS

Students may take other graduate-level courses with an environmental emphasis from Biology, Geology, or Engineering, or other departments as approved by student's MPA committee.

Specialized Area 3 Public Health Administration:

Choose four courses:

POLS 553	Public Policy Analysis
POLS 557	Grantwriting
POLS 623	Program Assessment

You must take other graduate-level courses from Health Care Administration (HCA), Health Education (HE), Master of Public Health (MPH), and Philosophy (Philosophy 600, Ethics in Health Care), as approved by your graduate chair. A class in health care ethics is strongly recommended.

Specialized Area 4 The Legal Environment of Administration

Required courses:

SOC 531	Criminology
POLS 543	Constitutional Law (Civil Liberties)

Choose two courses:

POLS 504	Legislative Process
POLS 506	Intergovernmental Relations
POLS 541	Administrative Law
POLS 542	Constitutional Law (Separation of Powers)
POLS 669	Independent Problem

III. Public Administration Internship

Each student must complete 6 credit hours of an approved internship.

American Politics Graduate Courses

POLS g501 Political Parties and Interest Groups 3 credits. The nature and development of political parties and pressure groups as exemplified in the United States.

POLS g503 The Presidency 3 credits. Evolution and development of the office of the president; its major responsibilities in domestic and foreign affairs, with emphasis on particular power problems that confront the president.

POLS g504 The Legislative Process 3 credits. Nature and functions of the U.S. Congress. Topics covered: Legislative campaigns, the politics of law-making, congressional investigations, and major problems facing the Congress.

POLS g506 Intergovernmental Relations 3 credits. Analysis of patterns of intergovernmental relations including changing patterns of program and fiscal responsibility in the federal system. The emerging role of new federal structures, state and substate regional organizations will be reviewed in the context of "new" federalism and its implications for intergovernmental relationships.

POLS g508 Metropolitan and Urban Studies 3 credits. Analysis of metropolitan and smaller urban systems with emphasis on relationships among general groups, political organizations and institutions. Federal, state and interlocal programs will serve as a focus for analyzing particular problems of metropolitan and urban systems in the 20th century.

POLS g509 Community and Regional Planning 3 credits. Steps involved in planning will be analyzed in the context of community and regional decision-making processes. Two perspectives will be stressed—that of the decision-maker, the social structure within which the decision-maker operates and strategies for implementing decision; and that of the citizen or group interest which lies outside the power structure of the community. Each perspective will be used as a framework for analyzing power configurations, techniques of identifying patterns of decision making, and various forms of citizen participation.

POLS g527 Voting and Public Opinion 3 credits. Analysis of the way citizens and government communicate with each other. Elections, public opinion, and media influence are studied.

POLS g553 Public Policy Analysis 3 credits. Theoretical and practical analyses of public policies, including theories of policy formation and their political implementation through governmental institutions. Case studies will provide the means of analyzing specific policy problems.

POLS g555 Environmental Politics and Policy 3 credits. Study of the political forces affecting

environmental policy and investigation of several specific policies affecting the environment, such as pollution control, energy production, hazardous chemicals, and the public lands.

POLS g556 Labor Organization 3 credits. Evolution of economic systems and labor's response to changing patterns of production is studied, and a counter perspective to traditional management views of "efficiency" is presented. Emphasis is on governmental employee unions.

POLS g565 .S. Political History 3 credits. Study of the political history of the United States involving a discussion of theories of popular voting behavior, critical elections, and political party systems. Cross-listed as HIST g465.

POLS g566 Public Lands Policy 3 credits. Analysis of the historical and contemporary use and disposition of the federal public lands. The agencies that manage the public lands, major laws, and regulations and the political conflict that surrounds their use and conservation.

POLS g571 Historical Geography of Idaho 3 credits. Influences of geography and geology on Idaho's economic, political and cultural history. May be team taught, and includes field trips, discussion sections. Cross-listed as HIST g571 and GEOL g571.

POLS g578 Federal Indian Law 3 credits. Examination of tribal governments; their relationship with the federal government; sovereignty, jurisdictional conflicts over land and resources; and economic development. Cross-listed as ANTH g578.

POLS g579 Tribal Government 3 credits. Complex legal position of Indian tribes as self-governing entities; principles of inherent powers; governmental organization, lawmaking, justice, relation to state and federal government. Cross-listed as ANTH g579.

Political Analysis Graduate Courses

POLS g512 Modern Political Analysis 3 credits. Methods of political inquiry and theories and doctrines of politics, with emphasis on modern developments.

POLS g519 Political Research Methods 3 credits. This class investigates the theory and application of various research methods and statistical techniques common to the social sciences, with particular reference to their use in political inquiry.

POLS g519L Political Research Methods Lab 1 credit. Application of, and practice in research methods.

Administrative Graduate Courses

POLS g505 Administrative Process 3 credits. Analysis of the principles of public administration with an introduction to theories of organization and administration.

POLS g541 Administrative Law 3 credits. Introductory survey of the legal principals defining governmental administrative processes. Topics include judicial review, tort liability of governments and offices, rules and rule-making, due process, and the limits of administrative discretion.

POLS g551 Organizational Theory and Bureaucratic Structure 3 credits. Introduction to the study of complex organizations and organizational behavior in the administration of public policy. Emphasis on public institutions.

POLS g552 Financial Administration and Budgeting 3 credits. Emphasis on different approaches to financial administration, ranging from incremental and short-term planning to more recent and comprehensive emphases on management by objectives and zero-based budgeting. The development of the Office of Management and Budget and its relationship with the President, Congress and the Federal bureaucracy will be considered as well as political, organizational and behavioral constraints on budgetary decision-making.

POLS g554 Public Personnel Administration 3 credits. Operations and processes of personnel management in public institutions. Major topics include personnel processes, public employee rights and duties, employee motivation and morale, the political environment of public personnel administration, and the impact of professionalism, technology, and participatory democracy on public personnel practices.

POLS g557 Grantwriting 3 credits. Steps involved in the grantwriting process from strategic planning, research, writing to finding appropriate grant sources.

POLS g558 Public Administration Ethics 3 credits. A course in applied ethics serving to educate students from a theoretical and a practical point of view. The course provides a historical and social perspective of ethics in public administration.

POLS g567 State and Local Administration 3 credits. Seminar in the practice and principles of state, municipal, and sub-state management. Emphasis is given to the evolution of interaction between different branches of sub-national government.

Political Theory Graduate Courses

POLS g511 American Political Theory 3 credits. Political ideas in the United States from Colonial and Revolutionary times through the controversies of the Civil War to the present.

POLS g518 Topics in Political Theory 3 credits. This course requires examination, analysis and investigation of selected texts and topics in political philosophy. May be repeated for a maximum of 6 credits.

POLS g520 Contemporary Political Theory 3 credits. Recent 20th century political philosophies and theories ranging from democratic, Marxist, and existentialist thought to Critical Theory and post-modernism.

POLS g521 Democratic Political Thought 3 credits. Historical and contemporary models of democracy as well as contemporary debates in democratic thought. Democracy is treated as a contested idea.

International Politics Graduate Courses

POLS g525 Topics in International Politics 3 credits. This course requires examination analysis and evaluation of selected topics in international politics. May be repeated for a maximum of 6 credits.

Comparative Politics Graduate Courses

POLS g532 Comparative Politics: Change and Political Order 3 credits. The nature of political change is examined in a multifaceted framework consisting of concepts such as political order, progress and decay, revolutionary violence, and political culture. The technological and post-industrial revolutions are examined as they relate to political change and stability in developed societies.

POLS g533 Politics of Developing Nations 3 credits. An examination of political change, political order, political culture and the role of revolutionary violence. Change and order in the context of globalization is emphasized.

POLS g534 Terrorism and Political Violence 3 credits. A survey of forms of domestic and transnational terrorism, other forms of political violence, and problems of counter-terrorism.

POLS g535 Topics in National/Regional Studies 3 credits. Surveys the political, economic, and social issues of a nation or regions. May be repeated once for different topics.

Public Law Graduate Courses

POLS g542 Constitutional Law 3 credits. Analysis of opinions of the United States Supreme Court concerning the distribution of authority between the national government and the states and the relationship among the branches of the national government.

POLS g543 Constitutional Law 3 credits. Analysis of opinions of the United States Supreme Court with a special emphasis on criminal cases and civil liberties.

POLS g545 Jurisprudence 3 credits. Nature, source, and theories of law; the role of law in modern society; and the application of legal philosophy to the political system.

POLS g550 Special Topics in Law 3 credits. Examine and analyze selected topics in constitutional law and legal philosophy. Topics may include the constitution and foreign affairs, women and the law, law and literature, and law and film. May be repeated for up to 6 credits.

General Graduate Courses

POLS g559 Government Internship 1-9 credits. Directed student internship in government and organizations or associations related to public policy and the selection of public officials involving supervised work experience in research, staff management practices, or making and implementing public policies. The student will be placed in a supervised position commensurate with his or her abilities as determined and approved by faculty in the department. May be repeated up to 9 credits. Graded S/U.

POLS g591-592 Seminar 1-3 credits. Research, reading, discussion, and the preparation of reports on selected topics. Ordinarily for seniors majoring in political science and having the instructor's consent. Each course may be repeated for a total of 6 credits.

POLS 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U .

POLS 606 Environmental Law and Regulation 3 credits. Federal, state, and local environmental regulations addressing environmental impact assessment; water and air pollution control, hazardous waste, resource recovery, reuses, toxic substances, occupational safety and health radiation, siting, auditing, liability. Cross-listed as ENGR 606. PREREQ: PERMISSION OF INSTRUCTOR.

POLS 608 Environmental Case Law 3 credits. The legal analysis of regulation as a method of controlling pollution and hazardous waste. PREREQ: POLS 606.

POLS 609 Environmental Law: Natural Resources 3 credits. Federal and Idaho statutes and regulations as they apply to natural resources such as public lands, endangered species, and the EIS process. PREREQ: POLS 606.

POLS 611 Seminar: Political Theory 3 credits. Review of the primary and recent literature of political theory.

POLS 612 Seminar: State and Local Politics 3 credits. Analysis of state, local and regional political institutions and processes from the federal and comparative perspectives.

POLS 613 Seminar: American Politics—Behavior 3 credits. Micro inquiry and analysis into political behavior. Areas relevant to such inquiry may include but are not limited to, political psychology, political socializations, attitude and opinion formation, and voting behavior.

POLS 614 Seminar: American Politics—Institutions 3 credits. Macro inquiry and analysis into the basic institutional structures and processes of the American political system. Areas of emphasis include, but are not limited to, executive, legislative and judicial processes, political parties and interest groups.

POLS 615 Seminar: World Politics 3 credits. World politics is analyzed both from the perspective of relationships between nation-states and the domestic political sources which influence and determine these relationships.

POLS 616 Seminar: Public Administration and Public Policy 3 credits. Analysis of selected topics and academic literature in public administration and public policy.

POLS 620 Seminar: Philosophy of Social Science 3 credits. The application of mathematical and scientific methods to the study of social, economic, and political life will be considered through the reading of certain seminal writings. Attention will be given to the fundamental assumptions about the nature of scientific rationality. Required of all D.A. students.

POLS 621 Seminar: Interdisciplinary Topics in Social Science 3 credits. Examination of selected topics in the social sciences from the analytic orientations and perspectives common and peculiar to the disciplines of political science economics and sociology. Required of all D.A. students.

POLS 622 Public Administration Research Methods 3 credits. Emphasis on the role of research methodology in administrative decision-making. Topics to be covered include modeling, evaluation design, ethics, sampling, data collection, data processing, data analysis, and report writing.

POLS 623 Program Assessment 3 credits. Techniques and analytical methods of assessing governmental program success. Emphasis is given to program designs, data collection, ethics, and quantitative applications.

POLS 649 Research Problems 1-6 credits. Independent research on non-thesis and non-dissertation disciplinary questions. Credit hours and subject must be approved by instructor. May be repeated to a maximum of 6 credits.

POLS 650 Thesis 1-6 credits. Graded S/U.

POLS 669 Independent Problems-Tutorial 1-3 credits. A directed project emphasizing individual study, research, or the development of expository writings according to the needs of the individual student. May be repeated.

POLS 694 Seminar in College Teaching 3 credits. Literature-based review of theory and practice for effective college teaching. Required of all D.A. candidates and must be successfully completed prior to matriculation in POLS 702 or POLS 703.

POLS 701 Supervised Administrative Internship in Higher Education variable up to 6 credits.

POLS 702 Team Teaching 3 credits. Doctor of Arts candidates team teach an entire course with a faculty member. PREREQ: POLS 694.

POLS 703 Solo Teaching 3 credits. Doctor of Arts candidates assume total responsibility for teaching a class. PREREQ: POLS 694 AND POLS 702.

POLS 850 Dissertation 1-9 credits. May be repeated. Graded S/U.

Department of Psychology

Chair and Professor Turley-Ames
Professors: Cellucci, Hatzenbuehler, Jackson, Roberts, Vik
Associate Professor: Lynch, Rasmussen, Wong
Assistant Professors: Brumley, Lawyer, Letzring, McCulloch, Prause,
Adjunct Faculty: Atkins, Heyneman, Landers, Larsen, Richards, Simonson, Sommer, Stephens, Traughber, Welsh

Doctor of Philosophy in Clinical Psychology

Doctoral training in clinical psychology is fully accredited by the American Psychological Association. All educational experiences needed to obtain a license to practice psychology in Idaho, and most other states and provinces, are offered. Theory, research, and practice are integrated into a comprehensive, five-year program. It is the goal of the doctoral training program to produce clinical psychologists who are well trained in the science of human behavior and its application to diverse clinical populations. All students are required to participate in course work and practica that emphasize assessments and treatments in all major areas of child and adult psychopathology. Evaluations of each student's clinical-professional development and scholarship-research skills are continuous.

Goals

Five program goals have been defined: Research Knowledge and Skills; Professional Knowledge and Skills; Integration of Science and Practice; Professional Identification and Ethical Practice; and Appreciation of Individual Differences, Cultural Differences, and Diversity of Practice. Each goal has associated objectives and competencies.

Admission Requirements

Admission requirements are as stated for the Master of Science in Psychology with the following additions: all students must have been recommended by the Clinical Admissions Committee of the Psychology Department.

General Requirements

All doctoral students must complete the Master of Science in Psychology, or its equivalent, as noted below. Students entering the doctoral training program at Idaho State University with a master's degree from another institution will receive full or partial credit, based on an examination of completed course work and research. The Department Chair, the Director of Clinical Training, and the departmental subject matter expert(s) will review all relevant documents and determine the course work and research, if any, that will be required to compensate for omissions and/or non-equivalency. The following requirements are all in addition to the Master of Science requirements.

Required Courses

Assessment Sequence

PSYC 620	Psychodiagnostic I 3 c	
PSYC 621	Psychodiagnostics II 3 cr	
PSYC 623	Advanced Psychological Measurements3cr	

Clinical Core

PSYC 512	Ethical & Professional Issues in Psychology	2 cr
PSYC 634	Cultural Diversity	3 cr
PSYC 645	Theory and Method of Psychosocial Adult Therapy I	3 cr
PSYC 646	Theory and Method of Psychosocial Adult Therapy II	3 cr
PSYC 648	Advanced Psychopathology	3 cr
PSYC 649	Psychosocial Child Therapy	3 cr
PSYC 701	Clinical Psychology	3 cr
PSYC 702	Introduction to Psychotropic Medication	2 cr
PSYC 703	Advanced Ethics Seminar	1 cr

Practicum

PSYC 517	Interdisciplinary Evaluation Team	1 cr
PSYC 724	Community Practicum0-3 cr	
PSYC 725	Psychology Clinic Practicum	4-7 cr
PSYC 749	Clinical Internship	1 cr

Research

PSYC 850	Dissertation	12 cr

Clinical Electives

Each student must complete 12 credits of clinical electives from the following options or other graduate courses approved by the Clinical Training Committee.

PSYC 563	Clinical Psychology and the Law	3 cr
PSYC 565	Behavioral Medicine	3 cr
PSYC 601	Family Assessment and Therapy	3 cr
PSYC 633	Psychology of Addictive Behaviors	3 cr
PSYC 635	Marital Assessment and Therapy	3 cr
PSYC 636	Neuropsychological Assessment	3 cr
PSYC 736	Advanced Clinical Assessment or Treatment	1-12 cr

Methodological Elective

Each student must complete an additional 3-credit course in advanced statistics acceptable to the Clinical Training Committee.

History and Systems Requirement

PSYC 672	History and Systems	3 cr

Minimum Total Credits - 71

The 12 elective credits earned for the Master of Science degree, described below, will satisfy course requirements for the Doctor of Philosophy, subject to the approval of the Departmental Chair.

Scholarship - Research Development

Upon completion of Area Requirements plus PSYC 627 and PSYC 632, doctoral students are required to pass a Qualifying Exam, both written and oral, over the area requirements and statistical/methodological topics introduced during the first two years of graduate study.

Students may be admitted to candidacy for the doctoral degree upon satisfactory completion of the Master of Science degree (or its equivalent) and the Qualifying Exam. Candidates for the doctoral degree may not propose a dissertation (PSYC 850) until admitted to candidacy.

A five-member doctoral committee will be formed by the student and his/her advisor. Three members of the doctoral committee must be full-time equivalent faculty members of the Department of Psychology, including at least one clinical and one experimental faculty member. The fourth and fifth members must meet Graduate School requirements and include the Graduate Faculty Representative. Students will present findings and implications of the dissertation to departmental faculty, students, and community members at an open forum.

Clinical - Professional Development

All students must complete 7 credits of PSYC 725 (Psychology Clinic Practicum) and 1 credit of PSYC 517 (Interdisciplinary Evaluation Team). Up to 3 credits of PSYC 724 (Community Practicum) may be substituted for credits of PSYC 725. Progress in the development of professional skills is evaluated by faculty supervisors and the Clinical Training Committee. Satisfactory evaluations of professional development by the Clinical Training Committee is a degree requirement.

All students must satisfactorily complete a one-year full-time clinical internship at a site belonging to the Association of Psychology Postdoctoral and Internship Centers or comparable supervised clinical practice approved by the Clinical Training Committee. Concurrent enrollment at Idaho State University in 1 credit of PSYC 749 (Clinical Internship) is required. Students enrolled in PSYC 749 will be considered full-time Idaho State University students. Application to clinical internships and acceptance into clinical internships requires completion of the dissertation prospectus and the approval of the Clinical Training Committee.

Master of Science in Psychology

Goals

To ensure that students who receive a master's degree in psychology will be prepared for further post-graduate study and for careers in related areas, the department has identified the following goals: an understanding of core areas and the breadth of the field of psychology and its applications; ability to integrate knowledge and theories across, and to think critically about, topics within the domains of psychology; competence in library information technology and computer applications related to the study of psychology; competence in scientific methodology and analysis as they apply to the study of psychology; ability to communicate effectively, in both oral and written form, about issues within the field of psychology; active participation in the research process; and understanding and compliance with the APA code of ethics pertaining to research conduct. Each goal has associated objectives and competencies.

Admission Requirements

In addition to the general requirements of the Graduate School, the applicant must have:

1. Minimum entrance requirements include a 3.0 grade point average during the last two years of undergraduate study. Graduate Record Exam scores of the 50th percentile or higher are preferred on two of the three aptitude tests (verbal, quantitative, or analytical writing) and the advanced subject test in psychology.

2. An undergraduate major in psychology or the equivalent.
3. Recommendation by the Experimental or Clinical Admissions Committee of the Department of Psychology. The Clinical Admissions Committee only admits students into the combined Master of Science and Doctor of Philosophy course of study.

General Requirements

Area requirements assume the satisfactory completion of undergraduate courses that prepare the student for advanced study. Specifically, students must have completed undergraduate courses in experimental psychology, neuroanatomy, sensation, perception, learning, social psychology, developmental psychology, personality, history and systems, or the equivalent of these topic areas. Each student's records will be reviewed by the Departmental Chair in consultation with departmental staff. Students deficient in area prerequisites may be required to enroll in additional course work and/or experience limitation of choices in Areas A and D. An Area Requirement Plan of Completion must be finalized during the student's first month following matriculation. The Chair, the student, and one or more faculty appointed by the Chair will meet and approve each student's Plan of Completion.

In addition, each student must complete 12 elective graduate credits in psychology. A student may complete up to 6 of these elective credits in a related field approved by the student's graduate advisor. Courses identified to remediate deficiencies by the Area Requirement Plan of Completion do not satisfy any portion of the 12-credit elective requirement.

Required Courses

PSYC 627	Advanced Statistics	3 cr
PSYC 632	Advanced Experimental Design I	3 cr
PSYC 650	Thesis	6 cr

Area Requirements

Each student must complete one, 3-credit course from each of the following core areas of psychology:

Area A: Biological Bases of Behavior

PSYC 504	Sensation & Perception
PSYC 531	Physiological Psychology I
PSYC 532	Physiological Psychology II

Area B: Cognitive-Affective Bases of Behavior

PSYC 642	Cognitive Psychology

Area C: Social Bases of Behavior

PSYC 643	Advanced Social Psychology

Area D: Individual Behavior

PSYC 644	Advanced Developmental Psychology
PSYC 647	Personality and Individual Differences

Minimum Total Credits - 36

Psychology Graduate Courses

PSYC g501 Theories of Personality 3 credits. Detailed study of the leading theories of personality with emphasis on the Freudian, Neo-Freudian, humanistic and existential theories. PREREQ: PSYC 225 OR 301.

PSYC 502 Teaching of Psychology 1-2 credits. Prepare students to teach independently. Pedagogy, use of technology, and problem solving skills related to teaching psychology courses will be discussed. Supervised teaching will be treated as a separate module. Repeatable up to 4 credits. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

PSYC g504 Sensation and Perception 4 credits. The anatomical and physiological basis of sensation will be reviewed. Moreover, traditional and contemporary theories of perception will be critically considered. Students will be expected to do laboratory work illustrating basic concepts of sensory and perceptual function. PREREQ: PSYC 303.

PSYC g508 Science, Pseudoscience, and Psychology 3 credits. Designed to teach scientific thinking and how to critically evaluate fringe-science, paranormal, and other unproven claims. The psychological processes underlying pseudo-scientific thinking and beliefs also are introduced.

PSYC g512 Ethical and Professional Issues in Psychology 2 credits. Topics include informed consent, confidentiality, deception, duty to protect, competency, malpractice, dual and collegial relationships, and impaired professionals in research and practice. PREREQ: 24 CREDITS IN PSYCHOLOGY OR PERMISSION OF INSTRUCTOR.

PSYC g517 Interdisciplinary Evaluation Team 1 credit. Introduction to the principles and techniques associated with interdisciplinary evaluation. Disciplines emphasized: Audiology, Nursing, Physical Therapy, Psychology, Social Work, Special Education, Speech-Language Pathology. Cross-listed as NURS g517, SOWK g517, SPA g 417.

PSYC g531 Physiological Psychology I 3 credits. Introduction to neuropsychology with an emphasis on methods, basic neuroanatomy, and neurophysiology. PREREQ: PSYC 303.

PSYC g532 Physiological Psychology II 3 credits. Survey of the physiological bases of psychological processes, including learning, emotion, motivation, sensation, and perception. Emphasizes current research and theory concerning brain mechanisms and behavior. PREREQ: PSYC 431 OR PERMISSION OF INSTRUCTOR.

PSYC g535 Animal Behavior 3 credits. Study of experiments in animal learning that have thrown light upon the problem of understanding human learning. Course is concerned with both observation and experimental studies of habit formation, conditioning, related endocrinology, and nerve structure as they are associated with behavior capabilities. PREREQ: SIX HOURS IN PSYCHOLOGY BEYOND PSYC 101-102 OR PERMISSION OF INSTRUCTOR.

PSYC g545 Psychology of Learning 3 credits. Survey of the major principles of learning, including the processes underlying classical and instrumental conditioning and motor skills behavior. PREREQ: PSYC 303-404 OR PERMISSION.

PSYC g563 Clinical Psychology and the Law 3 credits. An introduction to the field of forensic psychology by exposing students to the primary areas in which clinical psychology relates to the legal system. Emphasis will be on expert testimony by clinicians in matters of criminal responsibility, mental competency, civil commitment, and child custody.

PSYC g564 Dilemmas of Youth 3 credits. This course surveys theory and research concerned with dilemmas of identity formation. Personal accounts, literature-classic and psychological-will serve to illustrate dilemmas and explain their resolution.

PSYC g565 Behavioral Medicine 3 credits. Psychological issues of health, disease states, and prevention. Critical evaluation of clinical research and practice including nontraditional healing techniques and current models used to understand health and disease. PREREQ: PSYC 101 OR PERMISSION OF INSTRUCTOR.

PSYC g567 Topics in Psychology 1-3 credits. Selected topics in psychology. Contents vary. May be repeated with different content and departmental approval for a total of 6 credits. PREREQ: Permission of Instructor

PSYC g583 Special Problems 1-3 credits. Research or readings in a special area of interest to be arranged on an individual basis with individual faculty. May be repeated to a maximum of 6 credits. PREREQ: 24 HOURS IN PSYCHOLOGY.

PSYC 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U.

PSYC 601 Family Assessment and Therapy 3 credits. Introduction to clinical work with families, including theoretical models and intervention techniques, assessment methods, current research, and special topics relevant to families.

PSYC 611 Advanced Motivation 3 credits. Surveys current and traditional theories of motivation

with emphasis on empirical research illustrating the effects of motivational systems on both human and animal models. PREREQ: PSYC 545 OR EQUIVALENT.

PSYC 612 Theories of Perception 3 credits. Theories of perception, ecological, constructive, gestalt, and motivational, will receive critical review. Students will perform measurements of perception and research guided by theoretical accounts of the perceptual process.

PSYC 620 Psychodiagnostics I 3 credits. Theory, measurement development, and current use and limitations of major tests of intelligence, academic achievement, development, and neurological function. Practice in test administration is included. PREREQ: PSYC g527 OR PERMISSION OF INSTRUCTOR.

PSYC 621 Psychodiagnostics II 3 credits. Theory, measurement development, and current use and limitations of major tests of personality, both objective and projective, with an emphasis on classification decisions. Practice in test administration is included. PREREQ: PSYC 620 OR PERMISSION OF INSTRUCTOR.

PSYC 623 Advanced Psychological Measurements 3 credits. Psychological measurement theory, the mathematical basis of reliability and validity constructs, and test construction strategies are introduced. Measurement principles are then generalized across response modes and methods, focusing on direct observation technologies.

PSYC 627 Statistics and Research Design I 3 credits. Critical review of the theory and the methods used to evaluate the outcome of empirical research in the life and social sciences. Chi square, correlation, regression, analysis of variance designs are considered and related to the theoretical distributions basic to statistical inference. PREREQ: BASIC STATISTICS, COLLEGE ALGEBRA, AND/OR CALCULUS, OR PERMISSION OF INSTRUCTOR.

PSYC 632 Statistics and Research Design II 3 credits. Basic assumptions in the philosophy of scientific investigation, principles of design and analysis of experiments, including tests of significance and factorial designs, and reporting of research, in which the student is required to prepare reports of his own work as if for publication. PREREQ: PSYC 303 AND STATISTICS.

PSYC 633 Psychology of Addictive Behaviors 3 credits. Reviews research on alcohol and other drug use within biopsychosocial framework. Included are etiological factors and natural history, assessment and diagnosis, comorbidity, motivational interviewing, treatment models, and special population issues.

PSYC 634 Cultural Diversity 3 credits. Examines various dimensions of cultural diversity in psychological science and practice. Topics include: conceptual, political, and practice considerations, cultural world views, psychologically relevant aspects of various diverse cultural groups, and culturally competent assessment and intervention.

PSYC 635 Marital Assessment and Therapy 3 credits. Introduction to assessment of marital distress, theoretical approaches to treating couples, intervention techniques, current research, and special topics in the clinical study of couples.

PSYC 636 Neuropsychological Assessment 3 credits. Introduction to the selection, administration, scoring, and interpretation of commonly used neuropsychological tests, including tests of conceptual, perceptual, and linguistic ability. PREREQ: PSYC 620 AND PSYC 621.

PSYC 637 Multivariate Statistics and Research Design 3 credits. Continuation of research principles in design and analysis, emphasizing the use of multiple dependent variables, strategies for investigating latent variables, and testing complex causal models. PREREQ: PSYC 632 OR PERMISSION OF INSTRUCTOR.

PSYC 641 Special Problems 1-3 credits. Individual work under staff guidance. The student will pursue original research in some area of psychology of particular interest to him and write a report of his work in a form suitable for publication. Repeatable up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

PSYC 642 Cognitive Psychology 3 credits. Examines cognitive processes underlying perception, attention, mental imagery, memory, language, and problem solving/decision making. Cognitive development and individual differences are discussed. Both theory and experimental findings are emphasized in each area.

PSYC 643 Advanced Social Psychology 3 credits. Review of current research and major theories of social psychology. Areas of emphasis include attitude, persuasion, prejudice and stereotyping, attraction, aggression, helping, and social cognition.

PSYC 644 Advanced Developmental Psychology 3 credits. Study of developmental theories, issues, and research across the life span. Emphasis is on current empirical research, highlighting the interaction of biological, cognitive, and social domains of development within and between individuals.

PSYC 645 Theory and Method of Psychosocial Adult Therapy I 3 credits. A review of theoretical models and treatment methods across major psychosocial disorders of adults, including associated psychopathology and diagnostic material.

PSYC 646 Theory and Method of Adult Psychosocial Therapy II 3 credits. Continuation of the review of theoretical models and treatment methods of clinical psychology. PREREQ: PSYC 645 OR PERMISSION OF INSTRUCTOR.

PSYC 647 Personality and Individual Differences 3 credits. This course will explore contemporary personality theory, as well as significant areas and trends in the current empirical literature.

PSYC 648 Advanced Psychopathology 3 credits. Theories and forms of psychopathology are presented, incorporating the current empirical literature. Disorders covered include substance use, affective, thought, health-related, and personality disorders. Pathology is conceptualized from biological, medical, behavioral, and cognitive perspective.

PSYC 649 Psychosocial Child Therapy 3 credits. Review of the psychopathology, assessment, diagnosis, and treatment of major psychological disorders of childhood, including mental retardation, autism, learning disability, attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder.

PSYC 650 Thesis 1-6 credits. Graded S/U.

PSYC 672 History and Systems 3 credits. Survey of historical and philosophical bases of theories of psychology presently used. Emphasis on understanding impact of political, cultural, and historical forces on ideas and methods used in psychology. PREREQ: PASSAGE OF QUALIFYING EXAMINATION OR PERMISSION OF INSTRUCTOR.

PSYC 701 Clinical Psychology 2 credits. Orientation to professional training, evaluation, diagnosis, and treatment. Orientation to the Idaho State University Psychology Clinic procedures and report writing requirements. Introduction to clinical interviewing, crisis management, supervision, and consultation.

PSYC 702 Introduction to Psychotropic Medication 2 credits. Introduction to clinical psychopharmacology meeting American Psychological Association guidelines for Level 1 predoctoral training. Disorders of substance abuse, psychosis, mood, anxiety, and development are highlighted. PREREQ: PSYC 532.

PSYC 703 Advanced Ethics and Professional Issues 1 credit. Systematic review of ethical decision-making emphasizing analysis of complex ethical issues. Professional topics include supervision, post-doctoral training, licensure, management of high-risk patients, self-care, and emerging models of behavioral health consultation. PREREQ: PSYC 512 AND FOURTH-YEAR CLINICAL DOCTORAL STUDENT STATUS.

PSYC 724 Community Practicum 1-2 credits. Students work in public or private mental health agencies under qualified supervisors. Professional activities include evaluation and therapy. Six hours per week per credit. PREREQ: APPROVAL OF CLINICAL TRAINING COMMITTEE.

PSYC 725 Psychology Clinic Practicum 1-2 credits. Students are supervised in the evaluation and treatment of clients served by the Psychology Department Clinic. Six hours per week per credit. PREREQ: APPROVAL OF CLINICAL TRAINING COMMITTEE.

PSYC 736 Advanced Clinical Assessment or Treatment 1-3 credits. A specific area of psychopathology is presented. Current theoretical and empirical information are explored in depth, emphasizing assessment and/or treatment.

PSYC 748 Clinical Externship 1 credit. Clinical practice in regional human service agency. Minimum 10 hours per week; 1 hour supervision

by Ph.D. psychologist per 20 contact hours. Repeatable up to 6 credits. PREREQ: APPROVAL OF CLINICAL TRAINING COMMITTEE. Graded S/U.

PSYC 749 Clinical Internship 1 credit. Predoctoral internship, 11-12 months, at a member site of the Association of Psychology Postdoctoral and Internship Centers, or comparable supervised clinical practice approved by the Clinical Training Committee. PREREQ: APPROVAL OF CLINICAL TRAINING COMMITTEE. Graded S/ U.

PSYC 850 Dissertation 1-12 credits. Research, analysis, and writing of a doctoral dissertation. PREREQ: ADMISSION TO CANDIDACY FOR THE DOCTORAL DEGREE. Graded S/U.

Department of Sociology, Social Work, and Criminal Justice

Chair and Professor: Hunter
Professors: Aho, Leavitt, Pierson
Associate Professors: Hooper
Assistant Professors: Crue, Hearn, Jensen-Hart

Goal and Mission

The goal and mission of the MA program are to prepare graduates for positions as sociological researchers in charitable non-governmental organizations, business, or government. This is accomplished by providing them with the theories, findings, and methods distinctive to sociology. Some graduates choose to pursue a sociology doctorate with the hope of college teaching, others go on to law school, still others into counseling or private consulting.

Objectives

1. Graduates will master literature in one substantive area of sociology.
2. Graduates will develop an understanding of sociological theories, related findings, research design and statistics.
3. Graduates will further their professional careers by either continuing education at the doctoral level or finding employment in public service utilizing their advanced degree.

Master of Arts in Sociology

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with the following departmental requirements: students must score a minimum of the 40th percentile in one of the three sections of the GRE, have a grade point average of 3.0 or higher (on a 4.0) for all upper division credits taken as an undergraduate, or permission of the Graduate Director. Three letters of recommendation must accompany the application.

For full admission to the graduate program in Sociology, the student must have completed the following courses or their equivalent: Introduction to Sociology, Social Theory, Social Statistics, and Social Science Research Methods. In cases of deficiencies, students may be granted waivers, alternative courses, or Classified with Performance Requirements (w/PR) admission at the discretion of the Sociology Graduate Director.

General Requirements

SOC 502	Proseminar	3 cr
SOC 508	Advanced Sociological Statistics	3 cr
SOC 600	Comparative Sociological Theories	3 cr
SOC 603	Seminar: Topics in Methods 3 cr	
SOC 650	Thesis	6 cr
Sociology Electives		15 cr
Minimum Total Credits		33 cr

The Sociology electives may be selected from 500- and 600-level courses in Sociology or other graduate courses approved by the Sociology Graduate Director. If SOC 408 was taken as an undergraduate, 3 credit hours of electives will be substituted for SOC 508.

Other requirements include the successful completion of a written comprehensive examination, a thesis proposal presentation and an oral defense of the completed thesis.

For more information, please consult the Sociology Graduate Student Handbook and Sociology Graduate Director.

Sociology Graduate Courses

SOC g502 Proseminar in Sociology 3 credits. An overview of the field of sociology, with emphasis on the teaching of sociology, orientation to graduate education, major sociological theories, issues, research approaches, and ethical problems in the field today. PREREQ: PERMISSION OF INSTRUCTOR.

SOC g503 Contemporary Sociological Theory 3 credits. Survey and appraisal of sociological theories since 1945: structural functionalism, rational choice, conflict, symbolic interactionism, and phenomenology.

SOC g508 Statistical Analysis 3 credits. Emphasizes advanced techniques in research design, data measurement, and multivariate analysis utilizing computer application.

SOC g513 Mind, Body and Society 3 credits. Symbolic interaction and its relation to selfhood, sympathy, illness, sexuality, and addiction; and to groupings like enemies, communities, and associations.

SOC g531 Criminology 3 credits. Analysis of criminal law, law enforcement, judicial roles and processes, correctional approaches, the criminal offender and societal reactions. Theory and research as applicable to behavior and institutional relationships.

SOC g562 Power, Class and Prestige 3 credits. Theories and methodology of status systems; the relation of class to the social structure; analysis of class in different societies, with emphasis upon the class system and power.

SOC g567 Community Networking: Cultivating the Sociological Imagination 3 credits. Advanced study of the sociology of community through readings, class discussions, lectures, and a community networking internship.

SOC g583 Independent Problems in Sociology 1 - 4 credits. Readings, observations, applied work, or data analysis in content area not offered in our curriculum. May be repeated for up to 6 credits.

SOC g591 Topics in Sociology 3 credits. Reading, discussion, and preparation of reports on selected topics. May be repeated when topics vary.

SOC 600 Comparative Sociological Theories 3 credits. Comparative analysis of various theoretical perspectives in sociology with special emphasis on structural functionalism, symbolic interactionism, exchange theory, conflict theories, phenomenology, and ethnomethodology. Primary emphasis will be placed on the major propositions of each perspective and the significant contributions of scholarship in each area. PREREQ: SOC 403 OR EQUIVALENT.

SOC 601 Sociological Theories 3 credits. A seminar in selected topics in theory which will focus on either historical, comparative or contemporary theories. May be repeated for up to 9 credits.

SOC 603 Topics in Methods 3 credits. In depth focus on methodological topics relevant and timely to students' needs and interests. May be repeated up to 6 credits.

SOC 605 Social Organization 3 credits. A seminar in selected topics of social organization and disorganization which will include such themes

retardation, autism, learning disability, attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder.

PSYC 6650 Thesis 1-6 credits. Graded S/U. May be repeated

PSYC 6672 History and Systems 3 credits. Survey of historical and philosophical bases of theories of psychology presently used. Emphasis on understanding impact of political, cultural, and historical forces on ideas and methods used in psychology. PREREQ: PASSAGE OF QUALIFYING EXAMINATION OR PERMISSION OF INSTRUCTOR.

PSYC 7701 Clinical Psychology 2 credits. Orientation to professional training, evaluation, diagnosis, and treatment. Orientation to the Idaho State University Psychology Clinic procedures and report writing requirements. Introduction to clinical interviewing, crisis management, supervision, and consultation.

PSYC 7702 Introduction to Psychotropic Medication 2 credits. Introduction to clinical psychopharmacology meeting American Psychological Association guidelines for Level 1 predoctoral training. Disorders of substance abuse, psychosis, mood, anxiety, and development are highlighted. PREREQ: PSYC 5532.

PSYC 7703 Advanced Ethics and Professional Issues 1 credit. Systematic review of ethical decision-making emphasizing analysis of complex ethical issues. Professional topics include supervision, post-doctoral training, licensure, management of high-risk patients, self-care, and emerging models of behavioral health consultation. PREREQ: PSYC 512 AND FOURTH-YEAR CLINICAL DOCTORAL STUDENT STATUS.

PSYC 7724 Community Practicum 1-2 credits. Students work in public or private mental health agencies under qualified supervisors. Professional activities include evaluation and therapy. Six hours per week per credit. PREREQ: APPROVAL OF CLINICAL TRAINING COMMITTEE.

PSYC 7725 Psychology Clinic Practicum 1-2 credits. Students are supervised in the evaluation and treatment of clients served by the Psychology Department Clinic. Six hours per week per credit. PREREQ: APPROVAL OF CLINICAL TRAINING COMMITTEE.

PSYC 7736 Advanced Clinical Assessment or Treatment 1-3 credits. A specific area of psychopathology is presented. Current theoretical and empirical information are explored in depth, emphasizing assessment and/or treatment.

PSYC 7748 Clinical Externship 1 credit. Clinical practice in regional human service agency. Minimum 10 hours per week; 1 hour supervision by Ph.D. psychologist per 20 contact hours. Repeatable up to 6 credits. PREREQ: APPROVAL OF CLINICAL TRAINING COMMITTEE. Graded S/U.

PSYC 7749 Clinical Internship 1 credit. Predoctoral internship, 11-12 months, at a member site of the Association of Psychology Postdoctoral and Internship Centers, or comparable supervised clinical practice approved by the Clinical Training Committee. PREREQ: APPROVAL OF CLINICAL TRAINING COMMITTEE. Graded S/ U.

PSYC 8850 Dissertation 1-12 credits. Research, analysis, and writing of a doctoral dissertation. PREREQ: ADMISSION TO CANDIDACY FOR THE DOCTORAL DEGREE. Graded S/U.

Department of Sociology, Social Work, and Criminal Justice

Chair and Professor: Hunter
Professors: Aho, Leavitt, Pierson
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Goal and Mission

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Objectives

1. Graduates will master literature in one substantive area of sociology.
2. Graduates will develop an understanding of sociological theories, related findings, research design and statistics.
3. Graduates will further their professional careers by either continuing education at the doctoral level or finding employment in public service utilizing their advanced degree.

Master of Arts in Sociology

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with the following departmental requirements: students must score a minimum of the 40th percentile in one of the three sections of the GRE, have a grade point average of 3.0 or higher (on a 4.0) for all upper division credits taken as an undergraduate, or permission of the Graduate Director. Three letters of recommendation must accompany the application.

For full admission to the graduate program in Sociology, the student must have completed the following courses or their equivalent: Introduction to Sociology, Social Theory, Social Statistics, and Social Science Research Methods. In cases of deficiencies, students may be granted waivers, alternative courses, or Classified with Performance Requirements (w/PR) admission at the discretion of the Sociology Graduate Director.

General Requirements

SOC 5502	Proseminar	3 cr
SOC 5508	Advanced Sociological Statistics	3 cr
SOC 6600	Comparative Sociological Theories	3 cr
SOC 6603	Seminar: Topics in Methods	3 cr
SOC 6650	Thesis	6 cr
Sociology Electives		15 cr
Minimum Total Credits		33 cr

The Sociology electives may be selected from 5500- and 6600-level courses in Sociology or other graduate courses approved by the Sociology Graduate Director. If SOC 4408 was taken as an undergraduate, 3 credit hours of electives will be substituted for SOC 5508.

Other requirements include the successful completion of a written comprehensive examination, a thesis proposal presentation and an oral defense of the completed thesis.

For more information, please consult the Sociology Graduate Student Handbook and Sociology Graduate Director.

Sociology Graduate Courses

SOC 5502 Proseminar in Sociology 3 credits. An overview of the field of sociology, with emphasis on the teaching of sociology, orientation to

costume technology. PREREQ: THEA 221.

THEA g506 Advanced Light Design 3 credits. Study of lighting design in performing arts. Students gain knowledge through actualized projects, study of television and film lighting, and exploration of the Controllable properties including color. PREREQ: THEA 111, 209, AND 311.

THEA g512 Scenic Painting 3 credits. A study of painting techniques as used in theatrical scenery; theory, practice, and equipment will be investigated as they apply to the art of stage painting.

THEA g519 Modern European Theatre 3 credits. Continental and British theatre and drama from 1850 to mid-twentieth century.

THEA g520 American Theatre 3 credits. American theatre and drama from the beginning to mid-twentieth century.

THEA g521 Basic Pattern Drafting for Stage Costuming 3 credits. Cutting patterns from measurements. Adjusting various patterns to designs. Alterations and fittings. PREREQ: THEA 221 OR PERMISSION OF INSTRUCTOR.

THEA g522 Period Pattern Drafting for Stage Costuming 3 credits. Use of the basic patterns to reproduce historical costumes from the 12th century to 1950. PREREQ: THEA 221 OR PERMISSION OF INSTRUCTOR.

THEA g524 Advanced Acting Styles 3 credits. Study of the various period styles of acting including Greek, Medieval, Elizabethan, Restoration, and 19th century melodrama. The student will act in a series of special projects encompassing a variety of styles. PREREQ: THEA 251, 252, OR PERMISSION OF INSTRUCTOR.

THEA g526 Advanced Scene Design 3 credits. Study of scene design in performing arts and beyond. Students work toward portfolio-quality work in realized and non-realized projects in theatre, television, film, and design areas. PREREQ: THEA 111, 209, AND 311.

THEA g555 Beginning Stage Direction 3 credits. Consideration of aesthetics of dramatic production and the relationship of basic techniques of stage direction. Includes the direction of scenes and short one-act plays. PREREQ: THEA 101, THEA 111, THEA 251, THEA 252, OR PERMISSION OF INSTRUCTOR.

THEA g556 Advanced Stage Direction 3 credits. Advanced theories in techniques of stage direction including consideration of period styles. The student will direct a series of advanced projects including scenes and a complete one-act play. PREREQ: THEA g555, OR PERMISSION OF INSTRUCTOR.

THEA g570 Contemporary Theatre 3 credits. World drama and theatre during the five most recent decades.

THEA g590 Practicum Theatre Arts II 1-3 credits. Integrated projects for advanced students in various areas of theatre arts emphasizing analysis and presentation of experimental work. May be repeated for a maximum of four credits, with different content.

THEA g591 Independent Research Project II 1-2 credits. Under the supervision of the drama faculty, students will undertake special research projects in theatre. May be repeated once with different content.

THEA 597 Professional Education Development Topics. **Variable credit.** A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be repeated. May be graded S/U .

THEA 601 Introduction to Research in Drama 3 credits.

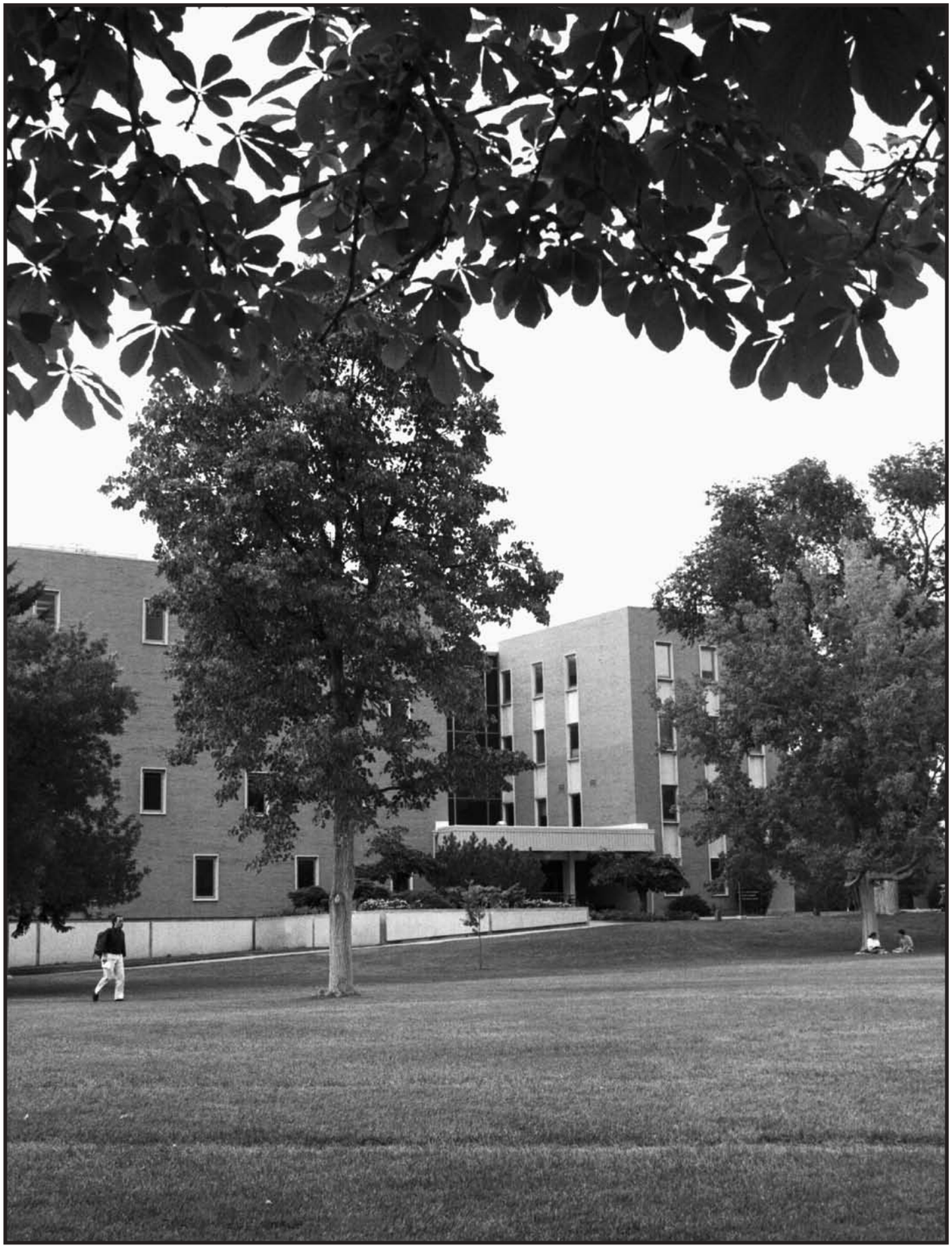
THEA 641 Seminar in Drama Theory 3 credits.

THEA 642 Seminar in Drama Theory 3 credits.

THEA 650 Thesis 1-6 credits. Graded S/U.

THEA 660 Graduate Degree Papers 1-2 credits. May be repeated. Graded S/U .

THEA 691 Independent Study in Drama 1-4 credits. Supervised individual study in drama. Instructor's consent required. May be repeated for a maximum of 4 credits.



College of Business

Kenneth Smith, Ph.D., Dean
Kregg Aytes, Ph.D., Associate Dean
Robert Picard, Ph.D., Associate Dean
Corey Schou, Ph.D., Associate Dean for Information Systems
Sam Peterson, M.B.A. Director

Department of Accounting
Chair and Professor: Picard
Professors: Boes, Frischmann, Plewa, K. Smith
Associate Professor: Reis

Department of Computer Information Systems
Chair and Professor: Ottaway
Professors: Aytes, Beachboard, Beard, Parker, C. Schou,
Associate Professors: Trimmer
Assistant Professor: Tay

Department of Finance
Chair and Professor: Byers
Professors: Hackert, Khang, Santhanakrishnan
Assistant Professor: Brookman
,
Department of Management
Chair and Professor Jolly
Professors: M. Johnson, Krumwiede, Lund-Dean, Stratton, Tokle
Associate Professor: Murphy
Assistant Professor: Street, Tocher
Instructors: Peterson, S. Schou

Department of Marketing
Chair and Professor Speck
Professor: Hoover, Nitse
Assistant Professor: Carter

Master of Business Administration

The College of Business (COB) at Idaho State University (ISU) offers a program leading to the degree of Master of Business Administration (MBA) to holders of business and non-business bachelor's degrees. The MBA program is accredited by AACSB International, the Association to Advance Collegiate Schools of Business. In addition to the traditional MBA degree, the program offers MBA degrees with emphasis areas in Accounting, Computer Information Systems (CIS), Finance, Health Care Administration (HCA), Management, and Marketing. The MBA program at Idaho State University was the first to be accredited by the AACSB in the State of Idaho and remains committed to the delivery of a high quality, rigorous program.

The traditional MBA provides a broad general degree particularly suited to those pursuing a managerial focus in their careers. The Accounting, Computer Information Systems, Finance, and Health Care Administration, Management, and Marketing options provide specialized knowledge relating to their respective fields. The Accounting emphasis meets the needs of students who wish to satisfy requirements for certification as public accountants (CPA) or certification as management accountants (CMA).

In the interest of a more diverse student body, the college encourages and attracts a number of full-time students from other parts of the United States and foreign countries.

Mission and Goals

The Idaho State University MBA program's mission is to develop and deliver programs that address the diverse needs of stakeholders. Our primary mission is to offer an MBA program that enhances our students' competence in business management, fosters their intellectual curiosity, and develops the personal skills necessary to be an effective manager. The MBA program prepares students for leadership roles in all areas of business requiring skilled and ethical decision making and analytical abilities.

Specific programs goals are to develop:

- Competency in the functional fields of accounting, finance, information systems, marketing, and management.
- An understanding of human behavior in business situations and the manager's role as a leader in influencing behavior.
- Skill in performing industry and financial analysis in a global context.
- An awareness and understanding of the economic, political, legal and social environments in which business operates.
- An integrative and strategic focus for students in decision making and problem solving.
- Strengthened individual competencies in (1) communications (written and oral), (2) critical thinking, (3) technology skills, and (4) group processes/interpersonal skills.

The MBA Program

The MBA program consists of eight graduate core courses (MBA-I) covering basic knowledge skills and concepts, a core of eight broad integrative courses (MBA-II), plus six to twelve hours of additional graduate level courses depending upon the student's program of study.

The MBA-I core develops a broad competence in the functional fields of business: Accounting, Economics, Management, Marketing, Operations, and Finance. The core also examines behavioral, international, ethical, industry analysis, and strategic issues that cut across the functional boundaries and provide a basic educational background. Students with undergraduate degrees in business may have MBA-I classes waived.

The MBA-II core consists of eight required courses which, although anchored in traditional functional fields, are designed to provide a strong integrative focus building upon the competencies developed in MBA-I courses.

The traditional MBA degree requires six credit hours of graduate course work beyond the MBA-II core courses. The various emphases require nine to twelve credit hours of graduate course work beyond the MBA-II core courses. The courses in the Accounting, Computer Information Systems, Finance, Health Care Administration, Management, and Marketing areas of emphasis are designed to provide specialized knowledge specific to each of their respective fields.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School, and all additional College of Business requirements.

Admission to the MBA program is granted only to students showing high promise of success. The College of Business uses various measures of high promise, including the candidate's performance on the Graduate Management Admissions Test (GMAT) and upper-division grade point average (GPA). Such measures, along with other reasonable indications of promise, will be used in combination to arrive at a final judgment.

The minimum requirement for admission is defined by the following:

The sum of 200 times the grade point average in upper-division course work (4.0 system) plus the total score on the Graduate Management Admission Test must equal at least 1150 points.

For applicants from schools with different grading systems a GPA will be inferred as accurately as possible. Also, graduate courses will be included in the upper-division GPA calculation. For applicants with a significant amount of recent upper-division academic course work versus course work that is considerably older, we may choose to consider only the recent GPA.

Individuals holding a current master's degree from a regionally accredited institution may meet minimum requirements and be considered for admission if they meet the Graduate School requirements regarding GRE scores in which case the student is not required to take the GMAT for admission.

Meeting the minimum formula requirement or minimum GRE requirement does not assure admission to the MBA program since other factors may be considered if they are deemed important in the assessment of the applicant's probable success in the MBA program.

All applicants are required to submit a resume outlining work experience and two letters of reference.

Please note that no individual can be admitted to classified status in the MBA program until the College of Business has received the applicant's official transcripts and official GMAT/GRE scores.

Applications are accepted at any time. Complete applications are reviewed the first working day of each month up to the Graduate School deadlines for admission.

Locations

The MBA program serves Southeast Idaho's need for part-time and full-time graduate education in business. The traditional MBA degree is offered in the evening in Pocatello and Idaho Falls to full-time and part-time students. The Finance, Marketing, and Management emphasis areas require that students be able to take at least some emphasis-area daytime courses in Pocatello, and are restricted to individuals who do not have an undergraduate major in the respective fields. The CIS emphasis and Accounting emphasis elective courses are only daytime courses offered in Pocatello. The Health Care Administration emphasis courses are offered primarily in the evening in Pocatello.

Conduct

Academic integrity is expected by the College of Business. All forms of academic dishonesty, including cheating and plagiarism, are prohibited. The penalties for students engaging in academic dishonesty, plagiarism, unprofessional or unethical conduct within the university community range from a failing grade to dismissal from the MBA program, and/or permanent expulsion from the university with notation on the student's transcript. The Graduate Catalog explains the dismissal policy and the procedures for the appeal of dismissal. If you are unclear as to what constitutes academic dishonesty, you should consult the Graduate Catalog, then review the College of Business policy on Academic Integrity available from the College of Business Office in BA 202; from the College of Business web site at www.cob.isu.edu; or refer to the Idaho State University Faculty/Staff Handbook policy on academic dishonesty. If you are still in doubt about academic dishonesty, you're encouraged to consult with a faculty member, the MBA Director, or the Dean.

MBA Degree Requirements

MBA Minimum Prerequisites

Mathematics Skills

The minimum level of mathematics required for the MBA program is college algebra. If students have not completed this course, they must do so early in their program prior to enrolling in MBA-II courses. College algebra may be waived if the student scores in the 50th percentile or higher on the quantitative section of the GMAT. If all MBA-I courses are waived, the student may enroll in MBA-II courses provided they are concurrently enrolled in courses to meet the math requirement.

Computer Skills

Computer literacy is an essential skill for success in the MBA program and success in a professional business career. The minimum skills required are the ability to use a word processor, a spreadsheet, the Internet, and Windows. Students are required to maintain e-mail and Internet accounts on the Idaho State University network.

Communications Skills

Good communication skills are fundamental for students and managers. Students are expected to have a high degree of proficiency in both oral and written communication skills. Students failing to demonstrate communications proficiency will be required to take remedial work.

MBA I (24 hours)

Students must take the following courses or their undergraduate equivalents:

MGT 216	Business Statistics
MBA 610	Applied Economics
MBA 611	Financial Reporting and Managerial Accounting
MBA 612	Human Behavior in Organizations
MBA 613	Marketing
MBA 614	Operations Management
MBA 615	Finance
MBA 616	Business Policy

Waiver of MBA-I Requirements

MBA-I courses may be waived for students with a business degree from an AACSB accredited institution. MBA-I courses may be waived for students with a business degree not accredited by AACSB subject to a transcript and program evaluation by the MBA Director. For students with non-business degrees or degrees from foreign universities, courses may be waived where equivalency of content with the Idaho State University MBA core can be established and the student has earned at least a grade of C- or equivalent. Individuals with degrees greater than 10 years old may be required to take selected MBA-I courses. Work experience is not a basis for waiving MBA-I course work; however, students with substantial work experience may demonstrate competence in a particular field through examination.

MBA-II (24 hours)

After all MBA-I requirements are satisfied, students may enroll in the MBA-II core component courses listed below.

MBA 620	Quantitative Information for Business Decisions
MBA 621	Managerial Decision Making
MBA 622	Finance in an Integrated Environment
MBA 623	Marketing in an Integrated Environment
MBA 624	Information Technology in Business
MBA 625	Managerial Control Systems
MBA 626	Business Policy/Strategy in a Global Environment
MBA 628	Business Simulation and Application

Exceptions to the requirement that all MBA-I courses be completed prior to enrolling in MBA-II courses may be made when most MBA-I courses have been taken and enforcement of this requirement would cause undue hardship for a student (i.e., a delay in his/her

program). Students may substitute a course for MBA 620 with permission of the MBA Program Director. Exceptions will be granted only where it is reasonable to conclude that the student has sufficient background to perform satisfactorily in MBA-II courses.

A request for an exception to the MBA-I prerequisite requirement must be made to the MBA Director. This request should state the MBA-I courses remaining to be taken in the student's program, when those courses will be taken, and what hardships will be incurred if the exception is not granted.

Additional Course Requirements

Students seeking the traditional MBA degree will complete six credit hours of additional graduate course work beyond the MBA-II core.

Students seeking the MBA with an emphasis in Accounting, Computer Information Systems, Finance, Management, or Marketing will complete nine credit hours of graduate work in their selected emphasis area.

Students seeking the MBA with an emphasis in Health Care Administration will complete twelve credit hours of graduate work in Health Care Administration.

Students may select as electives any 500-level or 600-level courses offered by the College of Business that meet emphasis area requirements with the exception of courses numbered between MBA 600 and MBA 626 inclusive and MBA 628. Students wishing to take elective courses outside the College of Business must have those courses approved by the MBA Director. The electives may include MBA 650 Thesis (6 credit hours), or MBA 639 Paper (3 credit hours). Students may not take a 500-level course for elective credit if a similar course has been taken at the undergraduate level.

The Traditional MBA degree (6 hours of electives)

Students pursuing the traditional MBA degree are required to meet the following requirements:

- Electives (6 credit hours). The traditional MBA degree requires six credit hours of College of Business electives at the 500/600 level approved by the MBA Director.

Accounting Emphasis (9 hours)

The MBA with an Emphasis in Accounting program produces graduates with the knowledge and skills for successful professional accounting careers. The goal of the accounting emphasis is to provide graduates with the following characteristics:

- Business and accounting knowledge.
- Capability and motivation for continued learning.
- Competence in learning skills (including research of data bases).
- Ability to analyze, critique, and communicate.
- Ability to work effectively with others.
- Rigorous ethical standards.

The Accounting Emphasis program enhances knowledge and skills for rapid advancement in either managerial or public accounting. MBA graduates should be prepared to pass certification examinations for both the Certified Public Accountant (CPA) and Certified Management Accountant (CMA).

Students choosing an emphasis in Accounting must select 9 hours of 500/600 level accounting courses. Appropriate undergraduate prerequisite courses are required. Courses at the 500-level cannot be selected if a comparable undergraduate course has already been taken.

Computer Information Systems Emphasis (9 hours)

The MBA with an Emphasis in Computer Information Systems program is focused on providing managerial-level knowledge of information technology for MBA students. The CIS emphasis provides general business managers with a curriculum focused on building their knowledge of information systems and the opportunity to develop technical skills in this field.

Electives (9 credit hours). The MBA with an emphasis in Computer Information Systems requires 9 credit hours of 500/600-level elective course work in the field of computer information systems.

Finance Emphasis (9 hours)

The MBA with an Emphasis in Finance is not open to students who have a previous undergraduate major in Finance. The Finance emphasis requires that students must be able to take at least some daytime courses in Pocatello.

Students pursuing the MBA with an Emphasis in Finance are required to meet the following requirements:

- Required courses for the Finance emphasis (6 credit hours)

FIN 578	Investments
FIN 550	Advanced Corporate Financial Management II

- Electives (3 credit hours). The MBA with an Emphasis in Finance program requires 3 credit hours of 500/600-level elective course work in the field of Finance.

Management Emphasis (9 hours)

The MBA with an Emphasis in Management is not open to students who have a previous undergraduate major in Management. The Management emphasis requires that students must be able to take at least some daytime courses in Pocatello.

Students pursuing the MBA with an Emphasis in Management are required to meet the following requirements:

- Required course for the management emphasis (3 credit hours)

MGT 541	Organizational Behavior

- Electives (6 credit hours). The MBA with an Emphasis in Management requires 6 credit hours of 500/600-level elective course work in the field of Management.

Marketing Emphasis (9 hours)

The MBA with an Emphasis in Marketing is not open to students who have a previous undergraduate major in Marketing. The Marketing emphasis requires that students must be able to take at least some daytime courses in Pocatello.

Students pursuing the MBA with an Emphasis in Marketing are required to meet the following requirements:

- Required courses for the Marketing emphasis (6 credit hours)

MKTG 532	New Product Development
MKTG 575	Competitive Intelligence

- Electives (3 credit hours). The MBA with an Emphasis in Marketing requires 3 credit hours of 500/600-level elective course work in the field of Marketing.

Health Care Administration Emphasis (12 hours)

Students who select the MBA with an Emphasis in Health Care Administration program take the following HCA courses, all of which are normally offered only in the evening in Pocatello.

HCA 625	Healthcare Law and Bioethics

HCA 665	Health Insurance and Reimbursement
HCA 680	Applied Topics in Health Care
HCA Elective	

Program of Study

All MBA students are required to meet with the MBA Director prior to or during their initial term in the program in order to develop an approved program of study. Students will be blocked from registering for the next term until this program of study is approved.

Examination Requirements

The MBA program requires the satisfactory completion of an oral examination in the final term of the student's program.

Academic Requirements

Any student who, after admission to the College of Business graduate program, falls below a 3.0 GPA or receives two C (C+, C, or C-) grades or a grade of D+ or lower in the MBA program (MBA-I, MBA-II, and elective courses) is deemed to be doing unsatisfactory work and is subject to review by the College of Business MBA Administrative Committee and to dismissal from the program. A student dismissed for academic reasons may apply for readmission to the MBA program no earlier than four months following his/her dismissal. Requests for readmission will be denied unless the student can demonstrate that the reasons for the previous unsatisfactory work have been rectified and can show evidence of ability to perform satisfactorily in the MBA program.

Courses in which a grade of D+, D, D- or F has been earned will not be counted toward fulfillment of MBA-I or MBA-II program requirements. Students may not use more than two courses with a grade of C+, C, or C- to satisfy graduation requirements. Students must achieve a 3.0 or better GPA in order to graduate.

Time Limit

Any course used to meet MBA-II, elective, or emphasis area graduation requirements must be completed within five years prior to the date of graduation. This time limit does not apply to MBA-I courses.

MBA and PharmD Joint Degree Program

Students enrolled in the PharmD Program at Idaho State University may combine that degree program with an MBA degree with approximately one year of additional effort. The program is essentially the traditional MBA degree program with the use of some PharmD courses to meet MBA requirements. The program follows the PharmD program with the following changes and requirements:

- In the two years of pre-pharmacy coursework, students complete ECON 201 (Macro Economics), ECON 202 (Micro Economics), ACCT 201 (Financial Accounting), and ACCT 202 (Managerial Accounting). ECON 202 and the accounting courses satisfy four hours of the 18 hours of electives required in the first two years of the pre-pharmacy program.
- Students may be admitted to the MBA program at the end of the second professional year. During the third professional year and summer preceding that year, the student takes MBA 613 (Marketing), MBA 614 (Operations Management), MBA 615 (Finance), MBA 616 (Business Policy). This satisfies four hours of electives specified in spring semester of the third professional year of the pharmacy program. MBA 612 (Human Behavior in Organizations) substitutes for PHAR 547 (Pharmacy Practice Management).
- In the fourth professional year the student takes six hours of clerkship to satisfy six elective hours in the MBA program.
- Following the fourth professional year the student would take the eight MBA-II courses. They are MBA 620, MBA 621, MBA 622, MBA 623, MBA 624, MBA 625, MBA 626 and MBA 628.

Award of the MBA degree requires successful completion of the PharmD degree or a bachelor's degree at Idaho State University.

Admission Requirements

Admission to the MBA program will normally take place at the end of the second professional year. PharmD students must meet the regular admission requirements of the MBA program except they are required to have completed only the equivalent of an undergraduate degree at the time of admission. Applicants must request the College of Pharmacy to certify to the Graduate School that the student has completed 128 hours and that those 128 hours are equivalent to an undergraduate degree.

Graduate Certificate in Business Administration Program (18 credits)

The College of Business offers a Graduate Certificate in Business Administration for individuals with non-business degrees who wish to enhance their business knowledge and skills. The program is designed as an evening, part-time program for the working professional, providing a broad base of knowledge and skills needed for today's high technology business environment. Individuals who may subsequently apply for admission to the MBA program would have all MBA-I requirements completed.

Admission Requirements

Admission to the program and maintenance of good standing will be in accord with the requirements of the Graduate School of Idaho State University and additional College of Business requirements.

Admission to the Graduate Certificate in Business Administration program is open to students with non-business degrees only, with a minimum of three years, post baccalaureate, full-time working experience. Admission to the program requires that applicants meet one of the following two requirements.

1. The student has a minimum upper-division GPA of 3.0.
2. Please see Graduate School requirements regarding the Graduate Management Admissions Test (GMAT).

Students who complete the Graduate Certificate in Business Administration program are required to meet the regular MBA admission requirements if they wish to complete the MBA degree. Two modifications to the admission process are: (1) Grades in the certificate program will be included in computing upper-division GPA. (2) Only the GPA in MBA-I classes will be used in cases where an individual has an extremely old GPA.

The following actions are required to be considered for admission to the Graduate Certificate in Business Administration program.

1. Submit a Graduate School application form and application fee to the Graduate School. An online admission form is located at http://www.isu.edu/departments/graduate/graduate-application.html
2. Provide official GMAT scores to the Idaho State University College of Business (COB). This is optional if an applicant has an admission GPA of 3.5 or greater.
3. Provide official transcripts to the Idaho State University Graduate School.

4. Provide a resume of work experience to the Idaho State University College of Business.

Locations

The Graduate Certificate in Business Administration program is offered in both Pocatello and Idaho Falls. In some instances, students may have to travel to Pocatello or Idaho Falls to obtain a specific class.

Requirements (18 hours)

- Certificate Minimum Prerequisites

Students entering the Graduate Certificate in Business Administration program are expected to have completed formal courses in statistics, college algebra, and Micro and Macro Economics. If students have not completed this work, they must do so early in their program.

- Required courses for the Graduate Certificate in Business Administration (18 hours as specified below):

MBA 611	Financial Reporting and Managerial Accounting
MBA 612	Human Behavior in Organizations
MBA 613	Marketing
MBA 614	Operations/Information Systems
MBA 615	Finance
MBA 616	Business Policy

Waiver of Requirements

Course requirements will be waived for students who can demonstrate that they have taken equivalent courses within the last 5 years. If a course is waived, the student is required to substitute an alternative course in the field of study that was waived. Waiver of courses and substitutions must be approved by the MBA Director.

Academic Requirements

Any student who, after admission to the College of Business certificate program, falls below a 3.0 GPA or receives two C+ grades or a grade of D or F in any course is deemed to be doing unsatisfactory work and is subject to dismissal from the program. A student dismissed for academic reasons may apply for readmission to the certificate program no earlier than four months following his/her dismissal. Requests for readmission will be denied unless the student can demonstrate that the reasons for the previous unsatisfactory work have been rectified and he/she shows evidence of ability to perform satisfactorily in the certificate program. Courses in which a grade of D or F has been earned will not be counted toward fulfillment of program requirements. Students may not use more than two courses with a grade of C+ to satisfy certificate completion requirements.

Accounting Graduate Courses

ACCT g500 Managerial Tax Planning 3 credits. For prospective business managers, owners, or investors interested in important tax consequences of alternative financial transactions. PREREQ: FIN 315, ECON 201, 202.

ACCT g531 Advanced Tax Concepts 3 credits. Specialized federal tax concepts for individuals, businesses, estates, and trusts. Elaborates on basic principles discussed in Principles of Taxation. PREREQ: ACCT 201, 202, 331, ENGL 101, ECON 201, 202 AND MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51.

ACCT g533 Legal Environment of Accounting 3 credits. Study of legal issues facing accountants, including business law, forms of organizations, and regulatory requirements. PREREQ: ECON 201, 202 AND MGT 261.

ACCT g541 Management Control Systems 3 credits. Focuses on strategic and managerial evaluation and control systems using financial and nonfinancial accounting information. PREREQ: ACCT 201, 202, ENGL 101, ECON 201, 202, MGT 217, MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51; AND ACCT 341, ENGL 308, OR SENIOR STANDING AND PERMISSION OF INSTRUCTOR.

ACCT g556 Auditing 3 credits. Concepts and practices of independent and internal auditing. Professional responsibilities, risk assessment, audit planning and reporting. PREREQ: ACCT 324, MGT 216, ENGL 101, ECON 201, 202 AND MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51. PREREQ OR COREQ: CIS g503.

ACCT g557 Advanced Auditing 3 credits. Integration of financial statement auditing concepts in case discussions. Research into contemporary auditing literature. PREREQ: ACCT 324, g556, MGT 216, CIS g503, ENGL 101, ECON 201, 202, AND MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51.

ACCT g560 Governmental and Not-For-Profit Accounting 3 credits. Accounting and reporting principles, standards and procedures applicable to governmental units and not-for-profit institutions, i.e. universities, hospitals. Special consideration to financial management problems peculiar to the not-for-profit sector. PREREQ: ACCT 324, ENGL 101, ECON 201, 202, AND MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51.

ACCT g561 Advanced Accounting 3 credits. Study of accounting problems arising in connection with partnerships, corporate affiliation; institutional, social, and fiduciary accounting; consignments; installment sales; and foreign exchange. PREREQ: ACCT 324, ENGL 101, ECON 201, 202, AND MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51.

ACCT g570 Contemporary Issues in Managerial Accounting 3 credits. Contemporary topics and emerging issues in managerial accounting. This field is rapidly evolving to meet the needs of enterprises competing in a dynamic global environment. PREREQ: ACCT 201, 202, 341, ENGL 101, ECON 201, 202, AND MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51.

ACCT g580 Comparative International Accounting 3 credits. Study of systems that have proven to be problems in an international accounting context, particularly for corporate financial reporting. Also, the progress toward international harmonization of financial reporting and taxation. PREREQ: ACCT 324, ENGL 101, ECON 201, 202, AND MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51.

ACCT g590 Financial Reporting and Statement Analysis 3 credits. A financial accounting capstone course focusing on statement analysis from the point of view of the many users of financial statements: investors, creditors, managers, auditors, analysts, regulators, and employees through the case analysis of actual companies' financial statements. PREREQ: ACCT 324, 461, ENGL 101, ECON 201, 202, AND MATH 143 OR ACT = 27, OR SAT = 620, OR COMPASS ALGEBRA = 51, OR TRIGONOMETRY = 51.

ACCT g592 Special Problems in Accounting 1-3 credits. Research and reports on selected problems or topics in accounting. Restricted to senior and graduate students in business who have the consent of the Dean. May be repeated under a different title for a maximum of 9 credits with the permission of the major advisor and the Dean.

ACCT g593 Accounting Internship 1-3 credits. A program of significant business experience coordinated by the faculty to provide a broad exposure to issues. May be repeated up to a total of 3 credits.

ACCT 631 Accounting Theory 3 credits. Study of accounting conceptual framework and accounting principles. Case discussions and research into contemporary accounting literature. PREREQ: ACCT 324.

ACCT 632 Advanced Auditing 3 credits. Integration of auditing concepts in case discussions. Research into contemporary auditing literature and data bases. PREREQ: ACCT g556.

ACCT 634 Seminar in Accounting 3 credits. Capstone course integrating special problems of financial, managerial, and tax accounting. Emphasis on analytical and communication skills. PREREQ: ACCT 324 AND ACCT g561.

ACCT 635 Strategic Cost Management 3 credits. Critical examination of various cost management issues and techniques with emphasis on strategic, behavioral, and cultural issues. PREREQ: MBA 611, MBA 615, AND MBA 616.

Computer Information Systems Graduate Courses

CIS g503 Systems Analysis and Logical Design 3 credits. Develops systems analysis skills, using modern CASE techniques, prototyping with a relational database, structured analysis and design phases of the systems development life cycle. PREREQ: CIS 301.

CIS g507 Database Design and Implementation 3 credits. Design and implementation of multi-user relational DBMS. Use of stored procedures, advanced SQL, query optimization, transaction processing, DBMS information assurance and administration. Secure object-oriented design, programming and UML. PREREQ: CIS 120 OR CS 181, AND CIS g503.

CIS g511 Intermediate Information Assurance 3 credits. Focuses on homeland security, information assurance, integrity, control and privacy. Covers CNSS-4011, NIST-800-16 standards, national policy, and international treaties. PREREQ OR COREQ: CIS 120.

CIS g512 Systems Security for Senior Management 1-3 credits. System architecture, security measures, operations, operations policy, management plan, and provisions for system operator and end user training. PREREQ: CIS g511 OR PERMISSION OF INSTRUCTOR.

CIS g513 Systems Security Administration 1-3 credits. Course covers basic principles of systems security administration. Introduces students to the methods and technologies associated with running a system to maintain privacy and security. PREREQ: CIS g511 OR PERMISSION OF INSTRUCTOR.

CIS g514 Systems Security Management 1-3 credits. Covers managing systems and systems administrators operating in secure and private computing environments. Deals with facilities management, contingency plans, laws, standards of contract and operations management. PREREQ: CIS g511 OR PERMISSION OF INSTRUCTOR.

CIS g515 System Certification 1-3 credits. Describes techniques and methods for certifying a system is in compliance with national and governmental information assurance standards. Evaluates various certification methodologies. PREREQ: CIS g511 OR PERMISSION OF INSTRUCTOR.

CIS g516 Risk Analysis 1-3 credits. Develops techniques to identify the character and likelihood of adverse events. Explains methods to characterize consequences and costs associated with adverse events. Provides insight into consequence combinations. PREREQ: CIS g511 OR PERMISSION OF INSTRUCTOR.

CIS g519 Advanced Informatics Practicum 1-3 credits. Significant Informatics experience including research coordinated by the faculty designed to provide broad exposure to issues in Information Assurance. Does not fulfill major/minor requirements. May be repeated for a maximum of 6 credits. PREREQ: PERMISSION OF INSTRUCTOR REQUIRED. Graded S/U.

CIS g524 Decision Support Systems 3 credits. Study of the design and implementation of decisions support tools and techniques used in programming languages and skills. PREREQ: CIS g503, FIN 315, MGT 217.

CIS g530 Ebusiness and Web Development 3 credits. Technical and business topics related to conducting business over the Internet and other networks, including implementation technologies, electronic money and funds transfer, legal and regulatory considerations, security and privacy issues. PREREQ: CIS g503, CIS g120.

CIS g540 Object-Oriented Development 3 credits. The organization of software as a collection of discrete objects incorporating both data and operations performed on that data. Concepts of object-oriented development, including classes, inheritance, and encapsulation in a modern object-oriented language. PREREQ: CIS 120.

CIS g582 Advanced Systems Analysis and Design 3 credits. Provides the knowledge and tools necessary to develop a physical design and an operational computerized system in a secure environment. PREREQ: CIS 320, CIS g503, CIS g507, MGT 312, MGT 329, FIN 315, FIN 317, AND MKTG 325.

CIS g585 Network and Communication Systems 3 credits. Study of the implementation and development of network information systems. Protocols and techniques will be compared. PREREQ: CIS 285 OR PERMISSION OF INSTRUCTOR.

CIS g586 Business System Simulation 3 credits. Study, construction, and operation of computer simulations as aids for management and administrative decisions. PREREQ: MGT 217, CIS 120 OR PERMISSION OF INSTRUCTOR.

CIS g587 Software Systems Study of the Software Implementation Process 3 credits. In addition to system optimization techniques, management strategies will be discussed. PREREQ: CIS g503.

CIS g590 Management of Information Systems and Information Security 3 credits. Study of the problems associated with the organization, management and security of information technology services. PREREQ: CIS 302 OR PERMISSION OF INSTRUCTOR.

CIS g591 Seminar in Computer Information Systems 3 credits. Reading, discussion, and reporting on selected topics. Restricted to senior/graduate students in business with consent of the instructor. May be repeated with the instructor's permission for up to 6 credits.

CIS g592 Special Problems in Computer Information Systems 1-3 credits. Research and reports on topics in computer science. Restricted to senior/graduate students in business with consent of the Dean. May be repeated under a different title for maximum of 9 credits.

CIS g593 Computer Information Systems Internship 1-3 credits. Significant business experience coordinated by the faculty to provide broad exposure to issues. May be repeated up to a total of 9 credits. Does not fulfill major or minor requirements.

CIS 610 Computer Information Systems Security 3 credits. Network and IS security issues, risk assessment, technological, and procedural security measures; computer fraud and privacy issues; hacker attacks, phone fraud, denial of service, and virus and worm attacks; laboratory and professional practice.

CIS 630 Implementing E-Commerce 3 credits. Discussion of technical and business topics related to implementing business electronically, over the Internet and other networks, electronic funds transfer; online marketing alternatives; legal and regulatory considerations; security and privacy issues.

Finance Graduate Courses

FIN g531 Financial Modeling 3 credits. Survey of integrative modeling with special applications of computer models. Includes topics from cash flow forecasting, mergers and acquisition, financial structure, and capital budgeting. PREREQ: FIN 315 AND FIN 317.

FIN g545 Real Estate Finance 3 credits. Principles and methods of valuing business and residential land and improvements; analysis of sources and methods used in the financing of construction and development. PREREQ: FIN 315.

FIN g548 Financial Management of Depository Institutions 3 credits. An analysis of the managerial issues which affect the financial performance of depository institutions such as capital adequacy, liquidity and asset/liability management techniques, profitability analysis, funding and investment decisions. PREREQ: FIN 315 AND FIN 317.

FIN g550 Advanced Corporate Financial Management II 3 credits. Advanced development of financial statement analysis, financial planning, working capital management, and special topics emphasizing analysis and application to financial management decisions. PREREQ: FIN 315 AND MGT 216.

FIN g564 Entrepreneurial Finance 3 credits. This course develops financial and managerial skills important to students who are interested in pursuing careers in an entrepreneurial setting. Topics include: financial issues unique to entrepreneurial firms, development of skills with wide application in entrepreneurial situations, and financing sources available to entrepreneurial companies. PREREQ: FIN 315.

FIN g575 International Corporate Finance 3 credits. Study of financing investment projects abroad including the tapping of overseas capitol markets, financing export transactions, hedging foreign exchange risks, and the control alternatives of international business. PREREQ: FIN 315, FIN 317, AND MGT 216.

FIN g578 Investments 3 credits. Fundamental principles in the risk-return valuation of financial instruments. Topics include the institutional framework in which securities are traded, modern portfolio theory, asset pricing, derivatives, and

portfolio management. PREREQ: FIN 315, FIN 317 AND MGT 216.

FIN g584 Options and Futures 3 credits. Examination of the pricing and use of options, financial futures, swaps, and other derivative securities. PREREQ: FIN 315, FIN 317 AND MGT 216.

FIN g591 Seminar in Finance 3 credits. Reading, discussion and preparation of reports on selected topics. Restricted to senior and graduate students in business who have the consent of the instructor. May be repeated with instructor's permission for up to 6 credits.

FIN g592 Special Problems in Finance 2-3 credits. Research and reports on selected problems or topics in finance. Restricted to senior and graduate students in business who have the consent of the Dean. May be repeated under different title for a maximum of 9 credits with the permission of the major advisor and the Dean.

Health Care Administration Graduate Courses

HCA 625 Healthcare Law and Bioethics 3 credits. Comprehensive coverage of legal issues and the ethical implications of the law as applied to regulation and licensure, health care financing. Medicare and Medicaid, health care reform, and other relevant current issues. PREREQ: HCA 610 AND HCA 620.

HCA 665 Managed Care 3 credits. Introduction to, and analysis of, the evolving managed care industry. Select topics include managed care's relationship to traditional health care delivery models and the insurance industry; patient satisfaction and care delivery modes; clinical and managerial quality. PREREQ: HCA 382.

HCA 680 Applied Topics in Health Care 3 credits. Advanced readings and analysis in the areas of health economics, health finance, social aspects of medicine, bioethics, public health, and epidemiology. PREREQ: HCA 382.

Management Graduate Courses

MGT g510 Entrepreneurship 3 credits. Developing new business ideas, initiating a new enterprise, bringing new technology to the market; applying sound business practices involving management, marketing, accounting, finance and CIS to accommodate changing market opportunities. PREREQ: FIN 315, MGT 312, AND MKTG 325 OR PERMISSION OF INSTRUCTOR.

MGT g530 Advanced Operations/Production Management 3 credits. Study of problems on line management in organizations. Major sections include strategy, process analysis, manpower planning, inventories, scheduling, and control of operations. Emphasizes both behavioral and technical aspects of problem solving in the area of operations management. PREREQ: MGT 329 AND MGT 312.

MGT g534 Productivity and Quality 3 credits. Study of the factors involved in an organization's productivity and quality of product or service. PREREQ: MGT 329 AND MGT 312.

MGT g541 Organizational Behavior 3 credits. Case study approach designed to encourage independent thought in the application of behavioral theories and concepts of organizational problems. Emphasis on integrating theoretical concepts with patterns of organizational direction, control, communications and decision-making. PREREQ: MGT 312 OR PERMISSION OF INSTRUCTOR.

MGT g550 Manufacturing Strategy 3 credits. Study of the various production alternatives as critical factors in a company's competitive strategies. PREREQ: MGT 329 AND MGT 312.

MGT g562 Issues in Business and Society 3 credits. Seminar course designed to focus thinking on critical issues facing managers in making decision choices regarding employees and other stakeholder groups, the community, and the environment. PREREQ: SENIOR STANDING OR PERMISSION OF INSTRUCTOR.

MGT g565 International Business 3 credits. Special emphasis on managerial functions and critical elements of the management process in a firm operating under foreign economic, technological, political, social and cultural environments. PREREQ: ECON 201 AND FIN 317.

MGT g573 Human Resource Management 3 credits. Introduction to the methodology of employee selection, employment and development; personnel supervision and management; financial compensation; job analysis; behavioral tools and techniques employed to deal with personnel problems and contemporary problems of manpower management. PREREQ: MGT 312.

MGT g574 Advanced Human Resource Management 3 credits. In-depth study of selected personnel/human resources management topics, including employee selection, performance evaluation, and compensation administration. PREREQ: MGT 217 AND MGT g573.

MGT g580 Labor and Employment Law 3 credits. Study of state and federal laws, domestic and foreign, governing employment relationships, including labor-management relations, discrimination and employee rights, work place safety, compensation and benefits, and related topics. PREREQ: MGT 261 OR MGT g573.

MGT g582 Project Management 3 credits. Philosophy and tools of project management focusing on applied methodologies. Addresses project scope, breakdown structure, schedules, and closure following professionally accepted industry standards. PREREQ: MGT 329 OR PERMISSION OF INSTRUCTOR.

MGT g583 Industrial Relations 3 credits. Integrated study of principles and practices of collective bargaining and industrial relations. Discussion of methods and techniques in dealing with labor-management problems arising out of contract negotiations and administrations. PREREQ: MGT 312.

MGT g591 Seminar in Management and Organization 3 credits. Reading, discussion, and preparation of reports on selected topics. Restricted to senior and graduate students in business who have the consent of the instructor. May be repeated with instructor's permission for up to 6 credits.

MGT g592 Special Problems in Management and Organization 2-3 credits. Research and reports on selected problems or topics in management and organization. Restricted to senior and graduate students in business who have the consent of the Dean. May be repeated under a different title for a maximum of 9 credits with the permission of the major advisor and the Dean.

MGT 675 Environmental Management 3 credits. The study of environmental issues in managerial decision making. Total cost/benefit analysis, political ramifications, publicity, ethical considerations, global issues. Analysis of various business functions and their impact on short- and long-term concerns.

Marketing Graduate Courses

MKTG g505 Sales Force Management 3 credits. Determination of the amount and allocation of personal sales effort to be applied to the market and methods of organization, evaluating, and controlling this effort. PREREQ: MKTG 325.

MKTG g521 Services Marketing 3 credits. Examines the development, promotion, and management of services. Topics covered include strategic planning, delivery channels and promotional challenges inherent to services. PREREQ: MKTG 325.

MKTG g526 Marketing Research 3 credits. Evaluation and study of providing relevant marketing information to management. Emphasizes problem formulation, consideration of data sources, means of acquiring information, sampling, interpretation of results. PREREQ: MGT 216, MGT 217 AND MKTG 325.

MKTG g528 Marketing Communications 3 credits. Introduction to the promotion process of business enterprises and other types or organizations. Emphasizes the management and implementation of advertising and sales promotion. Includes organizing and operating a sales force. PREREQ: MKTG 325.

MKTG g532 New Product Management 3 credits. Analysis of new product ideas: screening, business analysis, prototype development, market testing, and commercialization of goods and services. Includes diffusion of innovation issues in consumer and industrial markets. PREREQ: MKTG 325.

MKTG g540 Seminar in International Marketing 3 credits. Assessment of export potential using secondary research regarding the export feasibility of products offered by select firms in Southeast Idaho. PREREQ: MKGT 325 AND PERMISSION OF INSTRUCTOR.

MKTG g565 International Marketing 3 credits. Comparative marketing arrangements are examined. Covers factors which need to be recognized

by international marketing managers in analyzing markets, covering foreign operations, and in assessing economic, cultural, and political aspects of international markets. PREREQ: MKTG 325.

MKTG g575 Competitive Intelligence 3 credits. How to use competitive intelligence to gain strategic advantage. Includes understanding of information gathering techniques, the conversion of information into intelligence, various analysis methodologies, and intelligence dissemination processes. PREREQ: MKTG 325.

MKTG g580 Marketing on the Internet 3 credits. Understanding and using the Internet for marketing communications. Includes evaluating current sites, developing skills for authoring HTML pages, and developing an Internet marketing strategy and site for an organization. PREREQ: MKTG 325.

MKTG g591 Seminar in Marketing 3 credits. Reading discussion, and preparation of reports on selected topics. Restricted to senior and graduate students in business who have the consent of the instructor. May be repeated with instructor's permission for up to 6 credits.

MKTG g592 Special Problems in Marketing 2-3 credits. Research and reports on selected problems or topics in marketing. Restricted to senior and graduate students in business who have the consent of the Dean. May be repeated under a different title for a maximum of 9 credits with the permission of the major advisor and the Dean.

MBA Graduate Courses

MBA 610 Applied Economics 3 credits. Applied principles and techniques of analysis in micro and macro economics. Cross-listed with ECON 610.

MBA 611 Financial Reporting and Managerial Accounting 3 credits. Integrates study of accounting concepts with understanding of financial reports. Use of accounting information in managerial decision making and control.

MBA 612 Human Behavior in Organizations 3 credits. Study of human behavior in organizations. Decision making and problem solving, interpersonal relations and communications, and negotiations.

MBA 613 Marketing 3 credits. Analysis of forces producing changes in general business conditions. Principles of market driven decision making. Application to marketing management decisions and marketing strategy.

MBA 614 Operations Management 3 credits. Course covers decision making techniques for analysis of operational systems. Topics include operations/production planning, process analysis, project planning and control, and quality control.

MBA 615 Finance 3 credits. Study of the allocation of scarce resources, domestic and international financial management.

MBA 616 Business Policy 3 credits. Study of strategic decision making in a firm and its relation to the functional area of a business. Techniques of industry analysis. Study of ethics/social responsibility in the business organization.

MBA 620 Quantitative Information for Business Decisions 3 credits. Development and use of financial and non-financial information to support business analysis and decision making. Develops and applies analytical tools and framework through readings and case analysis.

MBA 621 Managerial Decision Making 3 credits. Study of the environment in which managerial decisions are made. Includes issues of organizational change, leadership, values, regulation, corporate culture and process, and organizational diversity.

MBA 622 Finance in an Integrated Environment 3 credits. Integrated analysis of a firm's decisions with emphasis on the financial aspects of these decisions.

MBA 623 Marketing in an Integrated Environment 3 credits. Integrated analysis of a firm's decisions with emphasis on the marketing and distribution aspects of these decisions over time. Analysis of decisions involving product development and market strategy.

MBA 624 Information Technology in Business 3 credits. The use and assessment of information technology in organizations. Focus is on strategic and integrative issues.

MBA 625 Managerial Control Systems 3 credits. The managerial and strategic use of control systems. The impact of control systems on organizational behavior and decision making.

MBA 626 Business Policy/Strategy in a Global Environment 3 credits. Strategic management of the firm, with emphasis on industry analysis, strategy formulation, implementation, cultural diversity in a global environment.

MBA 627 Planning for E-Commerce 3 credits. Study of Internet marketing, business models, customer interfaces, and communication issues. Includes planning and evaluation of online enterprises. Group projects may develop an Internet presence for regional organizations. PREREQ: ALL MBA I COURSES.

MBA 628 Business Simulation and Application 3 credits. Student teams manage a simulated company's operations and interact with various stakeholder groups. Focus is on enhancing broad-based, integrated understandings of complex business operations and applying discipline-based skills developed in other MBA courses. This course must be taken in the last spring semester in which a student is enrolled. PREREQ: MBA 622, 626, AND TWO ADDITIONAL MBA 62X COURSES OR 500-LEVEL GRADUATE ELECTIVES.

MBA 639 MBA Paper 3 credits.

MBA 650 Thesis 1-6 credits. Graded S/U.

MBA 651 New Product Development 3 credits. Examines the successful origination, development, implementation, and diffusion of product and process innovations in industry and government. Management of the technological change process in new ventures. PREREQ: MBA 613 OR MKTG 325.

MBA 683 Entrepreneurship 3 credits. Study of the process of forming a new venture. Emphasis is on the preparation of realistic action-oriented business plans to launch a new enterprise.

MBA 692 Special Problems in Business Administration 2-3 credits. Research readings or reports on selected problems and topics. May be repeated under a different title for a maximum of 6 hours credit. Requires the consent of the instructor.

MBA 693 Graduate Internship 1-3 credits. A program of significant business experience coordinated by the faculty to provide broad exposure to issues. May be repeated for up to 3 credits. Graded S/U.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COLLEGE
OF
EDUCATION
COLLEGE
of
EDUCATION

College of Education

Deborah L. Hedeen, Ph.D., Dean
Jack D. Newsome, Ph.D., Associate Dean
Peter R. Denner, Ph.D., Assistant Dean for Assessment

Conceptual Framework

The College of Education conceptual framework guides the curriculum, instruction, and assessment for all initial and advanced professional education programs in the College of Education. This framework comprises a standards-driven, learner-centered, assessment-informed, collaborative approach through which teachers, administrators and other school personnel develop the knowledge, dispositions, and skills deemed essential for effective professionals.

Standards for Advanced Professionals: The College of Education Standards for Advanced Professionals address the knowledge, dispositions, and skills required for school personnel completing initial and advanced/administrative preparation. These standards present the advanced professional as reflective, inquiry-oriented, cognizant of cultural diversity and individual differences, able to communicate effectively, aware of the research in his/her field, and able to assume leadership responsibilities.

Professional Studies and Research: The professional accesses, reads, and interprets the literature in his/her field and applies information from the research to professional practice.

Theoretical Foundations: The professional understands the theoretical foundations of the profession and applies knowledge of theoretical foundations to professional practice.

Professional Practice: The professional recognizes and addresses current issues in the profession, solves problems encountered in professional practice, and reflects on his/her professional practice and its effects.

Exceptionality and Diversity: The professional addresses issues of exceptionality and cultural diversity in his/her professional practice.

Technology: The professional uses technology in his/her professional practice.

Assessment: The professional uses a variety of formal and informal assessments to evaluate his/her performance and the performance of others.

Management of the Work Environment: The professional creates and maintains a safe and productive work environment.

Leadership: The professional assumes leadership roles in the profession and shares knowledge and expertise with others in the profession and community.

Interpersonal Skills: The professional fosters and maintains positive work relationships and models effective oral and written communication.

Personal Characteristics: The professional displays the beliefs, values, and behaviors that guide the ethical dimensions of professional practice.

Organization of the College of Education

To facilitate student access to advising and other academic support services, the College of Education is organized into four departments: the Department of Educational Leadership and Instructional Design, the Department of Educational Foundations, the Department of Educational Learning and Development, and the Department of Sport Science and Physical Education. Program descriptions, admission requirements, and program standards for each department are described in the following sections. However, the following are common elements to all master's programs within the College of Education. Requirements for doctoral programs and educational specialists are listed with those programs.

Admission to College of Education Master's Programs

At the time of application, the applicant must specify a single Master of Education program area to which admission is requested (i.e., Educational Administration, Elementary Education, Secondary Education, Literacy, Instructional Technology, K-12 Education/Music Education Emphasis, Child and Family Studies, School Psychology, Special Education, Human Exceptionality, or Physical Education/Athletic Administration). Should a student wish to change his/her program area, he/she must reapply to the Graduate School and to the new program area for admission.

The following are required for admission by all Master of Education program areas:

- The student must apply to, and meet all criteria for, admission to the Graduate School.
- Bachelor's degree from a college or university accredited in the United States or its equivalent from a school in another country.
- Grade point average of 3.0 or higher for all upper division credits taken at the undergraduate level.
- Fulfill any additional requirements of the proposed Master's program area (e.g., successful completion of an admission interview with the Master's program faculty).

Program Requirements:

No more than 9 credits of unclassified graduate coursework may be applied to the student's program. The student is responsible for meeting the requirements of, and being admitted to, the program as a classified student before taking additional coursework.

Master of Education students are strongly encouraged to sequence the Master's core courses as follows:

EDUC 601	within the first 9 credit hours
EDUC 602	within the first 18 credit hours
EDUC 610	within the first 24 credit hours

Additional program requirements specific to the Master's of Education and the Master's of Physical Education are listed below with each program description.

Retention in College of Education Graduate Programs:

Students must meet university, college, and department standards for grades, residency, time limits, and continuing registration (refer to the General Information section at the front of the Graduate Catalog, and program descriptions that follow.

Department of Educational Leadership and Instructional Design

Chair and Professor Lawson
Professors: Frantz, Pemberton
Associate Professors: Coffland, Neill, Sammons-Lohse, Strickland, Thomas
Assistant Professor: Meyer, Moulton, Scherz
Lecturer: Lind

Doctor of Education in Educational Leadership

The Doctor of Education in Educational Leadership is the College of Education's highest degree. Knowing that students enter the program with substantial knowledge, skills, abilities, and experience, the Doctorate in Educational Leadership seeks to support the development of education professionals as scholars, researchers, and practitioners. This three-part whole provides the grounding from which all benchmarks of the student's educational journey, from admissions, to advancement to candidacy , and ultimately program completion, are assessed.

As scholars, Doctors of Educational Leadership demonstrate content mastery. As researchers, Doctors of Educational Leadership demonstrate the application of content mastery through scholarly contributions reflecting the necessary dispositions and skills to successfully conduct meaningful education research. Finally, through guided practicum experiences, Doctors of Educational Leadership demonstrate their ability to use acquired knowledge, dispositions and skills as scholars and researchers in applied educational leadership settings.

EdD Educational Leadership Standards

The Ed.D. in Educational Leadership is aligned with two sets of standards: The Idaho State University College of Education Standards for Advanced Professionals (described in the previous section), and the Doctor of Education in Educational Leadership Standards.

Doctor of Education in Educational Leadership Standards: The Doctor of Education in Educational Leadership Standards address the knowledge, dispositions, skills and strategies that frame successful educational leadership. They include: Organizational Development, Consultation, Diversity, Supervision, Managing Change, Applied Foundations, Technology, Research, Teaching and Learning Theory, and Leadership, Ethics and Communication.

Admission Requirements

Admission to the Educational Leadership doctoral program is based on a rolling-cohort model. Cohorts cycle through approximately every three years. Screening of applications for cohort admission begins April 15th of the year in which a cohort is scheduled to begin the program. Outside the cohort, applications are invited on an ongoing basis. Non-cohort applications are reviewed fall, spring and summer. Every effort is made to support the doctoral program of study of non-cohort students.

At the time of application, the applicant must specify a single area of concentration (i.e., Educational Administration, Higher Education Administration). Should a student wish to change his or her area of concentration, he or she must reapply to the Graduate School for readmission to the doctoral program in Educational Leadership.

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, individuals applying for admission to the doctoral program in Educational Leadership will be reviewed using the following criteria for admission. Preference will be given to applicants who have:

1. A master's degree in education or a related field.
2. An academic record of at least 3.0 grade point average in the last two years of undergraduate course work and 3.5 grade point average at the graduate level.
3. For applicants submitting the MAT, as well as those with a Verbal GRE below 400, an on-site writing sample may be required.
4. A current curriculum vitae.
5. The Ed.D. Admission Checklist indicating competency in computer skills.
6. Successful completion of an interview with faculty in the area of proposed concentration (which may include an on-site writing experience).

International students whose native language is not English must comply with Graduate School admissions requirements. Additional language-based course work may be required of international students whose native language is not English.

General Requirements

The Doctor of Education in Educational Leadership requires a minimum of 65/66 semester credits of course work: For Educational Administration 25 credits in the doctoral core, and a minimum of 30 credits in the area of concentration. For Higher Education Administration 17 credits in the doctoral core and 39 credits in the area of concentration, including 6 credits of electives. Both emphases include 9 credits of graduate-level cognate study, and at least 10 credits of dissertation. The Educational Leadership program defines cognate study as a planned set of courses, 500-level and above, outside the student's concentration area, taken within the College of Education or outside it. Cognate study is to be determined prior to cognate course enrollment, in consultation with the student's advisor.

Of the 65/66 semester credits required for the Ed.D. in Educational Leadership, at least 30 semester credits of course work must be taken at Idaho State University. Dissertation credits may not be transferred from another institution.

Students are required to maintain continuous enrollment in at least one semester credit of work each semester (including summers) from matriculation to completion of the program including completion of the dissertation and oral defense. Failure to maintain continuous enrollment can result in dismissal from the program.

Students must maintain a 3.2 grade point average to qualify for the Doctor of Education. Two grades of C+ or below during the entire program will result in admissions status review, with the possibility of dismissal.

Final Program of Study

Tentative programs of study may be drafted upon program entry with the help of the student's advisor. The final program of study must be submitted with the Comprehensive Examination Notice of Intent and routed through the student's advisor, the Department, and the Dean of the College of Education. Upon submission of the final program of study

to the Dean of the Graduate School, the Dissertation Committee, including the Graduate Faculty Representative, is established and the student is advanced to candidacy.

Comprehensive Examination

The comprehensive examination is a significant aspect of the student's total doctoral program. The written examination is normally administered during or immediately following the last semester in which the student is engaged in formal course work.

The comprehensive examination has, as its overall objective, the assessment of the student's knowledge, understanding, and skills as they relate to the field of educational leadership. Examination guidelines are provided in the Ed.D. Handbook.

Dissertation and Oral Defense

Upon successful completion of the comprehensive examination and approval of the dissertation proposal by his or her Dissertation Committee, the student is authorized to complete the dissertation in preparation for the final oral defense.

Required Courses

The Doctor of Education in Educational Leadership requires a minimum of 65/66 semester credits of course work: For Educational Administration, 25 credits in the doctoral core and a minimum of 30 credits in the area of concentration. For Higher Education Administration, 17 credits in the doctoral core and 39 credits in the area of concentration, including 6 credits of electives. Both emphases include 9 credits of graduate level (500 or above) cognate study (determined in consultation with the student's advisor and concentration area), and at least 10 dissertation credits. The student may select from the following areas of emphasis: Educational Administration or Higher Education Administration.

Doctoral Core (Higher Education 17 credits (Read A) or Educational Administration (Read B) 25 credits)

EDLP 700	Change Strategies (A&B)	3 cr
EDLP 701	Advanced Statistics in Education (A&B)	3 cr
	Or approved equivalent or alternative (A)	3 cr
EDLP 702	Supervision & Empowerment (B)	3 cr
EDLP 703	Leadership & Organizational Development (A&B)	3 cr
EDLP 704	Conditions of Learning & Teaching (B)	3 cr
EDLP 705	Advanced Research Design I (qualitative) (A&B)	3 cr
EDLP 706	Advanced Research Design II (quantitative) (A&B)	3 cr
EDLP 707	Instructional Technology (B)	3 cr
EDLP 800	Seminar (A&B)	1 cr
EDLP 801	Capstone Seminar (A)	1 cr

Dissertation (10 credits)

EDLP 850	Dissertation	10 cr

Area of Concentration: (Students select one of the following emphasis areas)

Educational Administration (minimum 30 credits)

EDLA 720	Legal Issues in Educational Organizations	3 cr
EDLA 721	Educational Policy and Governance	3 cr
EDLA 722	Data-Driven Decision-Making	3 cr
EDLA 723	Educational Planning and Evaluation	3 cr
EDLA 737	Practicum	6 cr
	Electives	3 cr

Cognate Study (minimum 9 graduate level credits (500 or above) - to be determined prior to cognate study enrollment, in consultation with the student's advisor and confirmed by concentration area review)

Higher Education Administration (minimum 39 credits)

REQUIRED-PLUS COGNATE STUDY (33 credits)

EDLH 730	History and Philosophy of Higher Education	3 cr
EDLH 731	Law in Higher Education	3 cr
EDLH 732	College and University Curriculum	3 cr
EDLH 733	Finance in Higher Education	3 cr
EDLH 734	Issues/Trends in Higher Education	3 cr
EDLH 736	Instructional Leadership and Affairs in Higher Education	3 cr
EDLH 737	Practicum	3 cr
EDLH 738	Assessment and Accountability in Higher Education	3 cr

ELECTIVES (6 credits)

COUN 680	Foundations of Student Affairs	3 cr
EDLA 630	Education Equity and Ethics	3 cr
EDLC 730	The Modern Community College	3 cr
EDLH 735	Government and External Relations	3 cr
EDLH 739	Higher Education Leadership: Strategies and Enrollment Planning, Governance, and Institutional Research	3 cr

Cognate Study (minimum 9 graduate level credits (500 or above) - to be determined prior to cognate study enrollment, in consultation with the student's advisor and confirmed by concentration area review)

Doctor of Philosophy in Instructional Design

The Doctor of Philosophy (Ph.D.) in Instructional Design degree prepares students to assume positions of leadership in instructional design, research, measurement, or evaluation. Graduates direct instructional design, research, measurement or evaluation projects as faculty at colleges and universities, in private or public institutions, or work as individual consultants.

While research is an integral component of the Instructional Design Ph.D. program, candidates are provided primarily with courses and experiences preparing them to function more effectively as leaders in guiding instruction to meet specific educational outcomes.

Admission Requirements

Admission to the Instructional Design Ph.D. program is based on a cohort model. Cohort cycles depend on the start date of the particular cohort (contact department chair for specific details). However, there is a specific sequencing of curriculum, and this may strongly influence the start date of a particular cohort. Applications for cohort admission are accepted at any time, in accordance with the deadlines set by the Graduate School. Every effort is made to accommodate the doctoral program of study for non-cohort students who enroll in full-time doctoral studies. In addition to the Graduate School general requirements, individuals applying for admission to the Instructional Design Ph.D. program will be reviewed using the following criteria for admission. Preference will be given to applicants who have:

1. A master's degree in instructional technology, instructional design, or a related field.
2. An academic record of at least 3.0 Grade Point Average (GPA) in the last two years of undergraduate course work and 3.5 GPA at the graduate level.
3. A minimum score at the 45th percentile, or above, on the Miller Analogies Test (MAT) or a minimum combined score of 1100 on the Verbal and Quantitative sections of the Graduate Record Examination (GRE). For applicants submitting a Verbal GRE score below 400, an on-site writing sample will be required. Applicants whose first language is not English need to meet the following TOEFL requirements for Classified admission: (1) Internet-based test (iBT): a total score of 80 with a score of at least 20 on each Section (graduate assistants who teach courses must score 23 or above on the Speaking Section) on the iBT; or (2) Computer-based test: a total score of 213 with a score of at least 21 on Section 1 (Listening Comprehension) on the computer test; or (3) Paper-based test: a total score of 550 with a score of at least 55 on Section l (Listening Comprehension)

on the paper test, or a score of 84 on the MTELP, or a score of 6 on the IELTS.

4. A current curriculum vitae.
5. Successful passing of the Department of Educational Leadership and Instructional Design graduate technology performance examination.
6. Successful completion of an interview with graduate faculty from the Department of Educational Leadership and Instructional Design.

General Requirements

The Doctor of Philosophy in Instructional Design requires a minimum of 67 semester credits, 12 credits in the Instructional Design Ph.D. core, a minimum of 30 credits in the Instructional Design specialty area, 15 credits in the Instructional Design Ph.D. Research area, and at least 10 credits of dissertation. Of the 67 semester credits required for the Ph.D. in Instructional Design, at least 30 semester credits of course work must be taken at Idaho State University. Dissertation credits may not be transferred from another institution.

Upon initial enrollment, all Instructional Design Ph.D. students will be required to maintain continuous enrollment, with at least one semester credit of work each semester (including summers) from matriculation to completion of the program, including completion of the dissertation and oral defense. Failure to maintain continuous enrollment can result in dismissal from the program.

Students must maintain a 3.5 GPA to qualify for the Ph.D. in Instructional Design. Two grades of C+, or below, during the entire program will result in the Department of Educational Leadership and Instructional Design reviewing the student's performance within the program. The result of this review may lead to dismissal from the program. Any additional grading policies are set by the Graduate School.

Program of Study

A Program of Study will be drafted during the first semester of course work. With the help of the student's major advisor and departmental approval, this plan of study will be filed with the Graduate School. Programs of Study will be updated each semester. The final Program of Study must be submitted with the Comprehensive Examination Notice of Intent and routed through the student's advisor, the Department, and the Dean of the College of Education. Upon successful completion of the comprehensive examination and submission of the final Program of Study to the Dean of the Graduate School, the Dissertation Committee, including the Graduate Faculty Representative (GFR), is established and the student is advanced to candidacy.

All doctoral requirements must be completed within five years of passing the Comprehensive Examination. Doctoral students must also meet appropriate residency requirements.

Doctor of Instructional Design Program Course Work

All course work is subject to the approval of the student's academic advisor, Instructional Design Ph.D. program chair, and the Department.

Instructional Design Ph.D. Core (12 credits)

The following list of courses are suggested (not required) and may fulfill the requirements within the Instructional Design Ph.D. Core. The intent of the core area is to provide depth of knowledge in learning theory and/or organizational theory. A prerequisite for the core curriculum may include EDUC 602 or demonstration of equivalent knowledge. Additional prerequisites may be required if the specific course indicates the need for a prerequisite.

EDLP 700	Change Strategies	3 cr
EDLP 702	Supervision and Empowerment	3 cr
EDLP 703	Leadership and Organizational Development	3 cr
EDLP 704	Conditions of Learning and Teaching	3 cr
PSYC 612	Theories of Perception	3 cr
PSYC 634	Cultural Diversity	3 cr
PSYC 642	Cognitive Psychology	3 cr
PSYC 644	Advanced Developmental Psychology	3 cr
PSYC 703	Advanced Ethics Seminar	1 cr

Instructional Design Ph.D. Research Area (15 credits)

The following list of courses are suggested (not required) and may fulfill the requirements within the Research Area. The intent of this Ph.D. Research Area is to provide depth of knowledge of quantitative and qualitative research designs and the statistical procedures that support both research design areas. Prerequisites for the research curriculum may include EDUC 601, EDUC 610, or demonstration of equivalent knowledge. Additional prerequisites may be required if the specific course indicates the need for a prerequisite.

EDLP 701	Advanced Statistics in Education	3 cr
EDLP 705	Advanced Research Design I (qualitative)	3 cr
EDLP 706	Advanced Research Design II (quantitative)	3 cr
PSYC 632	Advanced Experimental Design I	3 cr
PSYC 637	Advanced Experimental Design II	3 cr
ANTH g549	Methods and Techniques of Ethnographic Field Research	3 cr
MATH g558	Experimental Design	3 cr
MATH g559	Applied Multivariate Analysis	3 cr

Instructional Design Ph.D. Area (30 credits)

The following five courses are **required**, with the additional 15 credits intended to provide depth of knowledge of instructional design principles in print, digital, and classroom contexts. Instructional design for e-learning is emphasized. It is expected that this knowledge may be applied within a wide array of instructional design applications. Prerequisites for the Instructional Design curriculum may include EDUC 622, EDUC 655, EDUC 656, EDUC 639, or demonstration of equivalent knowledge. Additional prerequisites may be required if the specific course indicates the need for a prerequisite.

Required Courses

EDLP 707	Instructional Technology	3 cr
EDLT 740	Instructional Systems Design I	3 cr
EDLT 742	Multimedia Authoring I	3 cr
EDLT 743	Multimedia Authoring II	3 cr
EDLT 745	Instructional Design for Distance Learning Delivery	3 cr

The remaining 15 credits will be taken in appropriate course work that supports the candidate's work within Instructional Design.

Dissertation (10 credits)

A minimum of 10 semester credits for dissertation work is expected. Please note that some students may require more than 10 semester credits in order to successfully meet the requirements of the dissertation investigation.

Comprehensive Examination

The comprehensive examination is a significant aspect of the student's total doctoral program. The written examination is normally administered during, or immediately following, the last semester in which the doctoral student is engaged in formal course work.

The comprehensive examination has as its overall objective the assessment of the student's knowledge, understanding, and skills as they relate to the field of Instructional Design.

Dissertation and Oral Defense

Upon successful completion of the comprehensive examination and approval of the dissertation proposal by his or her Dissertation Committee, the student is authorized to complete the dissertation in preparation for the final oral defense.

Educational Specialist in Educational Administration

A program for advanced work in educational administration leading to an educational specialist certificate.

Applicants will enter the program after completion of the master's degree in Educational Administration. Completion of the educational specialist program will require a minimum of 30 semester credit hours beyond the master's degree with an accumulated GPA of 3.5 during the specialist program. Students with a master's degree in areas other than administration may be required to take additional work equivalent to that required in the administration degree and must meet initial administrative certification.

EdS Educational Leadership Standards

The Education Specialist in Educational Administration curriculum is aligned with three separate but related sets of standards: The Idaho State University College of Education Standards for Advanced Professionals (described previously), the Interstate School Leaders Licensure Consortium (Standards for School Leaders), and the Idaho State Department of Education's requirements for an Administrator Certificate with the Superintendent endorsement. All sets of standards align and overlap with each other.

Interstate School Leaders Licensure Consortium: Codified in 1996, these standards were drafted by personnel from 24 state education agencies and professional associations. These standards represent best practice model standards for school leaders. They represent a common core of knowledge, dispositions and performance skills developed to link leadership more forcefully to productive schools and enhance educational outcomes. The standards include: Facilitating a Vision, School Culture & Instructional Program, Management, Collaboration with Families & Communities, Integrity, Ethics & Fairness, and Political, Social, Economic, Legal and Cultural Context.

Idaho State Department of Education Administrator Certificate with the Superintendent Endorsement: These standards address competencies determined by the State of Idaho to be necessary for effective school (district level) leadership (i.e., the superintendency). These standards include: Advanced School Finance, Grant Writing & Revenue Generation, Policy Development & School Board Relations, District Wide Support Services, Employment Practices & Negotiations, Educational Product Marketing & Community Relations, and Special Services & Federal Programs. Superintendent level certification endorsement can be a student outcome through this curricular/standards alignment.

Admission Requirements

For admission to the Educational Specialist program the student must apply to, and meet all criteria for, admission to the Graduate School. The student must also provide a letter of reference verifying five years of successful teaching and/or administration experience AND a letter from his/her supervisor attesting to the student's school administration potential. (Administration experience must comprise at least one year).

A student who does not meet these requirements upon application may be admitted as Classified w/PR, and must complete all requirements for admission during the first semester of enrollment. Exceptions may be petitioned to a committee of educational administration faculty and the Department Chair.

General Requirements

Course requirements will be distributed within the areas listed below. Students must complete the minimum semester hours identified in each area. The courses used to meet the minimum area requirements may be taken during the master's degree or educational specialist program. In general, the program of study for the Education Specialist in Educational Administration is as follows:

Professional Foundations

EDLA 644	Instructional Leadership	3 cr
EDLA 662	Superintendency	3 cr

Content Specialization

EDLA 630	Education Equity and Ethics	3 cr
EDLA 643	School Personnel Administration	3 cr
EDLA 664	Public School Monetary Policy	3 cr
EDLA 720	Legal Issues in Educational Organizations	3 cr
EDLA 721	Educational Policy and Governance	3 cr
EDLA 722	Data Driven Decision Making	3 cr

Research and Evaluation

EDUC 610*	Applied Education Statistics	3 cr
EDLA 723	Educational Planning and Evaluation	3 cr

*Students must have taken EDUC 610 or an equivalent course in the last five (5) years prior to being accepted into the program or during enrollment for which credits will NOT be counted toward degree completion.

Field Experience

EDLA 637	Practicum	3 cr
EDLA 751	Field Project/Case Analysis	1 cr

Electives: as needed and appropriate with regard to credit totals and student needs.

Master of Education with Educational Administration Emphasis

The Master of Education with Educational Administration Emphasis is designed to strengthen the student's understanding, knowledge, and skills in Core Professional Studies and Educational Leadership as they relate to building level administration.

Master of Education Educational Leadership Standards

The Masters in Education with Educational Administration Emphasis curriculum is aligned with three separate but related sets of standards: The Idaho State University College of Education Standards for Advanced Professionals (described previously), the Interstate School Leaders Licensure Consortium (Standards for School Leaders described previously), and the Idaho State Department of Education's Principalship Certification Standards. All three sets of standards align and overlap with each other.

Idaho State Principalship Certification Standards: These standards address competencies determined by the State of Idaho to be necessary for effective school (building) level leadership (i.e., the principalship). Standards must be met through graduate level course work in school administration for the preparation of school principals at an accredited college or university. The standards include: Vision & Strategic Leadership, Instructional Leadership, Management & Organizational Leadership, Family & Community Partnerships, Professional & Ethical Leadership, and Governance & Legal Leadership. Principal level certification endorsement can be a student outcome through this curricular/standards alignment.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, individuals applying

for admission to the Master of Education with Educational Administration Emphasis will be reviewed using the following criteria. Preference will be given to applicants who meet or exceed these criteria.

1. Bachelor's degree from a college or university accredited in the United States or its equivalent from a school in another country.
2. Grade point average of 3.0 or higher for all upper division credits taken at the undergraduate level.
3. Submission of GRE or MAT scores.
4. One year of pre-K-12 teaching experience or documentation of equivalent experience.

Students must complete a minimum of 39 semester credit hours for the Master of Education with Educational Administration Emphasis. Students will complete a 540-hour internship; hours are specified at the elementary, middle school, and high school levels. At least 6 internship credits are required. Students enroll in 3 credits during their first semester of internship work and thereafter maintain continuous enrollment of at least 1 credit/semester until internship hours are completed. Students completing a thesis will orally defend the thesis. Students not completing a thesis will be required to complete a case analysis and pass an oral examination.

Students seeking Idaho certification in the area of their training must meet requirements of the State Board of Education for certification. It is recommended that students pursuing the Master of Education with Educational Administration Emphasis have professional experience in an educational context.

Required Core Professional Studies

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr

Specialty Studies

EDLA 608	Educational Leadership and Administration	3 cr
EDLA 612	School Law	3 cr
EDLA 613	Using Data to Improve School Leadership	3 cr
EDLA 614	Curriculum Leadership	3 cr
EDLA 615	Supervision of Instruction	3 cr
EDLA 630	Education Equity and Ethics	3 cr
EDLA 642	School Communications and Public Relations	3 cr

Integrative Field Research Studies (Either 650 or 651 and 657)

EDLA 650	Thesis	6 cr
EDLA 657*	Internship	6 cr
OR		
EDLA 651	Field Project/Case Study in Education	3 cr
EDLA 657*	Internship	6 cr

*Minimum of 6 credits required. Three (3) credit enrollment first semester, thereafter at least one (1) credit per semester continuous enrollment.

Master of Education in Elementary Education

The 36-credit non-thesis Master's degree in Elementary Education is a combination of pedagogy and content; designed for the practicing elementary school teacher to meet the demands of content-focused accountability. This degree will permit the practicing teacher to acquire greater depth in English/language arts, history/social science, mathematics, or science (geology, physical science, and biology).

1. The advanced elementary education professional, through the core curriculum, is expected to meet the core standards for advanced professionals.
2. The advanced elementary education professional is expected to meet Idaho Core Teacher Standards and National Board for Professional Teaching Standards Core Propositions.
3. The advanced elementary education professional is expected to extend their subject matter depth in history/social science, English/language arts, science, or mathematics.
4. The advanced elementary education professional is expected to utilize the knowledge of subject area concentration in specific applications and assessments within the educational methods curriculum.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, applicants for the Master of Education in Elementary Education must meet all college requirements for admission and retention.

General Requirements

Educational Core (12 credits)

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr
EDLT 616	Integration of Technology into School Curriculum	3 cr

Educational Pedagogy (12 credits)

EDUC 622	Educational Assessment and Evaluation	3 cr
EDUC 630	Advanced Elementary Methods	3 cr
EDUC 641	Advanced Studies in K-12 Curriculum	3 cr
EDUC 670	Seminar in Elementary Education	3 cr

Content Area (12 credits)

Applicants are instructed to see their education advisor for an outline of the 12 hours of approved electives from among graduate-level courses in mathematics, science, history/social science, or English/language arts.

Master of Education in Secondary Education

The 36-credit non-thesis Master's degree in Secondary Education is a combination of pedagogy and content designed for the practicing secondary teacher to meet the demands of content-focused accountability. This degree will permit the practicing teacher to acquire greater depth in English/language arts, history/social science, mathematics, or science (geology, physical science, and biology).

1. The advanced secondary education professional, through the core curriculum, is expected to meet the core standards for advanced professionals.
2. The advanced secondary education professional is expected to meet Idaho Core Teacher Standards and National Board for Professional Teaching Standards Core Propositions.
3. The advanced secondary education professional is expected to extend their subject matter depth in history/social science, English/language arts, science, or mathematics.
4. The advanced secondary education professional is expected to utilize the knowledge of subject area concentration in specific applications and assessments within the educational methods curriculum.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, applicants for the Master of Education in Secondary Education must meet all college requirements for admission and retention. In addition, applicants must be practicing educators or have a documented record of teaching experience. Applicants will be reviewed using a letter of interest/intent.

General Requirements

Core Professional Studies (12 credits)

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr
EDLT 616	Integration of Technology into School Curriculum	3 cr

Educational Pedagogy (12 credits)

EDUC 622	Educational Assessment and Evaluation	3 cr
EDUC 631	Advanced Secondary Methods	3 cr
EDUC 641	Advanced Studies in K-12 Curriculum	3 cr
EDUC 671	Seminar in Secondary Education	3 cr

Content Area (12 credits)

Applicants are instructed to see his/her education advisor for an outline of the 12 hours of approved electives from among graduate-level courses in mathematics, science, history/social science, or English/language arts.

Master of Education in Instructional Technology

The Master of Education in Instructional Technology prepares educators to greater depth in a cognitive area and in this way influences directions in elementary school curriculum. The program is designed to strengthen the student's understanding, knowledge, and skills in three major areas—Educational, Core Educational, and Specialty Studies — as they relate to teaching in the secondary school.

Applicants enter the program after completion of the bachelor's degree and will complete a minimum of 36 semester credit hours for the Master's degree. Students seeking Idaho certification in the area of their training must meet any requirements of the State Board of Education for certification. It is recommended that students pursuing the Master of Education degree in Instructional Technology have professional experience in an educational context.

1. The advanced secondary or elementary technology education professional, through the core curriculum, is expected to be aware of: theories of learning in education, research in education, the integration of technology in the elementary/secondary curriculum, and statistics that permit analyzing and interpreting student data.
2. The advanced secondary or elementary technology education professional is expected to extend his/her technology subject matter knowledge and expertise.
3. The advanced secondary or elementary technology education professional is expected to be aware of testing, measurement, and assessment as it relates to the integration of technology in the K-16 curriculum.
4. The advanced secondary or elementary technology education professional is expected to utilize the knowledge of technology in specific applications and assessments within the educational methods curriculum.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, applicants for the Master of Education in Instructional Technology must meet all college requirements for admission and retention.

General Requirements

Core Professional Studies (12 credits)

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr
EDLT 616	Integration of Technology into School Curriculum	3 cr

Educational Pedagogy (12 credits)

EDLT 621	Issues and Trends in Instructional Technology	3 cr
EDUC 622	Educational Assessment and Evaluation	3 cr
EDLT 626	Instructional Technology and Staff Development	3 cr
EDLT 655	Fundamentals of Instructional Design	3 cr

Technology Content (12 credits)

EDLT 639	Delivering Instruction in Electronic Formats	3 cr
EDLT 656	Fundamentals of Multimedia Development in Education	3 cr
	Electives	6 cr

Master of Education in K-12 Education

Music Education 36 Credits (course work only option)

The Master of Education in Music Education is designed to strength the student's understanding, knowledge, and skills in three major areas—Core professional Studies, Specialty Studies, and Integrative Field Research Studies—as they relate to music education. The program is designed to meet the needs of music education specialists who work in the public school system (grades K-12), or who aspire to further graduate study and teaching in music education.

Admission Requirements

The student must apply to and meet all criteria for admission to the Graduate School. In addition, applicants for the Master of Education in K-12 Education must meet all college requirements for admission and retention.

Individuals applying for admission to the Master of Education in Music Education, must meet the following admission requirements:

- Bachelor's degree in music from a regionally accredited college or university.
- It is expected that students will meet basic requirements for public school certification.
- Completion of entrance examinations in music history and music theory. Students whose examination indicate deficiencies will be granted Classified (w/PR) Status. Any course used to remove deficiencies does not count toward the degree. When deficiencies have been removed, the student may seek Classified Status.

General Requirements

Students complete a minimum of 36 semester credit hours for the Master's degree. Students seeking Idaho Certification in the area of their training must meet any requirements of the State Board of Education for certification. It is recommended that students have professional experience in an education context.

Education Core (12 credits)

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr
EDLT 616	Integration of Technology into School Curriculum	3 cr

Pedagogy and Content (24 credits)

MUSC 515	Seminar in Band Music	2 cr
	OR	
MUSC 516	Seminar in Choral Music	2 cr
MUSC 517	Advanced Conducting	2 cr
MUSC 601	Foundations in Music Education	3 cr
MUSC 610	Practicum in Rehearsal Techniques	2 cr
MUSC 671	Music Education Seminar	3 cr
Graduate Performance Ensemble (2 semesters)		2 cr
Music History/Theory Elective		2 cr
Music history Theory Elective		2 cr
Other Music Electives		6 cr
Total		36 credits

Department of Educational Foundations

Chair and Professor: Ray
Professors: Denner, Jenkins, Peña, Rankin
Associate Professors: Jack Newsome, Julie Newsome, Sanger
Assistant Professors: Counsell, Kelle, Roborough, Ruchti
Lecturers: Jacobsen, Kauer

Master of Education with Child and Family Studies Emphasis

Family Studies

The goal of the Early Childhood Education and Intervention Program is to prepare professionals who have the necessary knowledge, dispositions, and abilities to:

1. Enhance learning and development of young children, with and without disabilities, between the ages of birth and third grade.
2. Establish collaborative relationships with families, and other professionals in ways that produce positive outcomes for young children.
3. View their own professional development as a lifelong endeavor.
4. Advocate for children, families, and the early childhood profession.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, applicants for the Master of Education with Child and Family Studies Emphasis must meet all college requirements for admission and retention.

General Requirements

The Master of Education with Child and Family Studies Emphasis is designed to strengthen the student's understanding, knowledge, and skills in three major areas–Core Professional Studies, Integrative Field Research Studies, and Specialty Studies–as they relate to Child and Family Studies. The student must select one of the following option areas for the Master of Education with Child and Family Studies Emphasis:

Option areas:

- **Family Studies**
- **Early Childhood Education and Intervention**

Applicants enter the program after completion of the Bachelor's degree. All applicants completing a Master of Education with Child and Family Studies Emphasis must complete a written comprehensive examination and an oral examination; a case study/project OR a case study/project/internship combination, OR a thesis.

Required Core Professional Studies

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr

Integrative Field Research Studies
(must total 6 credits)

EITHER THESE TWO COURSES:		
CFS 647	Internship in Child and Family Studies	3 cr
CFS 669	Case Study/Project in Child and Family Studies	3 cr
OR		
CFS 669	Case Study/Project in Child and Family Studies	6 cr
OR		
EDUC 650	Thesis	6 cr

Additional Requirements for Family Studies Option

CFS 531	Family Resource Management	3 cr
CFS 535	Relationships Within Families	3 cr
CFS 600	Issues and Trends in Child and Family Studies	3 cr
CFS 632	Theoretical Frameworks for Understanding Families	3 cr
CFS 659	Seminar in Child and Family Studies	3 cr

Additional elective credits to total a minimum of 36 credit hours must be approved in advance by the student's major advisor.

Additional Requirements for Early Childhood Education and Intervention Option

CFS 501	Foundations of Early Childhood Education	3 cr
CFS 621	Learning and Development in Early Childhood Education	3 cr
CFS 622	Curriculum in Early Childhood Education	3 cr
CFS 642	Assessment in Early Childhood Education and Intervention	3 cr
CFS 643	Curricular Adaptations and Intervention in Early Childhood	3 cr
CFS 644	WorkingwithFamiliesinEarly Childhood Education and Intervention	3 cr

Additional elective credits to total a minimum of 36 credits must be approved in advance by the student's major advisor.

Planned Fifth-Year Program

The purpose of the planned Fifth-Year Program in Teacher Education is to provide an opportunity for students to further their professional growth and career goals through planning processes and guidelines that allow for maximum flexibility and increased autonomy by students in program design. Students professional development goals may be related to (a) extending and refining their cognitive background and skills related to their current professional assignment, (b) seeking improvement and/or modification in their professional career status within a teaching staff or institution, or (c) seeking an additional endorsement or advanced certification.

Admission Requirements

1. Possess a baccalaureate degree from a regionally accredited institution.
2. Meet standard certification requirements in the area and at the level of their planned Fifth-Year Program.
3. Apply for admission.
4. See an advisor/sponsor as soon as possible, preferably at the time of application for admission.
5. Establish with the advisor a proposal for the planned Fifth-Year Program that reflects the applicant's professional development goals and/or career ladder goals.
6. Work with the advisor to submit and gain approval of the proposal.

General Requirements

1. A minimum of 30 semester credits. At least 2/3 of the credits included in the program must be graduate level course work (500-600 level).
2. A minimum of 15 credits to be taken following approval of the planned Fifth-Year Program proposal.
3. A maximum of 1/3 of the credits may be undergraduate work.
4. A maximum of 10 credits of EDUC 397/597.
5. A maximum allowance of 8 transfer credits (graduate transfer credits must meet requirements of the Graduate School.)
6. All course work must be completed within a six-year period.
7. The student must maintain an overall grade point average of 3.00 in the planned Fifth-Year course work with a maximum of five credits of C allowed.

During the semester in which a student will complete all planned Fifth-Year Program requirements, the student will apply for graduation. The advisor, in consort with the student, will initiate a written recommendation to the Department Chair who will in turn transmit a recommendation to the Dean of the College of Education for issuance of the planned Fifth-Year Program certificate.

The student is responsible for initiating any application to the Idaho State Department of Education for certification stemming from completion of the planned Fifth-Year Program in Teacher Education.

Department of Educational Learning and Development

Chair and Associate Professor Squires
Interim Chair: Mercaldo
Professors: Hedeen, Nunn
Associate Professors: Klug
Assistant Professors: Cho, Coulter, Helfrich, Jantz
Lecturer: Toous

The Department of Educational Learning and Development offers the following graduate degrees: Educational Specialist in School Psychology or Special Education, M.Ed. with Child and Family Studies Emphasis, M.Ed. with Literacy Emphasis, and M.Ed. in Human Exceptionality (Special Education or School Psychological Examiner).

Educational Specialist in School Psychology or Special Education

The Ed.S. program is designed for persons who have completed a master's degree and wish to increase their skills for advanced certification requirements or other professional objectives. The Ed.S. level is the minimum preparation for school psychologists and directors of special education in most states. Further, the Ed.S. has become the intermediate degree for many professionals who supervise master's degree level personnel.

Goals

The School Psychologist is a professional operating within the school system, collaborating with professional educators, students, parents, and the community-at-large to improve psychosocial and academic success of all students. Primary goals of the program are grounded in research-based best practices promulgated by the National Association of School Psychologists Standards for Training and Field Placement programs (NASP, July, 2000). These standards represent an integrated and comprehensive model by which program content and experiences provided to school psychologists in training may be effectively organized and provided. These goals are:

1. **Diagnostic Goal.** The school psychologist will select, administer and interpret the results of various psychological instruments designed to evaluate a broad spectrum of human traits and characteristics, and make specific recommendations to provide insight and direction in dealing with the problem situation.
2. **Intervention Goal.** The school psychologist will provide direct service to students in such areas as academic skills and performance, life and social skills, social-emotional and behavioral disorders and conditions.
3. **Consultation Goal.** The school psychologist will consult with administrators, teachers, other professionals, and parents, regarding a wide variety of psychosocial, behavioral, academic and social-emotional problems affecting educational performance and life success.
4. **Research Goal.** The school psychologist will gather and analyze data in a systematic way utilizing experimental, developmental psychology, and statistical skills and competencies for contributing to existing knowledge in his or her field.
5. **Problem Solving Goal.** The school psychologist will act as a problem-solver, trained in using systematic methodologies of identifying and defining problems/concerns, determining best practice interventions and applying them, and using data-based decision-making to ascertain the impact upon presenting problems and concerns of the student.

Admission Requirements

Candidates for the Educational Specialist in School Psychology or Special Education degree must meet all college and university requirements for admission and retention. The student must hold a master's degree in the area of the chosen Ed.S. major. Master's degree majors in a closely related field may be approved upon recommendation of the selection committee.

General Requirements

The student must complete 64 credits in Special Education or 66 credits in School Psychology, including the master's degree and a specialist paper. All post-master's degree course work must be taken from members of the Idaho State University graduate faculty or be approved in advance by the graduate faculty. A minimum grade point average of 3.0 (B) is required over all course work taken in the Ed.S. program. An oral examination covering the specialist paper, portfolio, and/or relevant topics is required.

Time Requirement

All requirements for the Ed.S. must be completed within a period of five years from the date of completion of the first post-master's degree course to be applied toward the degree.

Specific Requirements:

School Psychology Major

The Ed.S. in School Psychology is designed to be consistent with the minimal entry-level requirements in the field of school psychology as presented by the National Association of School Psychologists. A master's degree as a school psychological examiner or its equivalent is required. The Ed.S. is viewed as a practitioner's degree and will focus on applied activities.

Course Requirements

CFS 631	Family Diversity	3 cr
EDLT 616	Integrating Technology into the School Curriculum	3 cr
SCPY 615	Advanced Child Psychology	3 cr
SCPY 616	Psychological Assessment	3 cr
SCPY 652	Specialist Paper	1 cr
SCPY 661	Techniques in School Psychology	3 cr
SCPY 662	Consultation in the Schools	3 cr
SCPY 664	Neurocognition and Learning	3 cr
SCPY 665	Clinical School Psychology	3 cr
SCPY 669	Internship in School Psychology	3 cr
SCPY 670	Practicum in School Psychology Clinic	2 cr
SCPY 759	Ed.S. Internship	6 cr

Additional Requirements

Students will also prepare a School Psychology Portfolio. The Portfolio will be presented and defended in the Oral Examination.

Special Education Major

The following course work is required:

a. A minimum of 21 credits in special education course work at or above the 600 level (including administration of special education), of which 6 credits are in the supervision of clinical practicum in special education and 3 credits are in internship in special education.

b. Behavioral sciences and/or education/school psychology, 9 credits.

c. Educational Specialist Paper in Special Education, SPED 652, 1-3 credits. The number of credits will be determined by the advisor and student.

Master of Education with Literacy Emphasis

1. The Literacy specialist understands the related nature of reading, writing, listening, speaking, and viewing and that literacy is a process of constructing meanings. These meanings begin with personal knowledge.
2. The literacy specialist understands the importance of building on strengths of individual learners rather than emphasizing needs.
3. The literacy specialist is able to support and expand student expression in speaking, writing, and creative art forms across subject matter areas.
4. The literacy specialist is able to conduct assessment that involves multiple indicators of student progress and develop an instructional plan based on these indicators.

The Master of Education with Literacy Emphasis is designed to strengthen the student's understanding, knowledge, and skills in three major areas–Core Professional Studies, Specialty Studies, and Integrative Field Research Studies–as they relate to literacy education.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, students for the Master of Education with Literacy Emphasis must meet all college requirements for admission and retention.

Individuals applying for admission to the Master of Education with Literacy Emphasis must meet the following admission requirements:

- Bachelor's degree from a college or university accredited in the United States or its equivalent from a school in another country.
- Grade point average of 3.0 or higher for all upper division credits taken at the undergraduate level.

General Requirements

Students must complete a minimum of 33 semester credit hours for the Master of Education with Literacy Emphasis. All students completing a thesis will orally defend the thesis, but will not complete written comprehensive examinations. All students not completing a thesis will be required to pass both a written comprehensive examination and an oral examination.

Students seeking Idaho certification in the area of their training must meet any requirements of the State Board of Education for certification. It is recommended that students pursuing the Master of Education with Literacy Emphasis have professional experience in an educational context.

Required Core Professional Studies

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr
EDLT 616	Integration of Technology into School Curriculum	3 cr

Specialty Studies

EDUC g519	Developmental Literacy	3 cr
EDUC g524	Assessing Literacy	3 cr
EDUC g526	Remediation of Literacy Problems	3 cr
EDUC 632	Psychology of Literacy	3 cr
EDUC 633	Language, Literacy, and Neurology	3 cr
EDUC 634	Literacy: Multicultural Views	3 cr
EDUC 635	Clinical Methods in Literacy	3 cr

Integrative Field Research Studies

EDUC 650	Thesis	6 cr
OR		
EDUC 673	Seminar in Literacy Education	3 cr

Master of Education in Human Exceptionality

The Master of Education in Human Exceptionality is designed to strengthen the student's understandings, knowledge, and skills in three major areas–Professional Studies, Specialty Studies, and Integrative Field Research Studies–as they relate to human exceptionality. The student may select one of two options for the Master's degree in Human Exceptionality:

- **Special Education**
- **School Psychological Examiner**

1. The special educator will understand the field as an evolving and changing discipline.
2. The special educator will know and demonstrate respect for his/her students first as unique human beings and contributing members of the community.
3. The special educator will understand the appropriate use of various types of assessments.
4. The special educator will adapt general curriculum by using a variety of instructional strategies and positive behavior supports.
5. The special educator will collaborate with colleagues, families, and agencies to develop inclusive communities.

Admission Requirements

Applicants for the Master of Education in Human Exceptionality must apply to, and meet all criteria for, admission to the Gradu-

ate School and all college requirements for admission and retention.

Individuals applying for admission to the Master of Education program in Human Exceptionality must meet the following admission requirements:

- Bachelor's degree from a regionally accredited college or university in the United States, or its equivalent from a school in another country.
- Grade point average of 3.0 or higher for all upper division credits taken at the undergraduate level.

General Requirements

Students completing a Master of Education in Human Exceptionality must complete both a written comprehensive examination and an oral examination.

Professional Studies Core

EDUC 601	Research and Writing	3 cr
EDUC 602	Theories of Learning	3 cr
EDUC 610	Applied Educational Statistics	3 cr

Additional Requirements for the Special Education Option

The student must either have an undergraduate special education major or a 14-credit undergraduate core of special education course work including SPED 330, SPED 334, SPED g523, SPED g524, and SPED g527. These courses will not be counted as part of the master's degree program. Persons seeking initial certification must also complete SPED 529, SPED 532, SPED 538, SPED 546, and complete the Idaho Technology Portfolio assessment.

SCPY 614	Diagnostic Evaluation of Learning Difficulties	3 cr
SPED 630	Professional Development in Special Education	2 cr
SPED 638	Practicum in Special Education	6 cr
SPED 662	Consultation in the Schools	2 cr

In addition, elective credits to total a minimum of 33 semester credit hours for the Master's degree must be taken from relevant graduate-level courses. Elective credits must be approved in advance by the student's major advisor.

Additional Requirements for the School Psychological Examiner Option

Specialty Studies in Psychological Examiner

SCPY 614	Diagnostic Evaluation of Learning Difficulties	3 cr
SCPY 619	Individual Intelligence Testing	3 cr
SCPY 660	Seminar in School Psychology	3 cr
	Elective credits approved by the School Psychology Program Chair	6 cr

Integrative Field Research Studies

SCPY 668	Practicum in School Psychology	3 cr
SPED 638	Practicum in Special Education	3 cr

The deadline for submission of applications is July 1. Applications will be reviewed and degree-seeking students will continue to be admitted until program capacity is reached.

Department of Sport Science and Physical Education

Chair and Professor Lester
Professor: Lyons
Associate Professor: Appleby, Fitzpatrick
Assistant Professors: Faure, Gouthier
Instructor: Cordingley
Lecturer: Watters

The Department of Sport Science and Physical Education offers the Master of Physical Education/Athletic Administration degree at Idaho State University and through the Idaho State University-Boise State Cooperative Program.

Master of Physical Education/ Athletic Administration

The Master of Physical Education/Athletic Administration is aligned with 2 sets of standards: The Idaho State University College of Education Standards for Advanced Professionals (described previously), and the National Association for Sport and Physical Education (NASPE) and the North American Society for Sport Management (NASSM) Standards.

NASPE-NASSM Content Standards: The NASPE-NASSM standards for Master's Degree Programs in Sport Management address eight specific areas that include the following: Management, Leadership and Organization in Sport; Research in Sport; Legal Aspects of Sport; Marketing in Sport; Sport Business in the Social Context; Financial Management in Sport; Ethics in Sport Management; and Field Experience in Sport Management.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, applicants for the Master of Physical Education/Athletic Administration degree must meet all college requirements for admission and retention. Individuals applying for admission to the Master of Physical Education/Athletic Administration program will be reviewed using the following criteria. Preference will be given to applicants who meet or exceed these criteria.

- Bachelor's degree from a regionally accredited college or university in the United States or its equivalent from a school in another country.
- Grade point average of 3.0 or higher for all upper division credits taken at the undergraduate level.

In addition, the Department of Sport Science and Physical Education requires that the applicant shall have had the necessary background in tests and measurements, and a knowledge of statistical procedures. Both a thesis and non-thesis option are available.

General Requirements

Students must complete a minimum of 33 semester credit hours for the Master of Physical Education/Athletic Administration degree. Students completing a thesis will orally defend the thesis, but will not complete written examinations. Students not completing a thesis will be required to pass both a written examination and an oral examination.

All students must document professional experience in an athletic setting either by prior athletic administrative experience (minimum of one year) or by completing an approved internship for credit while completing the MPE/AA program.

Course Requirements

PE 605	Leadership and Administration	3 cr
PE 615	Philosophy and Principles of Athletics in Education	3 cr
PE 631	Athletics and The Law	3 cr
PE 635	Management Aspects of Athletics	3 cr
PE 640	Research and Writing	3 cr
PE 649	Issues in PED and Athletic Administration	3 cr

Thesis Option

PE 650	Thesis	6 cr
IN ADDITION:	Approved Electives	9 cr

Non-Thesis Option

PE 610	Advanced Sport Psychology	3 cr
PE 645	Sports Medicine	3 cr
IN ADDITION:	Approved Electives	9 cr

Idaho State University -Boise State Cooperative Program

Through the Idaho State University-Boise State Cooperative Program, students are able to complete the entire 33 credit hour Master of Physical Education / Athletic Administration degree program on the Boise State campus. Course requirements are the same as those for the on-campus program listed previously, and students have the option of completing the thesis or non-thesis option. Up to 15 credit hours of approved Boise State courses may be counted toward the degree.

Idaho State University is the degree-granting institution. Students must initially apply for admission to Idaho State University and then, if accepted, apply for admission to Boise State University. An application fee must be paid to each institution. For information about the Idaho State University-Boise State Cooperative Program in Physical Education/Athletic Administration, contact the Department Chair.

The following BSU faculty members are approved as Idaho State University At-large Graduate Faculty, and are listed with the Graduate Faculty at the back of this catalog: Professors Hoeger, McChesney, Petlichkoff, Pfeiffer, Potter, Spear, Vaughn.

Graduate Courses in the College of Education

Child and Family Studies Graduate Courses

CFS g501 Foundations of Early Childhood Education Intervention 3 credits. Examination of social, historical, and philosophical foundations of early childhood education and intervention and their respective influences on currently accepted concepts and practices in programs serving young children from birth through age eight.

CFS g531 Family Resource Management 3 credits. Management theory for resource utilization and goal achievement. Issues include stress, communication, and family types. Emphasis on decision-making related to the dynamics of balancing work and family PREREQ: CFS g570 OR PERMISSION OF INSTRUCTOR.

CFS g532 CU(PDO) 132 Behavioral Growth and Development 1 credit. General body growth and development of the normal child. Major theories of psychological growth and maturation of the normal child with common aberrations. Dental management of children in regard to psychological growth and development (IDEP course).

CFS g535 Relationships Within Families 3 credits. Building and maintaining positive relationships within families. Critical issues facing individuals and families including communication, cultural diversity, balancing multiple roles, time management, and financial planning.

CFS g539 Sports Nutrition 2 credits. Review nutrition recommendations for both competitive and recreational athletic performance. Background into metabolism of nutrients related to strength and endurance given as rationale for nutrition practices. Controversies and misinformation addressed. Cross-listed as NTD g539. PREREQ: CFS 239 SUGGESTED.

CFS g561 Advanced Nutrition 3 credits. Advanced study of nutrition science, including protein, carbohydrate, lipid, vitamin, and mineral metabolism. Introduction to research methodology and professional literature. Cross-listed as NTD g561. PREREQ: CFS 239, CHEM 102.

CFS g570 Consumer Economics 3 credits. Financial management content with a focus on developing effective decision-making processes for managing resources. Topics: the changing American family; consumer protection and recourse; purchasing decisions; consumer credit; fundamentals of savings/investment; and insurance.

CFS g571 Advanced Consumer Economics 3 credits. Advanced study of social and economic problems affecting individuals and families. Topics: financial security; credit and loans; tax planning; major consumer purchases; risk management; investments; retirement and estate planning. PREREQ: CFS g570 OR PERMISSION OF INSTRUCTOR.

CFS g572 Teaching Consumer Economics 1-3 credits. Designed to provide educators with current content and resources for developing consumer and economic education curriculum. Teaching techniques discussed and practiced. PREREQ: CFS 471 OR PERMISSION OF INSTRUCTOR.

CFS 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/ U.

CFS 600 Issues and Trends in Child and Family Studies 3 credits. Exploration and discussion of current issues and trends impacting children and families and programs designed to serve them.

CFS 621 Learning and Development in Early Childhood Education 3 credits. Investigation of the development characteristics and processes of the young child from birth to age 8 related to the process of knowledge construction.

CFS 622 Curriculum in Early Childhood Education 3 credits. Examination and implementation of developmentally appropriate curricular practices that simultaneously strengthen all domains of development and contribute to the construction of knowledge in content areas.

CFS 631 Family Diversity 3 credits. Exploration and analysis of the role of diversity in defining family structure, functioning, and development. Includes focus on educational implications and opportunities for observation in a variety of settings.

CFS 632 Theoretical Frameworks for Understanding Families 3 credits. Analysis of theories of family interaction and family functioning. Emphasis on family development theory, family systems theory, social models, and other relevant models of family functioning.

CFS 634 Public Policy for Children and Families 3 credits. Analysis of selected state and federal legislation affecting the status of children and families. Focus includes legal definitions related to children and families and advocacy networks.

CFS 642 Assessment in Early Childhood Education and Intervention 3 credits. Selection, administration, and interpretation of assessment tools employed in early childhood inclusive practice. Emphasizes screening, educational assessment, and monitoring of child progress. PREREQ: CFS g501 OR PERMISSION OF INSTRUCTOR.

CFS 643 Curricular Adaptations and Intervention in Early Childhood 3 credits. Overview of theoretical bases for early intervention and selected service delivery models. Focus on program planning, curriculum, materials, procedures, and program evaluation. PREREQ: CFS g501 OR PERMISSION OF INSTRUCTOR.

CFS 644 Working with Families in Early Childhood Education and Intervention 3 credits. Theoretical and applied perspectives in providing family-focused early childhood services. Emphasis on models for service delivery and service coordination for all families with young children including those from diverse backgrounds.

CFS 647 Internship in Child and Family Studies 1-6 credits. Supervised practice in demonstration of competencies for children and families in a variety of educational settings. Fifty hours of experience and supervision equals one hour of academic credit.

CFS 659 Seminar in Child and Family Studies 1-3 credits. Critical analysis of the literature in one or more areas related to children and families. May be repeated up to 6 credits.

CFS 669 Case Study/Project in Child and Family 1-6 credits. Under faculty supervision, student is responsible for development and oral presentation of a comprehensive case study or a comprehensive graduate field project. May be repeated up to 6 credits.

CFS 676 Supervision of Family and Consumer Sciences Education 2 credits. Explores roles and responsibilities of cooperating teachers and college supervisor in providing desirable experiences of family and consumer sciences student teachers in the public schools. Supervision styles will be reviewed and evaluated.

Educational Administration Graduate Courses

EDLA 608 Educational Leadership and Administration 3 credits. Study of the nature

of educational leadership, administration, and management with reference to current practice at the school building level. Attention will be given to administrative theory and practice, philosophy, and organizational development.

EDLA 612 School Law 3 credits. Study of court decisions, statutes, and school board policy as related to teachers, pupils, and school officials.

EDLA 613 Using Data to Improve School Leadership 3 credits. Emphasis on the use and understanding of data analysis to improve teaching and learning in the classroom. Statistical analysis relating to educational leadership decision-making applications.

EDLA 614 Curriculum Leadership 3 credits. Designed for principals, emphasizes practical leadership skills, helps leaders gain the knowledge and skills to guide curriculum development, make informed curriculum decisions, clarify instructional focus of teachers, and communicate effectively about curriculum.

EDLA 615 Supervision of Instruction 3 credits. Roles of the supervisor in the improvement of classroom instruction. Emphasis on effective procedures as determined by research and experience. Simulation sessions provide for development of clinical skills needed in all types of supervisor-supervisee relations including student-teacher, self-supervision, administrator-teacher, and teacher-teacher.

EDLA 630 Education Equity and Ethics 3 credits. Designed to raise awareness among school leaders of equity issues and empower them to advocate equal opportunity for ALL students.

EDLA 637 Practicum 1-3 credits. Students observe, participate in, and perform activities in a school setting over 2 semesters. Focus: Idaho Superintendent's Certification competencies. 300 hours required (includes 20 hours/600 level EdS course). May be repeated for a maximum of 12 credits. PREREQ: PERMISSION OF INSTRUCTOR Graded S/U.

EDLA 642 School Communications and Public Relations 3 credits. Introduction and development of concepts, principles, and techniques in the organization, initiation, and operation of a planned program in inter-school communication systems and school-public relations.

EDLA 643 Public School Personnel Administration 3 credits. Study of effective human resources management, including recruitment, selection, induction, staff development, employee assistance, evaluation, contract negotiations and personnel management.

EDLA 644 Instructional Leadership 3 credits. Course emphasizes leadership for district-wide planning, implementation and monitoring of curriculum, assessment and instruction. Designed to address superintendent certification competencies.

EDLA 648 Independent Problems in Education 1-3 credits. Individual work under staff guidance. Field and/or library research on specific educational problems of interest to graduate students in education. Experience in research composition. May be repeated. PREREQ: PERMISSION OF INSTRUCTOR.

EDLA 649 Issues in Education Administration 3 credits. Critical analysis of issues, trends and current topics in education administration.

EDLA 650 Thesis 1-6 credits. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

EDLA 651 Field Project/Case Analysis in Education 1-6 credits. A Field Project or Case Analysis is completed in conjunction with the field practicum/internship and/or an educational setting scenario. Written report and oral explication required. May be repeated. Graded S/U.

EDLA 657 Internship 1-12 credits. A partnership educational leadership experience between the University and public schools. 540 hours of onsite work at a variety of school levels. Minimum of 6 credits required, 3 credit enrollment first semester, thereafter at least 1 credit/semester continuous enrollment. By application only. Graded S/U.

EDLA 662 The Superintendency 3 credits. Study of school district leadership including organizational systems, ethics, change processes, school board operations, community relations, the role of education in a democratic society, and the needs of diverse constituencies.

EDLA 664 Public School Monetary Policy 3 credits. Advanced study of the financial structure of public schools, including equity issues, taxation, revenue generation (grants) and budget development. Special emphasis on Idaho public education.

EDLA 751 Field Project/Case Analysis in Educational Administration 1-3 credit. A Field Project or Case Study/Analysis is completed in conjunction with the field practicum/internship and/or an educational scenario. Written report and oral explication required. May be repeated. Graded S/U.

Educational Administration Doctoral Courses

EDLA 720 Legal Issues in Educational Organizations 3 credits. Advanced study of legal issues in educational organizations and school systems, including major court cases, use of legal council and monitoring of legal compliance.

EDLA 721 Educational Policy and Governance 3 credits. Study of the relationship between politics, policy and governance of schools, including political systems, inter-governmental relations, power and conflict, and policy development regarding equity, quality and efficiency.

EDLA 722 Data-Driven Decision-Making 3 credits. Theory and practice for school system leaders to collect and use data for continuous school and school district improvement. PREREQ: EDUC 610 OR EQUIVALENT.

EDLA 723 Educational Planning and Evaluation 3 credits. Study of planning and evaluation in schools and school districts including strategic planning, effectiveness and curriculum audits, facility planning, and program planning and evaluation.

EDLA 737 Practicum 1-3 credits. Students observe, participate in and perform activities in a school setting. Designed to facilitate school/district leadership knowledge, skills and dispositions. Focus on certification standards. May be repeated for a maximum of 12 credits. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U .

Community College Doctoral Courses

EDLC 730 The Modern Community College 3 credits. Course content addresses the history and philosophy of community college education, including Tribal colleges. Examines the mission, objectives, educational functions, populations served, student and faculty characteristics, and current issues facing community colleges in a global environment.

Higher Education Administration Doctoral Courses

EDLH 730 History and Philosophy of Higher Education 3 credits. Comprehensive analysis of the origin of institutions of higher learning, their philosophical foundations and historical contexts from the classical periods of Greece and Rome to the 20th century.

EDLH 731 Law in Higher Education 3 credits. In-depth study of legal issues affecting public and private higher education institutions and systems. Emphasis on statutory provisions, court decisions, common law principles, and constitutional requirements.

EDLH 732 College and University Curriculum 3 credits. In-depth study of current higher education curriculum practices and issues in the context of historical, philosophical, and political influences. Includes focus on processes of curriculum development.

EDLH 733 Finance in Higher Education 3 credits. Critical analysis of issues in public and private higher education finance. Includes examination of alternative financing sources and methods, resource allocation, and fiscal management.

EDLH 734 Issues/Trends in Higher Education 3 credits. Critical analysis of current topics in higher education. Consideration of roles and responsibilities of chief academic officers, boards of regents, faculties, and student services.

EDLH 735 Government and External Relations 3 credits. Course explores leadership strategies for effective advocacy with state and federal policy makers, governing boards, development boards, foundations, business and industry, and the general public.

EDLH 736 Instructional Leadership and Faculty Affairs in Higher Education 3 credits. Practi-

cal study of leadership values and practices unique to higher education and necessary for successful administration in the context of shared governance: focus on faculty leadership in processes of curriculum and program design for college learners; evaluation, remediation, and rewards; and the development of academic policy.

EDLH 737 Practicum 1-3 credits. Students engage in practical experiences in higher education administration. Students work under the direction of a graduate faculty member/practicum supervisor and university administrator. May be repeated for a maximum of 12 credits. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

EDLH 738 Assessment and Accountability in Higher Education 3 credits. Key issues, strategies and challenges in developing assessment programs at the institutional, departmental and program levels that address national, state and accreditation mandates for accountability in higher education.

EDLH 739 Higher Education Leadership: Strategic and Enrollment Planning, Governance, Institutional Research 3 credits. Study of leadership strategies for strategic and enrollment planning, application of institutional research, and negotiation of complex on- and off-campus governance systems required for successful higher education leadership.

Educational Leadership CORE Doctoral Courses

EDLP 700 Change Strategies 3 credits. Investigation and application of individual and organizational change strategies and tactics.

EDLP 701 Advanced Statistics in Education 3 credits. Applications of advanced statistical methods most frequently used in the analysis of quantitative measurement data in education and related fields. PREREQ: EDUC 610 AND EDLP 705 OR EDLP 706, OR PERMISSION OF INSTRUCTOR.

EDLP 702 Supervision and Empowerment 3 credits. Practical study of leadership values; use of coaching, participative management, team building, and critical inquiry to improve supervision in complex organizations.

EDLP 703 Leadership and Organizational Development 3 credits. Students will identify and critique several leadership and organizational theories and their application to work environments, and demonstrate a professional code of ethics and values.

EDLP 704 Conditions of Learning and Teaching 3 credits. In-depth study of current theory, issues, and research on learning and teaching. Emphasis on understanding conditions of learning including motivation, social-cultural variables, and individual differences. PREREQ: EDUC 602 OR EQUIVALENT.

EDLP 705 Advanced Research Design I (qualitative) 3 credits. Process-based examination of qualitative research designs and methodologies commonly used in education and related fields. PREREQ: EDUC 601 AND EDUC 610 OR EQUIVALENT.

EDLP 706 Advanced Research Design II (quantitative) 3 credits. Process-based examination of quantitative research designs and methodologies commonly used in education and related fields. PREREQ: EDUC 601 AND EDUC 610 OR EQUIVALENT.

EDLP 707 Instructional Technology 3 credits. Examination of appropriate and effective uses of multimedia in K-college environments. Focus on exploration of the research on educational applications of multimedia.

EDLP 800 Doctoral Seminar 1 credit. Serves as an initiation/orientation to doctoral study. Exploration of educational leadership through readings, reflections and dialog. Special attention will be paid to social justice advocacy and service learning. Taken during the first year of doctoral course work. Graded S/U

EDLP 801 Capstone Seminar 1 credit. Course provides doctoral students (typically advanced to candidacy) with a capstone experience designed to support and facilitate the dissertation process. Graded S/U .

EDLP 850 Dissertation 1-10 credits. Graded S/U.

Instructional Technology and Design Courses

EDLT 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/U.

EDLT 616 Integration of Technology into School Curriculum 3 credits. Examination of appropriate and effective uses of technology in K-12 environments. Focus on exploration of the research on effective technology utilization in instruction.

EDLT 621 Issues and Trends in Instructional Technology 3 credits. Examination and discussion of current issues and innovations in instructional technology. Includes analysis of relevant historical and current national trends and issues. PREREQ: EDLT 616.

EDLT 626 Instructional Technology and Staff Development 3 credits. Examination of in-service models for integrating technology into the K-12 curriculum. Students will deliver an in-service session related to instructional technology. PREREQ: EDUC 601, EDLT 616, EDLT 621.

EDLT 639 Delivering Instruction in Electronic Formats 3 credits. Advanced study of electronic distance education, especially web-based instruction. Using instruction design principles, students will design, develop, and conduct a formative evaluation of a web-based instructional unit.

EDLT 646 Information Systems 3 credits. Investigation and application of computer software programs that reinforce administrative practices. Application of programs that promote effectiveness and efficiency through the appropriate development and use of data.

EDLT 648 Independent Problems in Education 1-3 credits. Individual work under staff guidance. Field and/or library research on specific educational problems of interest to graduate students in education. Experience in research composition. May be repeated up to 4 credits. PREREQ: PERMISSION OF INSTRUCTOR.

EDLT 649 Seminar 1-3 credits. Critical analysis of the literature in one or more areas of education. Enrollment limited. PREREQ: PERMISSION OF INSTRUCTOR.

EDLT 650 Thesis 1-6 credits. Graded S/U.

EDLT 651 Field Project/Case Study in Education 1-6 credits. A field project or case study is completed in conjunction with a field practicum/internship in an educational setting. Written report and oral explication of the project or case study required. Graded S/U.

EDLT 652 Field Practicum in Education 1-6 credits. Individually designed practicum in an educational setting. The length, placement, and learning experiences will be determined in consultation with the major advisor. Graded S/U.

EDLT 655 Fundamentals of Instructional Design 3 credits. Review of various instructional design models and fundamental design principles that guide the development of instructional materials. Students will create multimedia materials for incorporation into a final product. PREREQ: EDLT 616, EDUC 622.

EDLT 656 Fundamentals of Multimedia Development in Education 3 credits. Exploration of the use of multimedia technology in education. Students will use multimedia authoring tools to develop instructional units for integration of technology into the curriculum. PREREQ: EDUC 622, EDLT 655.

EDLT 737 Practicum 3 credits. This is an individually designed field experience in an area of technology, supporting and extending course work within this area of concentration. The length, placement, and prescribed learning experiences will be determined in consultation with the Educational Technology advisor. May be repeated for maximum of 12 credits.

EDLT 740 Instructional Systems Design I 3 credits. Examination of the instructional design process; applications of current research related to development of instructional multimedia materials. PREREQ: EDLP 706.

EDLT 742 Multimedia Authoring I 3 credits. Use of Macromedia Director as the main authoring system for designing instruction. PREREQ: STUDENT MUST BE EXPERIENCED USER OF HYPERMEDIA PROGRAMS; EDLT 740.

EDLT 743 Multimedia Authoring II 3 credits. Advanced use of Macromedia Director as an authoring system. Includes creation of digital sound graphics, animation, and movies. Student will produce a multimedia project. PREREQ: EDLT 742.

EDLT 744 Instructional Systems Design II 3 credits. Advanced study of instructional design process. Includes consideration of current research related to formative and summative evaluation techniques for multimedia design. PREREQ: EDLT 740.

EDLT 745 Instructional Design for Distance Learning Delivery 3 credits. Exploration of effective uses of multimedia materials in the distance learning environment. Includes investigation of skills needed for creating instructional media for distance learning. PREREQ: EDLT 742 AND EDLT 744.

EDLT 850 Dissertation 1-10 credits. Graded S/U.

Education Graduate Courses

EDUC g519 Developmental Literacy 3 credits. Instructional strategies for reading, emphasizing early literacy and language development, phonemic awareness, phonics, word recognition strategies, comprehension and meta-linguistic awareness. PREREQ: EDUC 321 OR PERMISSION OF INSTRUCTOR.

EDUC g520 Advanced and Compensatory Reading Strategies 3 credits. Advanced training for developmental/remedial reading, emphasizing study skills, critical/creative reading, and metacognition. Content area application. PREREQ: EDUC 333 AND TEACHING EXPERIENCE OR PERMISSION OF INSTRUCTOR.

EDUC g524 Assessing Literacy Abilities 3 credits. Methods of assessment in literacy. Introduction to case study, formal and authentic measures of comprehension, vocabulary, study strategies, and writing. PREREQ: EDUC g519 OR PERMISSION OF INSTRUCTOR.

EDUC g526 Remediation of Literacy Problems 3 credits. Teaching strategies for remediating problems in literacy. Emphasis on planning, implementing, and evaluating approaches and materials. PREREQ: EDUC g524.

EDUC g560 Foundations of ESL 3 credits. Study of ESL learner characteristics, historical, philosophical, cultural and linguistic foundations of ESL. Theories of language acquisition and those of leaders in the field will be included.

EDUC g563 ESL Methods 3 credits. Language assessment, planning, and delivery for teaching limited English proficient K-12 students. Appropriate methods for students at various developmental stages of language acquisition will be studied. PREREQ: EDUC g560 OR PERMISSION OF INSTRUCTOR.

EDUC g564 ESL Methods Lab (Practicum) 1 credit. Field experience in settings with English-as-a-Second-Language learners. COREQ: EDUC g563 OR PERMISSION OF INSTRUCTOR.

EDUC g570 Manipulative Mathematics 3 credits. Study of methods for teaching mathematics through the modern math approach stressing manipulations. Consideration is given to diagnostic and remedial procedures for exceptional children.

EDUC g571 Interpersonal Communications 2 credits. Examination of basic concepts, principles, models, and theories of interpersonal communications and their application to educational settings.

EDUC g581-g582 Contemporary Issues in Education 1-3 credits. Examination and analysis of contemporary issues and trends in theories and practices in education.

EDUC g583 Instructional Improvement for Teachers 1-3 credits. Study of ways by which teachers can improve instruction in their own classrooms with emphasis on the findings of research and experiences.

EDUC g585 Independent Problems in Education 1-3 credits. Individual work under staff guidance. Field and/or library research on specific educational problems of interest to majors in education. Experience in research composition. PREREQ: PERMISSION OF INSTRUCTOR.

EDUC g591 Seminar 1-3 credits. Critical analysis of the literature in one or more areas of education. Limited enrollment. PREREQ: PERMISSION OF INSTRUCTOR.

EDUC 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/U.

EDUC 601 Research and Writing 3 credits. Examination of methods for designing/conducting research in education and related fields and of procedures for formal report writing using APA style and format.

EDUC 602 Theories of Learning 3 credits. Advanced study of the psychology of human learning and instruction. Emphasis will be given to the application of contemporary theories of learning to instructional practice and the design of effective learning environments.

EDUC 610 Applied Educational Statistics 3 credits. Application of parametric and nonparametric statistical procedures for summarizing and analyzing qualitative and quantitative measurement data in conducting research and for report writing in education and related fields. Covers descriptive statistics to single-factor experiments.

EDUC 612 Learners and the Content 3 credits. Examination of curriculum scope and sequence within the context of varying learner needs. The course will focus on curriculum alignment with state and national standards and the connecting of content to learner characteristics and developmentally appropriate teaching practices. PREREQ: COHORT ADMISSION. COREQ: EDUC 602.

EDUC 614 Pedagogy and Content Knowledge 3 credits. Investigation of the structure of subject matter knowledge and how it determines pedagogical content. The course will examine philosophical perspectives, models of teaching, and develop contemporary applications. PREREQ: COHORT ADMISSION AND EDUC 602.

EDUC 618 Learning Communities 3 credits. Exploration of learning communities and examination regarding models for how they are created and sustained through curriculum leadership. The course includes such topics as parental involvement, curriculum for diverse learners, and collaborative teaching practices. PREREQ: EDUC 612 AND EDUC 614.

EDUC 620 Motivation for Learning 3 credits. Advanced study of theories and research on student motivation including strategies for linking motivation to classroom management and curriculum. Topics include individual differences, interpersonal motivation, self-motivation, and lifelong learning. PREREQ: EDUC 612.

EDUC 622 Educational Assessment and Evaluation 3 credits. Construction, administration and interpretation of educational assessments for the systematic analysis of student learning and teaching practice. Emphasis is placed on the use of assessment results in planning and valuation of curriculum leadership. PREREQ: EDUC 610.

EDUC 627 NBPTS Certification Part I 3 credits. Provides a framework for completion of the requirements for National Board for Professional Teaching Standards Certification. Examination of the standards and portfolio guidelines; provision of support and consultation in gathering and presenting documentation.

EDUC 628 NBPTS Certification Part II 3 credits. Mentors and supports teachers through advanced National Board for Professional Teaching Standards. Development of classroom-based portfolio entries and preparation for assessment center exercises. PREREQ: EDUC 627.

EDUC 630 Advanced Elementary Methods 3 credits. Advanced study of the subject content and teaching methods in grade K-8 programs. The course includes emphasis on development of materials, lesson planning, instructional strategies, assessment, and application of technology for information acquisition, analysis, and presentation by students and teacher.

EDUC 631 Advanced Secondary Methods 3 credits. Advanced study of the subject content and teaching methods in grade 6-12 programs. The course includes emphasis on development of materials, lesson planning, instructional strategies, assessment and application of technology for information acquisition, analysis, and presentation by students and teacher.

EDUC 632 Psychology of Literacy 3 credits. Examination of the nature of symbolic systems within the literacy field from the perspective of contemporary psychological science. Topics include decoding, lexical access, referential representation, and meta-cognition.

EDUC 633 Language, Literacy, and Neurology 3 credits. Theories and principles based on research in psycholinguistics and neurophysiology as related to literacy.

EDUC 634 Literacy: Multicultural Views 3 credits. Theories and research in language acquisition and development across cultures in-

cluding emphases on second language acquisition, dialects, and regionalisms affecting both oral and written codes.

EDUC 635 Clinical Methods in Literacy 3-6 credits. Consulting, supervising, evaluating, writing case reports, and relating research and theories in literacy to clinical methods. May be repeated up to 6 credits. PREREQ: EDUC g524, EDUC g526, AND EDUC 633.

EDUC 637 Leadership in Curriculum Development 3 credits. Development of the knowledge, skills, and disposition essential to effective curriculum leadership. While drawing on philosophy, the course focuses on the practical applications of leadership, including curriculum vision, development, management, and evaluation. PREREQ: EDUC 618, EDUC 620, AND EDUC 622.

EDUC 638 Supervision of Interns and Student Teachers 2 credits. Role and responsibilities of supervisory personnel in the intern and student teaching programs including student orientation readiness, planning and techniques of instruction, and evaluation. PREREQ: PERMISSION OF INSTRUCTOR.

EDUC 640 Workshop 1-2 credits. Special projects concerned with public school education. Meets for a minimum of 36 clock hours with appropriate outside assignments, lessons, or papers. May be repeated up to 6 credits.

EDUC 641 Advanced Studies in K-12 Curriculum 3 credits. Advanced study of research and development of subject-specific curriculum in K-12 environments. PREREQ: EDUC 601; EDUC 630 or EDUC 631.

EDUC 648 Independent Problems in Education 1-3 credits. Individual work under staff guidance. Field and/or library research on specific educational problems of interest to graduate students in education. Experience in research composition. May be repeated up to 4 credits. PREREQ: PERMISSION OF INSTRUCTOR.

EDUC 649 Seminar 1-3 credits. Critical analysis of the literature in one or more areas of education. Enrollment limited. PREREQ: PERMISSION OF INSTRUCTOR.

EDUC 650 Thesis 1-6 credits. Graded S/U.

EDUC 651 Field Project/Case Study in Education 1-6 credits. A field project or case study is completed in conjunction with a field practicum/ internship in an educational setting. Written report and oral explication of the project or case study required. Graded S/U.

EDUC 652 Field Practicum in Education 1-6 credits. Individually designed practicum in an educational setting. The length, placement, and learning experiences will be determined in consultation with the major advisor. Graded S/U.

EDUC 670 Seminar in Elementary Education 3 credits. Examination of research and current issues in Elementary Education. Seminar format requires active participation in readings, discussion, written assignments, and presentations.

EDUC 671 Seminar in Secondary Education 3 credits. Examination of research and current issues in Secondary Education. Seminar format requires active participation in readings, discussion, written assignments, and presentations.

EDUC 673 Seminar in Literacy Education 3 credits. Examination of research and current issues in Literacy Education. Seminar format requires active participation in readings, discussions, written assignments, and presentations. PREREQ: EDUC 635.

EDUC 675 Curriculum Project 3 credits. Completion of a curriculum project within the context of a supportive learning community, or, for those teachers who have achieved National Board Certification, submission of the portfolio. PREREQ; PERMISSION OF CURRICULUM LEADERSHIP PROGRAM MAJOR ADVISOR AND EDUC 601.

EDUC 676 Evaluation Research Practicum 3 credits. Supervised on-going assessment of curriculum projects and the systematic evaluation of their implementation in educational settings or, for those teachers who have achieved National Board Certification, content analysis of the portfolio. Each student will complete an independent curriculum evaluation project. PREREQ: PERMISSION OF CURRICULUM LEADERSHIP PROGRAM MAJOR ADVISOR.

Library Science Graduate Courses

LIBR g525 Media Center Administration 3 credits. General administration of media centers, including the implementation of state and national media standards, philosophy, and scope of services and the relationship of center activities to school curriculum. Students will develop an electronic portfolio.

LIBR g526 Automation, Selection, and Evaluation of Library Materials 3 credits. Addresses automation as it relates to library services and collections as well as the selection and evaluation of library materials. Students will develop an electronic portfolio.

LIBR g540 Practicum 1-4 credits. Practicum in a library and/or media center under the supervision of professional personnel. PREREQ: APPROVAL OF LIBRARY SCIENCE COORDINATOR.

LIBR g541 Independent Study in Library Science 1-2 credits. Individual work under staff guidance. Field and/or library research on specific problems in librarianship. PREREQ: PERMISSION OF LIBRARY SCIENCE COORDINATOR.

Physical Education Graduate Courses

P E g565 Organization and Administration of Intramural Sports 3 credits. Study of various methods of organizing and administering intramural sports programs on the junior high school, high school, and college levels.

P E g570 Care and Prevention of Athletic Injuries 2 credits. Prevention, cause, and care of athletic injuries. Emphasis on the role of the coach relative to responsibility and resultant liability.

P E g573 Facility Planning and Design 3 credits. An investigation of the various components, principles, and fundamental practices involved in facility planning and design for physical education, athletics, and recreation.

P E g575 Organization and Administration of Physical Education and Sport 3 credits. Study of the management theory and practices utilized in conducting physical education and sports programs. Emphasis will be placed on interscholastic as well as intercollegiate physical education and athletic programs.

P E g580 Coaching Problems 2 credits. Athletic control, eligibility, new coaching techniques, finances, safety measures, public relations, duties of coaches, managers, and officials. May be repeated once for additional credit.

P E g581 Coaching Clinic 1 credit. ISU is a sponsor of the annual Idaho Coaches Association Clinic held during the first week of August. Instruction offered in football, basketball, and other sports by coaches of national reputation. May not be applied to degree programs.

P E g585 Independent Problems in Physical Education 1-3 credits. Individual work under staff guidance. Field and/or library research on specific physical education problems. May be repeated up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

P E g591 Physical Education Workshop 1-3 credits. A critical analysis of one or more areas of physical education. Limited enrollment. May be repeated up to six credits. PREREQ: PERMISSION OF INSTRUCTOR.

P E g593 Diversity Issues in Education and Sport 3 credits. Explores various issues of social justice that are encountered in education and sport settings. PREREQ: GENERAL EDUCATION GOAL 1.

P E g594 Adapted Physical Activity 3 credits. History, philosophy, and the teaching//learning process in providing adapted physical activity in schools and community-based settings. Includes clinical experiences. PREREQ: BIOL 301 OR EQUIVALENT, OR PE 243, PE 300 AND PE 362.

P E 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/U.

P E 605 Leadership and Administration 3 credits. Development of leadership skills and the dynamics of group process relative to effective interpersonal relationship with special emphasis on Physical Education and Athletic programs and personnel needs.

P E 610 Advanced Sport Psychology 3 credits. Designed to define, critique, and apply critical perspectives of sport and exercise psychology,

including aggression theories, violence, cohesion, and social facilitation. Aspects of coaching theory and its application are included.

P E 612 Advanced Sociology of Sport 3 credits. Social aspects of sport and society, with emphasis on the relationship between sport, culture, and ideology.

P E 615 Philosophy and Principles of Athletics in Education 3 credits. The role of athletics in education, the function and organization of leagues and conferences of coaches, certification of coaches, ethics, and public relations.

P E 620 Curriculum and Supervision 3 credits. Consideration of the physical education curriculum in public schools and in colleges and universities. Recent developments and current trends that influence the curriculum and supervision policies. Observation techniques, standards in judging instruction, the supervisory conference, cooperative supervision, basic foundation of curriculum construction, and lesson planning.

P E 622 Survey of Professional Literature 2 credits. Identification and investigation of professional literature and its application to current and future directions of the field. Extensive reading and formal writing required.

P E 631 Athletics and the Law 3 credits. A study of the administrative role relating to the regulation of athletic competition and athletic programs. A review of significant court cases dealing with sports law, with application to the school setting.

P E 635 Management Aspects of Athletics 3 credits. Factors involved in the conduct of athletic events such as contracts, scheduling, travel, game management, crowd control, and the legal implications of athletics.

P E 640 Research and Writing 3 credits. Analysis and interpretation of the basic principles of research and writing as they relate to physical education, athletics and allied fields of endeavor. Integration of research and writing procedures likely to have the greatest influence on programs and practices relating to the administration of P.E.D. programs.

P E 645 Sports Medicine 3 credits. Study of sports medicine principles and practices involved in athletic programs. Includes kinesiological and physiological principles involved in athletics as well as management and administrative concerns related to conducting sports medicine programs.

P E 648 Problems 1-3 credits. Individual and group study of problems in the areas of physical education and recreation. May be repeated to 6 hours credit.

P E 649 Issues in PED and Athletic Administration 3 credits. A study of the current issues applicable to the administration of PED and athletics. Opportunities may be afforded for study within specialized areas. May be repeated up to 6 hours with departmental permission.

P E 650 Thesis 1-6 credits. Graded S/U.

P E 651 Master's Project in P.E.D. & Athletics 1-3 credits. May be repeated. May be graded S/U.

P E 655 Internship 1-3 credits. Administration, supervision and operation of a P.E.D. or Athletic Program. Students work under the direction of a graduate faculty member and practicing administrator. May be repeated up to 6 credit. May be graded S/U. PREREQ: APPROVAL OF ADVISOR AND/OR CHAIR.

P E 658 Athletics in the West 2 credits. Field-based review of programs and topics related to physical education and athletic administration, including: tours of facilities in schools, colleges, and professional athletics; lessons and seminars with practitioners and scholars.

Special Education Graduate Courses

SPED g523 Designing Instruction 3 credits. Introduction to instructional design principles and strategies for engaging students in higher order thinking and problem-solving. Emphasis on teaching complex concepts in reading comprehension, writing, mathematics and other academic subjects. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g524 Assessment Procedures in Special Education 3 credits. Introductory study of diagnostic assessment techniques and the writing of individual educational, behavioral prescriptions, and instructional objectives which are required to provide interventions suitable for remediating the learning programs in basic school curricula. PREREQ OR COREQ: SPED 330 AND SPED 334 OR PERMISSION OF INSTRUCTOR.

SPED g526 Assessment: Severe Disabilities 3 credits. Selection, administration, and interpretation of criterion-referenced tools employed with severely disabled students. Emphasizes functional approach to assessment and evaluation of behavioral and instructional domains. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g527 Precision Teaching 1 credit. Techniques of data collection, charting, and decision making in the educational programs of children with disabilities. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g529 Strategies: Severe Disabilities 3 credits. Consideration and evaluation of curriculum materials from behavioral, developmental, and ecological perspectives. Emphasizes functional approach to development and implementation of individualized intervention plans. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g532 Direct Instruction Systems 3 credits. This course provides mastery level skills training in direct instruction systems for reading, math, and written language. Includes field work, adaptation of curricula to direct instruction model and evaluation. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g533 The Emotionally Disturbed Child 3 credits. Survey of the causes of emotional disturbance in children and the effects upon the child's school performance and achievement. School programs and treatment considerations will be reviewed.

SPED g538 Policies and Procedures in Special Education 3 credits. Consideration of legal background, current court ruling, professional responsibilities, and models for consultation and collaboration in a variety of educational settings. Includes the IEP process. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g540 Biomedical Aspects of Physical Disability 2 credits. Study of the causes, treatments, and educational implications of physical and neurological disorders of genetically and orthopedically disabled children. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g543 Autism 2 credits. An overview of autism and implications for educational planning. Teaching strategies that are successful in working with individuals who have autism will be reviewed.

SPED g546 Secondary Special Education 3 credits. Teaching methodology focusing on needs of secondary and adult special education students. Topics include functional academics, transition, independent living, social skills, vocational training, employment options, and accessing community resources. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g548 Pre-practicum, Moderately Handicapped 1-3 credits. Supervised practical work with moderately handicapped children in a clinical setting. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g550 Creating Inclusive Classes 3 credits. Curricula and methods for educating students with disabilities in general education classrooms. Emphasizes inclusive lesson design, curricular adaptations, and collaborative teaching.

SPED g562 Advanced Issues in Behavior Disorders 2 credits. Study of educational organization, collaboration and consultation skills necessary to provide integrated service for this exceptionality. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g580 Seminar in Special Education 1 credit. Current topics in the field of special education by departmental faculty and guest lecturers. May be repeated for a total of 2 credits. GRADED S/U.

SPED g581 Seminar: Behavior Disorders 1 credit. Covers topical issues related to the education of children with behavior disorders in a variety of educational and therapeutic settings. PREREQ: PERMISSION OF INSTRUCTOR.

SPED g585 Independent Problems 1-3 credits. Individual work under staff guidance. Field and/or library research on specific educational problems of interest to majors in education. Experience in research composition. May be repeated. PREREQ: PERMISSION OF INSTRUCTOR. May be graded S/U.

SPED g591 Seminar 1-3 credits. Critical analysis

of the literature in one or more areas of education. Limited enrollment. PREREQ: PERMISSION OF INSTRUCTOR. May be graded S/U or on a letter-grade basis in separate sections.

SPED g598 Advanced Fieldwork 1-3 credits. Orientation, observation, planning and implementation of special education instruction in a special education setting in the public schools. PREREQ: PERMISSION OF INSTRUCTOR.

SPED 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/U.

SPED 630 Professional Development in Special Education 2 credits. Issues related to the professional role of the master's-degree-level special educator, including professional societies, history, philosophical and humanistic foundations.

SPED 632 Administration of Special Education 2 credits. Supervision of special education, including the organization, financing, equipping, housing, and staffing of educational facilities for exceptional children. Also includes legal provisions relevant to special education.

SPED 633 The Behaviorally Maladjusted Child 3 credits. Comprehensive study of the characteristics, learning problems, educational organizations, and teaching competencies for this exceptionality. PREREQ: SPED 334 OR PERMISSION OF INSTRUCTOR.

SPED 634 The Mentally Gifted Child 3 credits. Physical, mental, emotional, and social characteristics of the mentally gifted; teaching procedures, types of organization, analysis of educational need, and curricula material used in their education.

SPED 636 Medical and Health Issues in Special Education 2 credits. Consideration of medical and health issues, problems, and practices as they pertain to children with disabilities in hospital-, home-, and school-based programs.

SPED 638 Practicum in Special Education 2-8 credits. Individual observation, program development, and supervised practice in the development of teaching competencies for the education of exceptional children. A combination of fifty hours of experience and supervision equals one hour of academic credit. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

SPED 639 Internship in Special Education 3-12 credits. A combination of fifty hours of experience and supervision equals one hour of academic credit. PREREQ: SPED 638 AND PERMISSION OF INSTRUCTOR. Graded S/U.

SPED 650 Thesis 1-6 credits. Graded S/U.

SPED 651 Master's Paper 1-3 credits. A paper involving extensive familiarity with research findings written under the supervision of a faculty member in the department. May be repeated. Graded S/ U

SPED 652 Specialist Paper 1-3 credits. A paper involving extensive familiarity with research finding under the supervision of a faculty member of the program, consisting of applied research activity in the field of special education**,** written in format appropriate for publication consideration by a peer-reviewed journal.

SPED 658 Independent Problems 1-3 credits. Individual work under staff guidance. Field and/or library research on specific educational problems. Experience in research composition. May be repeated up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

SPED 659 Seminar 1-3 credits. Critical analysis of the literature in one or more areas of education. Enrollment limited. May be repeated up to 8 credits. PREREQ: PERMISSION OF INSTRUCTOR.

SPED 662 Consultation in Schools 2 credits. Provides theoretical and practical experience in the development, implementation, and evaluation of a variety of consulting strategies suitable for working with teachers, administrators, community agencies, and parents. PREREQ: PERMISSION OF INSTRUCTOR.

SPED 758 Independent Problems 2-4 credits. Individual work under staff guidance. Field and/or library research on specific educational problems. Experience in research composition. May be repeated up to 8 credits. PREREQ: PERMISSION OF INSTRUCTOR.

SPED 759 Ed.S. Internship 1-9 credits. Placement in a post-master's degree counseling, school psychology, or special education setting. A combination of fifty hours of experience and supervision equals one hour of academic credit. May be repeated. PREREQ: COMPLETION OF ALL PROGRAM COURSE WORK, AND PERMISSION OF INSTRUCTOR. Graded S/U.

School Psychology Graduate Courses

SCPY 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/U.

SCPY 614 Diagnostic Evaluation of Learning Difficulties 3 credits. Investigation of theoretical and applied assessment of intervention measures suitable for remediating learning problems.

SCPY 615 Advanced Child Psychology 3 credits. In-depth study of the principles of educational psychology and child development. Emphasis will be placed on applying research-based practices from the science of educational psychology to solve problems found in schools and other social settings. PREREQ: EDUC 602.

SCPY 616 Psychological Assessment 3 credits. Psychometric assessment to determine eligibility of students and provide diagnostic information to develop interventions and assess their effects. Includes writing of integrated reports that address various exceptionalities. PREREQ: SCPY 614 AND SCPY 619.

SCPY 619 Individual Intelligence Testing 3 credits. Supervised practice in administering, scoring, and interpreting the results of individual intelligence tests. Each section limited to 6 students. PREREQ: PERMISSION OF INSTRUCTOR.

SCPY 652 Specialist Paper 1 credit. An applied research paper in school psychology, written in format appropriate for publication consideration by a peer-reviewed journal. PREREQ: EDUC 601

SCPY 658 Independent Problems 1-3 credits. Individual work under staff guidance. Field and/or library research on specific educational problems. Experience in research composition. May be repeated up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

SCPY 660 Seminar in School Psychology 3 credits. Introduce students to the field of school psychology through guest speakers, literature, and discussion. Focus on assessment, diagnosis, professional ethics, historical development, and school law. PREREQ: PERMISSION OF INSTRUCTOR.

SCPY 661 Techniques in School Psychology 3 credits. Design, implement, and evaluate in-service training activities suitable for teachers, administrators, community agencies, and parents over a wide variety of topics. PREREQ: SECOND-YEAR SCHOOL PSYCHOLOGY STUDENT. COREQ: EDUC 616.

SCPY 662 Consultation in the Schools 3 credits. Provides theoretical and practical experience in the development, implementation, and evaluation of a variety of consulting strategies suitable for working with teachers, administrators, community agencies, and parents. PREREQ: SCPY 665 AND PERMISSION OF INSTRUCTOR.

SCPY 664 Neurocognition and Learning 3 credits. This course will increase skills of school psychologists and educators in applying neurocognitive research to psychoeducational adjustment in schools. Content will emphasize intervention, assessment, instruction, consultation, individual differences in emotionality, attention, memory, and problem solving. PREREQ: EDUC 602.

SCPY 665 Clinical School Psychology 3 credits. Clinical practice in school settings including individual interviewing, and group training techniques, case study methods, behavioral methods, and clinical assessment strategies. PREREQ: PERMISSION OF INSTRUCTOR

SCPY 668 Practicum: Introduction to School Psychology, Learning Disabilities, and Special Education 3 credits. Supervised experience in educational, intelligence, and personality testing as well as diagnostic evaluation of learning difficulties and report writing. Special emphasis on the interpretation of test results to teachers, counselors, and administrative personnel. A combination of fifty hours of experience and supervision equals

one hour of academic credit. PREREQ: SCPY 619 AND PERMISSION OF INSTRUCTOR. COREQ: SCPY 614.

SCPY 669 Advanced Practicum in School Psychology 1-12 credits. A combination of fifty hours of experience and supervision equals one hour of academic credit. PREREQ: SCPY 668 AND PERMISSION OF INSTRUCTOR.

SCPY 670 Practicum in School Psychology Clinic 1-2 credits. Second-year students will process school and community-based referrals. Fifty (50) hours contact time per credit. This involves a collaborative problem-solving approach with school-based teams to gain experience with pre-referral activities, evaluation, and intervention plans. COREQ: SCPY 665.

SCPY 759 Ed.S. Internship 1-9 credits. Placement in a post-master's degree counseling, school psychology, or special education setting. A combination of fifty hours of experience and supervision equals one hour of academic credit. May be repeated. PREREQ: COMPLETION OF ALL PROGRAM COURSE WORK, AND PERMISSION OF INSTRUCTOR.


LILLIBRIDGE
ENGINEERING
LABORATORY

College of Engineering

Richard T. Jacobsen, Ph.D., Dean and Professor
D. S. Naidu, Ph.D., Associate Dean and Professor
Professor and Chair, Department of Civil and Environmental Engineering: Zoghi
Professor and Interim Chair, Department of Electrical Engineering and Computer Science: Mousavinezhad
Professor and Interim Chair for Department of Mechanical and Nuclear Engineering: Imel
Professors: Bosworth, Ebrahimpour, Kunze, Leung, Lineberry, Sato, Schoen, Stuffle
Associate Professors: Ellis, Kantabutra, Sadid, Wabrek, B. Williams
Assistant Professors: Chiu, Dunzik-Gougar, Perez, Tappan, Savage
Adjunct Faculty: Larson, Lucas, Maio

Doctor of Philosophy in Engineering and Applied Science

The Ph.D. program in Engineering and Applied Science is an interdisciplinary program administered by the College of Engineering and offered jointly with the Department of Physics. The program allows for a broad range of research topics in both engineering and physics, but also has two special emphasis areas: (1) Nuclear Science and Engineering; and (2) Subsurface Science, each of which draws on a long-established expertise at Idaho State University in both teaching and research in these areas. Because of the unique interdisciplinary nature of the Ph.D. program in the emphasis area of Subsurface Science, the graduate faculty in the Departments of Geosciences and Mathematics may serve as committee members and/or major advisors for students in this emphasis area.

Research areas are Engineering (Civil Engineering, Electrical Engineering, Environmental Engineering, Measurement and Control Engineering, Mechanical Engineering, and Nuclear Engineering), Physics (Radiation Science, Accelerator Applications, Applied Nuclear Physics, and Health Physics), Geosciences, (Geology, Geophysics, Geochemistry, Environmental Geosciences), and Mathematics (Applied Mathematics and Computational Mathematics).

To attain a degree in this program, a student must demonstrate scholarly achievement and an ability for independent investigation. The program will normally require three years of full-time study beyond the master's degree, including research and preparation of the dissertation.

Goals

- Prepare graduates to conduct and disseminate independent scholarly research.
- Prepare graduates for careers in academia or industry.

Objectives:

- Increase the knowledge of graduates in their specialized field: Engineering, Physics, Nuclear Science and Engineering, or Subsurface Science.
- Enhance the ability of graduates to contribute to their chosen field.
- Enhance effective written and oral communication skills of graduates.

Admission Requirements

All applicants must meet Idaho State University Graduate School admission requirements for doctoral programs. Additionally, applicants must have attained a master's degree in engineering, physics, geosciences, mathematics, or a closely related field. Applicants must submit a one-page (only) statement of research interests, a one-page (only) statement of career interests, a resume, and at least 3 letters of reference along with their applications. In some special cases, a student with exceptional undergraduate academic record and aptitude for research but without an M.S. degree may be directly admitted to the Ph.D. program with the approval of the Ph.D. program committee.

General Requirements

The Ph.D. degree requires completion of at least 84 credits consisting of 30 credits for the M.S. degree, 18 credits of additional course work, 4 credits of graduate seminar and 32 credits of dissertation research. Six credits of core courses are required for each emphasis area. The 30 credits for the M.S. degree are the maximum allowed. At least 9 of the 18 credits of course work must be in collateral areas as designated by the student's advisory committee. Additional dissertation research credits may be required by the student's dissertation committee.

Program of Study

An advisory committee consisting of Idaho State University graduate faculty from the four academic units will be established for each student upon entry into the program. The committee will guide the student in establishing his or her program of course work and laboratory study based upon the student's background and research interest. The advisory committee has the responsibility of ensuring that the student has adequate knowledge to support research in his or her chosen area of interest.

At the end of the first year, the student will take a written, comprehensive qualifying examination covering the relevant information within the scope of the research area. A student taking the comprehensive qualifying exam needs to be prepared to take an oral examination conducted by the student's Advisory Committee. The oral exam needs to focus primarily on material in the written exam that was not adequately answered. However, the Advisory Committee, at its discretion, may excuse a student from taking the oral examination if the student excels in the written examination. The student will be allowed two attempts to pass the oral examination, and the second attempt must be within one-half year after the first attempt. The student will be admitted to candidacy upon passing the comprehensive qualifying examination.

A dissertation committee, chaired by the candidate's major professor, will be appointed. Within six months of passing the comprehensive qualifying examination, the candidate, with guidance from the major professor, will satisfactorily complete an oral presentation and defense of a proposal for dissertation research to the committee.

The research and dissertation preparation must be conducted under the close supervision of the committee and must include at least one full year of work performed under Idaho State University graduate faculty. The candidate can submit the final dissertation anytime after six months from the date of acceptance of the research proposal.

Dissertation approval requires a public presentation of the dissertation and a satisfactory oral defense to the Dissertation Committee. Doctoral oral examinations are open to all

regular members of the faculty as observers. Further, oral presentations are open to the public until questioning by the Dissertation Committee begins.

Graduate Programs in Engineering

The graduate program in the College of Engineering offers the student a choice of five majors for specialization at the master's level together with a breadth of courses to fit individual educational goals. The majors are:

1. Civil Engineering
2. Environmental Engineering
3. Measurement and Control Engineering
4. Mechanical Engineering
5. Nuclear Science and Engineering

Goals

- Prepare graduates to have an advanced understanding and the ability to apply problem-solving skills in their chosen field of study.
- Prepare graduates to undertake doctoral study and/or to take challenging careers in teaching, research, and industry, for continued personal growth and contribution to the global competitiveness of the United States.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School.

General Requirements

With the assistance of the graduate faculty of the College of Engineering, the student shall select an initial advisor during the first semester of residence to help in planning a program of studies and research. The student must also complete a Plan of Study and form a complete advisory committee by the time six credits of course work have been completed.

There are 32 credit hours required for each major. Approximately half of the credits are engineering and technical electives, subject to the approval of the student's advisory committee. The thesis project, required in each major, should consist of study and research that complements the course work selected. Each student must also complete two semesters of seminar, an important component in developing research and communication skills.

Master of Science in Civil Engineering

The M.S. program in Civil Engineering is designed to provide advanced study, both theoretically and experimentally, in structures, mechanics, finite element methods, water resources, and geotechnics. This program prepares the student for advanced placement in the civil engineering field in industry, research, or development areas. Additionally, this program provides a suitable base for entrance into a Ph.D. program in a field related to Civil Engineering. The program is offered both at the Pocatello and the Idaho Falls campuses, primarily through the use of telecommunications/distance learning, which includes partial in-class instruction.

Goals

- Enhance the knowledge of graduates in the advanced concepts in Civil Engineering fields such as structures, mechanics, finite element methods, geotechnics, and water resources.
- Increase the ability of graduates to synthesize and apply these advanced concepts to develop realistic designs in fields related to civil engineering and to solve identified problems, and design strategies for implementing them safely, ethically, and effectively.
- Enhance the ability of graduates to communicate these concepts effectively both in oral and written formats.

Required Courses

C E	531	Advanced Mechanics of Solids	3 cr
C E	664	Dynamics of Structures	3 cr
C E	665	Finite Element Methods	3 cr
C E	667	Structures & Mechanics Lab	3 cr
Approved Engineering Electives			6 cr
Approved Technical Electives			6 cr
ENGR	650	Thesis	6 cr
ENGR	651	Seminar	2 cr

Master of Science in Environmental Engineering

This program is designed to provide the student with advanced technical training in environmental engineering, with an emphasis on hazardous waste treatment and control. The program fills a need in industry and government for professionals with a broad understanding of the technical aspects of environmental issues. Students enrolled in the program are generally expected to have a sufficient background in mathematics and chemistry (a minimum of one year of general chemistry). Students with an insufficient background in engineering and math are required to make up the deficiencies according to the advice of their advisory committee (usually includes ENGR 307, CE 332, ME 341).

Goals

- Enhance the knowledge of graduates in the advanced concepts of environmental control and remediation, involving a significant fraction of the following: chemistry, water & waste water quality, air quality, radioactive material handling and disposal, environmental laws and regulations, global environmental issues, and cost benefit analyses.
- Increase the ability of graduates to synthesize and apply these advanced concepts to develop realistic environmental engineering designs and to solve identified problems, designing strategies for implementing them safely, ethically, and effectively.
- Enhance the ability of graduates to communicate these concepts effectively both in oral and written formats.

Required Courses

ENVE 508	Water & Waste Water Quality	3 cr
ENVE 509	Water & Waste Water Lab	1 cr
ENVE 510	Intro to Environmental Engineering	3 cr
ENVE 611	Treatment Systems for Environmental Remediation	3 cr

Approved Environmental Engineering Electives (9 credits required)

Students are to select a core of at least nine credits from graduate level engineering-intensive courses from the following list. Note: a particular student may select one or more intensive engineering courses not on this list, with the express approval of her/his committee, for the purpose of focusing him/her in a particular direction not covered by this abbreviated list.

ENVE 504	Engineering Risk Assessment	3 cr
ENVE 612	Treatment of Hazardous Chemical Waste	3 cr
ENVE 614	Hazardous Waste Site Remediation	3 cr

ENVE 615	Water Quality Modeling & Control	3 cr
ENVE 616	Biological Treatment of Wastewater	3 cr
ENVE 617	Environmental Systems Engineering & Design	3 cr
ENVE 629	Physical & Chemical Treatment of Water and Waste Water	3 cr
ENVE 630	Air Pollution & Control	3 cr
ENGR 521	Advanced Engineering Analysis (Math)	3 cr
ENGR 578	Probabilistic Design	3 cr
ME 519	Alternative Energy Systems Design	3 cr
ME 576	Heat Transfer	3 cr
N E 544	Nuclear Fuel Cycles	3 cr
N E 618	Treatment of Low Level Radioactive Waste	3 cr
NSEN 619	Treatment of High Level Radioactive Waste	3 cr

Seminar (2 credits required)

The seminar course must be completed two times in order to satisfy the requirement.

ENGR 651	Seminar	1 cr (x2)

Approved Environmental Engineering Technical Electives (6 credits required)

Any graduate level course from Biological Science, Chemistry, Geology, Math, or Pharmacy as well as engineering electives may be taken as a technical elective with approval of the student's advisory committee. The following courses are recommended for consideration.

ENGR 606	Environmental Law & Regulation	3 cr
ENGR 607	Hazardous Waste Management	3 cr
ENVE 610	Introduction to Radioactive Waste Management	3 cr
BIOL 687	Environmental Science & Pollutants	3 cr
BIOL 623	Soil & Groundwater Bioremediation	3 cr
GEOL 520	Principles of Geochemistry	3 cr
PHYS 605	Radiological Environmental Monitoring & Surveillance	3 cr
PSCI 621	Biological Action of Chemicals	3 cr
PSCI 622	Principles of Toxicology	3 cr

Master of Science in Environmental Science and Management

The Environmental Science and Management (ENSM) Program is an interdisciplinary program designed to allow students to combine courses in environmental engineering with related courses in an interdisciplinary area of emphasis. Interdisciplinary course work may come from a combination of courses from the following emphasis areas: Geosciences, Biological Sciences, Chemistry, Mathematics, Physics, Pharmaceutical Sciences, Political Science, and Business. Students may also choose Environmental Engineering as the academic emphasis; thus maintaining the entire program of study within the Department of Civil and Environmental Engineering. The ENSM program is jointly sponsored by the University of Idaho, and some of the courses are cross-listed. Students must complete at least ten credits in an interdisciplinary discipline (academic emphasis), and satisfy all departmental and Graduate School requirements.

Students entering the ENSM program are required to obtain interdisciplinary admission into the Department of Civil and Environmental Engineering and one other academic discipline (emphasis). Admission requirements vary between academic units, and there may be departmental requirements beyond those of the Department of Civil and Environmental Engineering which the student must fulfill to gain departmental admission. At least 30 credits are required for the degree, of which at least 15 must be at the 600 level. At least 10 credits must be completed within the academic emphasis, with the remainder of the course work representing ENSM course work. No more than 9 credits may be transferred from another university, with the exception of courses from the University of Idaho, which will be accepted as resident credits. Students must have successfully completed course work equivalent to Idaho State University's MATH 160 (Brief Calculus) and Idaho State University's CHEM 111/112 (General Chemistry) with grades of "C" or better. Students with pre-requisite course deficiencies may be admitted as Classified with Performance Requirements with the understanding that these requirements must be satisfied prior to graduation, and such efforts may not necessarily count toward graduation. Classified with Performance Requirements (w/PR) admission into the ENSM program is the prerogative of individual departments.

Thesis and non-thesis options are available for the ENSM degree. For the thesis option, a maximum of ten thesis credits may be counted toward the degree. For the non-thesis option, a maximum of three "Special Project" credits may be counted toward the degree. These credits may apply toward the requirement of 15 credits at the 600 level. There are program-wide and department-specific requirements for the thesis and non-thesis options, and students must create a program of study in conjunction with their advisory committee. Students will register for thesis credits or non-thesis project credits in the home department of the thesis/project advisor. Some departments' "Special Project" courses may have a different title and/or course number.

Within the framework of the basic degree requirements, an advisory committee is chosen to work with the student to create an individualized program of study. The advisory committee consists of two faculty advisors: one from the Department of Civil and Environmental Engineering (CEE), and one from the student's other academic discipline (emphasis). The student's major advisor provides direction to the student regarding all relevant aspects of the program. All courses selected for fulfillment of the program of study must be approved by the advisory committee. The initial program of study must be submitted to the ENSM program director no later than the second semester of enrollment. Changes in the initial program of study may only be made with the approval of the student's advisory committee. The final program of study is submitted to the Graduate School for graduation clearance in accordance with Graduate School policy.

Required Courses

The following courses are required for every student receiving the M.S. degree in Environmental Science and Management.

ENVE g510	Introduction to Environmental Engineering	3cr
ENGR 655*	Environmental Topics Seminar	1cr
and		
ENGR 650**	Thesis	1-6cr
or		
ENGR 660**	Special Project	3cr

*Course must be completed two times in order to satisfy requirement. A student may choose a seminar other than ENGR 655 offered in his/her interdisciplinary discipline with approval of the advisory committee.

** Students will register for thesis or non-thesis "Special Project" credits in the home department of the thesis/non-thesis project advisor. Some departments' "Special Project" courses may have a different title and/or course number.

In addition, the following courses are required for students choosing chemistry, environmental engineering or mathematics

as the second academic emphasis. Course work in other emphasis areas will be selected from elective course work with the approval of the advisory committee.

Chemistry Emphasis

CHEM g535	Environmental Chemistry	2cr
CHEM g537	Environmental Chemistry Laboratory	2cr

Environmental Engineering Emphasis

ENVE g508	Water and Wastewater Quality	3 cr
ENVE g509	Water and Wastewater Laboratory	1cr
ENVE g504	Environmental Risk Assessment	3cr

Mathematics Emphasis

MATH g521	Advanced Engineering Mathematics I	3 cr
MATH g522	Advanced Engineering Mathematics II	3 cr
and		
MATH g565	Partial Differential Equations	3 cr
or		
MATH 664 and		
MATH 665	Applied Mathematics	6 cr

Elective Courses

Students will select a core of courses from the following list. (Students may select one or more courses not on this list, with the approval of the advisory committee, for the purpose of focusing students in a particular direction not covered by this abbreviated list.)

Chemistry Electives

CHEM g507	Inorganic Chemistry II	2 cr
CHEM 601	Seminar	1 cr
CHEM 609	Advanced Inorganic Chemistry	3 cr
CHEM 630	Advanced Analytical Chemistry	3 cr
CHEM 621	Organic Reactions	3 cr
CHEM 655	Advanced Physical Chemistry	3cr
CHEM 671	Advanced Organic Chemistry	3cr

Environmental Engineering Electives

ENVE g508	Water and Wastewater Quality	3 cr
ENVE g509	Water and Wastewater Quality Laboratory	1 cr
ENVE g530	Air Pollution and Solid Waste	3 cr
ENVE 610	Introduction to Radioactive Waste Management	3 cr
ENVE 611	Treatment Systems for Environmental Remediation	3 cr
ENVE 615	Water Quality Modeling and Control	3 cr
ENVE 617	Environmental Systems Engineering and Design	3 cr
ENVE 629	Physical and Chemical Treatment of Water and Wastewater	3 cr
ENVE 630	Air Pollution and Control	3 cr
ENVG 606	Environmental Law and Regulation	3 cr
CE 599	Open Channel Flow	3 cr
CE g535	Hydraulics Design	3 cr
CE g554	Basic Engineering Geol	3 cr
CE g555	Geologic Data Methods	3 cr
NSEN 618	Treatment of Low Level Radioactive Waste	3 cr
NSEN 619	Treatment of High Level Radioactive Waste	3 cr

Geosciences Electives

GEOL g504	Advanced Geographic Information Systems	3 cr
GEOL g506	Environmental Geology	3 cr
GEOL g509	Remote Sensing	3 cr
GEOL g515	Quarternary Global Change	3cr
GEOL g516	Global Environmental Change	3 cr
GEOL g520	Principles of Geochemistry	3 cr
GEOL g530	Principles of Hydrogeology	3 cr
GEOL g554	Basic Engineering Geology	3cr
GEOL g583	Earthquake Engineering	3 cr
GEOL 602	Advanced Geomorphology	3 cr
GEOL 606	Geostatistical Spatial Data Analysis and Modeling	4 cr
GEOL 617	Environmental Geochemistry	3 cr
GEOL 625	Quantitative Geochemistry Laboratory	3 cr
GEOL 630	Advanced Hydrogeology	3 cr

Master of Science in Measurement and Control Engineering

The M.S. program in Measurement and Control Engineering is designed to provide advanced study (analytically, computationally, and experimentally) in measurements, modeling, simulation, adaptive, intelligent, nonlinear, optimal, robotics, and robust control. This program prepares the student for advanced placement in the measurement and control engineering field in industry, research, or development areas. Additionally, this program provides a suitable base for entrance into a Ph.D. program in a field related to Electrical or Mechanical Engineering. The program is offered both at the Pocatello and the Idaho Falls campuses, primarily through the use of telecommunications/distance learning, which includes partial in-class instruction.

Goals

- Enhance the knowledge of graduates in advanced concepts of measurement, control, signal processing, engineering mathematics, computation and other related areas.
- Increase the ability of graduates to synthesize and apply these advanced concepts to develop realistic measurement and control engineering designs and to solve identified problems, designing strategies for implementing them safely, ethically, and effectively.
- Enhance the ability of graduates to communicate these concepts effectively both in oral and written formats.

Required Courses

The following courses are required of every student receiving the M.S. Degree in Measurement and Control Engineering covered by the abbreviated list.

ENGR 521	Advanced Engineering Mathematics I	3 cr
MCE 642	Advanced Control Systems	3 cr
MCE 643	Advanced Measurement Methods	3 cr
MCE 644	Measurements and Controls Laboratory	3 cr
Approved Engineering Electives		6 cr
Approved Technical Electives		6 cr
ENGR 650	Thesis	6 cr
ENGR 651	Seminar	2 cr

Master of Science in Mechanical Engineering

The master's degree program in Mechanical Engineering is designed to provide advanced study, (analytically, computationally, and experimentally) in thermodynamics, fluids, heat transfer, energy systems, vibrations, engineering mechanics, and their associated measurement systems. This program prepares the student for advanced placement in the mechanical engineering field in industry, research, or development areas. Additionally, this program provides a suitable base for entrance into a Ph.D. program in a field related to Mechanical Engineering. The program is offered both at the Pocatello and Idaho Falls campuses, primarily through the use of telecommunications/distance learning, which includes partial in-class instruction.

Goals

- Enhance the knowledge of graduates in advanced concepts of thermodynamics, fluids, heat transfer, energy systems, vibrations, engineering mechanics, measurements, and engineering mathematics.
- Increase the ability of graduates to synthesize and apply these advanced concepts to develop realistic mechanical engineering designs implementing them safely, ethically, and effectively.
- Enhance the ability of graduates to communicate these concepts effectively both in oral and written forms.

Required Courses

ENGR	521	Advanced Engineering Mathematics I	3 cr
M E	607	Advanced Thermodynamics	3 cr
M E	640	Advanced Vibrations	3 cr
M E	643	Thermal Fluids and Vibrations Lab	3 cr
Approved Engineering Electives			6 cr
Approved Technical Electives			6 cr
ENGR	650	Thesis	6 cr
ENGR	651	Seminar	2 cr

Master of Science in Nuclear Science and Engineering

The master's degree program in Nuclear Science and Engineering prepares the student for advanced placement in the nuclear industry in commercial, research, or development areas. It provides in-depth studies and advanced design concepts in several areas of modern nuclear science and engineering. It is also an excellent program of study for entering the Ph.D. program in Nuclear Sci ence and Engineering.

Goals

- Enhance the knowledge of graduates in the physics and engineering of nuclear reactors, the nuclear fuel cycle, and other aspects of the study of nuclear engineering. At Idaho State University, while our emphasis is on advanced reactors and the science and technology of nuclear fuel recycling, we allow the flexibility to build programs on other aspects, which can include systems studies and simulations including policy aspects, radiation shielding and detection, medical applications of radiation, and the economics and safety of all of these applications.

- Increase the ability of graduates to synthesize and apply these advanced concepts to develop realistic nuclear engineering designs and to solve identified problems, designing strategies for implementing them safely, ethically, and effectively.

- Enhance the ability of graduates to communicate these concepts effectively both in oral and written formats.

Required Courses

12 credits from the following list:

NE	521	Mathematical Methods for Nuclear Engineers	3 cr
OR			
PHYS	602	Theoretical Methods of Physics	3 cr
NE	g545	Reactor Physics	3 cr
NE	g546	Nuclear Fuel Cycle System Analysis	3 cr
NSEN	684-685	Nuclear Engineering Basics	6 cr
NSEN	601	Nuclear Engineering Experiments	3 cr
NSEN	608	Radiation Transport	3 cr
NSEN	609	Radiation Detection	3 cr
NSEN	618	Radioactive Waste Management	3 cr
NSEN	619	Nuclear Waste Imomobilization	3 cr

12 credits of Engineering or Physics courses approved by the major advisor

NSEN	650	Thesis	6 cr
ENGR	651	Seminar	2 cr
Total credits:			32

Certificate Program in Applied Nuclear Energy

This program provides BS/BA graduates who do not have recent experience or education in the nuclear energy field with historical insights, information on basic concepts, regulatory requirements, and economic and environmental considerations. This program is not intended to lead to M.S. and Ph.D. programs in the areas of Nuclear Science and Engineering. The Certificate is granted upon completion of fourteen (14) credit hours of class work, consisting of nine credit hours of required courses, a three-credit elective course and participation in two semesters of a one-credit graduate seminar. Up to six credits of appropriate graduate course work taken at another university may be applied toward the Certificate program subject to approval by the student's Certificate Committee. With appropriate pre-planning, some of these credits could be applied to a master's degree.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. An earned grade point average of at least 3.0 or higher is required for all upper division credits taken at the undergraduate level, regardless of the institution at which the credits were earned GRE scores are not required.

Required courses (8 credits):

NSEN	615	Introduction to Practical Nuclear Engineering	3 cr
NSEN	617	Applications in Nuclear Energy	3 cr
ENGR	651	Seminar	2 cr

One of the following four courses (3 credits):

ENGR	606	Environmental Law and Regulation	3 cr
PHYS	610	Radiation Regulations	3 cr
NSEN	618	Treatment of Low Level Radioactive Waste	3 cr
NSEN	619	Treatment of High Level Radioactive Waste	3 cr
Approved NE, NSEN, ENGR, ENVE, or PHYS 5xx/6xx elective course			3 cr

Thesis Option in Engineering Master's Programs

All students entering with less than two years of industrial experience as determined by the College are required to complete six credits of thesis in their related field. Students who are planning to continue their education beyond the master level are strongly encouraged to choose this option. After the completion of the course work and the thesis, an oral defense of the thesis will be required. No more than six credits of Thesis will be allowed on the student's final Program of Study.

ENGR 650	Thesis	1-9 cr

Non-Thesis Option in Engineering Master's Programs

All students entering with a minimum of two years industrial experience in the related area as determined by the College are eligible to choose this option. In the non-thesis program students will be required to take an additional 3-credit course, to complete a 3-credit Special Project (ENGR 660) in the related field and submit a written report. After completion of the course work and the Special Project, students are required to take a two-hour oral exam on their Special Project and other courses in the MS program. No more than three credits of special Project will be allowed on the student's final Program of Study.

ENGR 660	Special Project	1-9 cr

Engineering Graduate Courses

ENGR g515 Model Theory 3 credits. Theory of design and testing of scaled system models. Dimensional analysis with application to physical models. True and distorted models, linear and non-linear models, and analogies. Laboratory work required. PREREQ: CE 341 OR ME 341, AND ENGR 350.

ENGR g516 Applied Engineering Methods 3 credits. Applied discrete and continuous probability, random variables, probability distributions, sampling, data description, parameter estimation, hypothesis testing, inference, correlation, and linear and multiple regression. PREREQ: MATH 170.

ENGR g521 Advanced Engineering Mathematics I 3 credits. Analysis of complex linear and nonlinear engineering systems using advanced techniques including Laplace transforms, Fourier series and classical partial differential equations. Cross-listed as MATH g521. PREREQ: MATH 360.

ENGR g522 Advanced Engineering Mathematics II 3 credits. Cross-listed as MATH g522. Analysis of complex linear and nonlinear engineering systems using advanced techniques, including probability and statistics, advanced numerical methods and variational calculus. PREREQ: ENGR g521 OR MATH g52l.

ENGR g560 Engineering Cost Estimating 3 credits. Introduction to design/construction processes, planning, contracts, procurement, plans/specifications, productivity analyses, safety, cost estimating, scheduling and environmental considerations. Use of data from actual construction projects. PREREQ: ENGR 360 OR PERMISSION OF INSTRUCTOR.

ENGR g578 Probabilistic Risk Assessment 3 credits. Probabilistic methods applied to analysis and design. Setting probabilistic design objectives and calculating probabilistic performance emphasized. Cross-listed as NE g578. PREREQ: ENGR 364, MATH 360 AND SENIOR STANDING IN ENGINEERING.

ENGR g583 Engineering Law and Ethics 3 credits. Contracts, liability, registration laws, codes of ethics and professionalism applied to engineering. Includes seminar with guest speakers and student presentations. PREREQ: SENIOR STANDING IN ENGINEERING.

ENGR g591 Seminar in Engineering 1 credit. A series of lectures on current topics in the literature by participants or guest lecturers chosen from industry. PREREQ: PERMISSION OF INSTRUCTOR.

ENGR g593 Human Factors in Engineering 3 credits. Overview of the discipline of human factors engineering, including design of information displays, controls, workspace, and human performance. Relationship of engineering to corporate issues such as R&D, maintenance, training, operations, safety.

ENGR 501 Methods of Engineering 3 credits. Introduction to fundamental concepts of engineering related to hazardous waste management. Not counted toward graduation. PREREQ: PHYS 111.

ENGR 510 Introduction to Environmental Engineering 3 credits. Introduction to physical, chemical, and biological principles of solid and hazardous waste management, water and wastewater treatment, air pollutant control, and national environmental regulation. PREREQ: CHEM 112 AND ENGR 309, OR PERMISSION OF INSTRUCTOR.

ENGR 570 Survey of Hazardous Waste Management Problems 3 credits. Environmental, technical, political and economic aspects of hazardous waste management. Credit not given if UI ChE 570 or ISU ENVE 607 taken. PREREQ: ENGR 501 OR EQUIVALENT.

ENGR 572 Waste Treatment Technologies 3 credits. Procedures for characterization of hazardous waste sites, identification and application of physical, chemical, biological and thermal treatment. PREREQ: PERMISSION OF INSTRUCTOR.

ENGR 589 Principles of Hazardous Waste Site Remediation 3 credits. Restoration technologies for waste sites. Site characterization and clean-up methods for chemical, radioactive, mixed wastes in soils and water. Practical methodologies. Credit not granted if ENVE 614 taken. PREREQ: ENGR 570 OR ENVE 607.

ENGR 606 Environmental Law and Regulations 3 credits. Federal, state, local environmental regulations addressing environmental impact assessment; water and air pollution control, hazardous waste, resource recovery, reuses, toxic substances, occupational safety and health, radiation, siting, auditing, liability. Cross-listed with POLS 606. PREREQ: PERMISSION OF INSTRUCTOR.

ENGR 607 Hazardous Waste Management 3 credits. Management of hazardous and solid wastes, emphasis on CERCLA (Superfund) process for cleaning of uncontrolled hazardous waste sites and RECRA process for industrial treatment, storage, disposal facilities. PREREQ: MATH 508.

ENGR 609 Advanced Transport Phenomena 3 credits. Advanced theory and applications of heat, mass, and momentum transport; gases for correlation in engineering design of a variety of process equipment. PREREQ: ME/NE g576, CE/ME/NE 341, MATH g521.

ENGR 650 Thesis 1-9 credits. Thesis research must be approved by the student's advisory committee. Six credits may be used to satisfy the research requirements for the degree. Graded S/U.

ENGR 651 Seminar 1 credit. Current topics in engineering. Invited speakers will be used when possible. Students presentations required. May be taken a maximum of four times. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

ENGR 652 Special Problems 1-3 credits. Special experimental, computational, or theoretical investigation leading to development of proficiency in some area of engineering. Formal report required. PREREQ: PRIOR PROJECT APPROVAL REQUIRED BY AN ENGINEERING FACULTY. May be graded S/U. May be repeated.

ENGR 655 Environmental Topics Seminar 1 credit. Environmental engineering and science topics related to hazardous waste characterization, cleanup, regulations. Includes case histories and presentations by graduate students and visiting speakers. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

ENGR 660 Special Project 1-9 credits. A significant project, involving engineering applications, toward the completion of M.S. program with non-thesis option. Includes a report and oral examination. Graded S/U.

Civil Engineering Graduate Courses

CE g531 Advanced Mechanics of Solids 3 credits. An introduction to elasticity, plasticity, and energy foundations, stability, plates. PREREQ: ENGR 350 AND MATH 360.

CE g534 Geotechnical Design 3 credits. Application of soil mechanics to design of foundations, retaining wall, stable slopes, buried conduits and pavement structures. Computer methods utilized. PREREQ: ENGR 350, AND CE 332.

CE g535 Hydraulic Design 3 credits. Hydraulic design of water control and transport structures, pipelines, and distribution systems. Computer methods utilized. PREREQ: CE/ME 341.

CE g536 Roadway Design 3 credits. Fundamentals of earthwork, route location, drainage, and pavement materials with application to geometric and pavement design of highways, streets and rural roads. PREREQ: ENGR 223; CE 301 OR 302. COREQ: CE 332.

CE g537 Geotechnical Engineering Laboratory 1 credits. Field and laboratory work on site investigation, soil sampling classification and testing. Evaluation of soil properties. Design of experiment. PREREQ: CE 332.

CE g540 Vibration Analysis 3 credits. Free vibration and forced response of single and multiple degree of freedom systems, normal modes, random vibrations. Cross-listed as ME g540. PREREQ: MATH 360, ENGR 220, AND ENGR 350.

CE g554 Basic Engineering Geology 3 credits. Geology applied to civil engineering projects; rock engineering classification systems and geotechnical parameters such as joint set orientation; ground behavior and underground construction. Preparation of baseline geotechnical reports. Cross-listed as GEOL g554. COREQ: GEOL 314 OR CE 332.

CE g555 Geologic Data Methods 3 credits. Geotechnical investigations for civil works projects. Geologic mapping for civil engineering purposes. Development of engineering geologic profiles. Core logging. Preparation of Geotechnical Data Reports for civil works projects. Cross-listed as GEOL g555. PREREQ: CE g554.

CE g561 Advanced Structural Analysis 3 credits. Analysis of statically indeterminate structures. Continuation of the use of classical methods. Introduction to computer methods in structural analysis including the use of commercially available software, and lateral load effects. PREREQ: CE 362.

CE g562 Design of Steel Structures 3 credits. Design of steel members and connections with emphasis on the AISC specifications. PREREQ: CE 362.

CE g564 Design of Concrete Structures 3 credits. Design of reinforced concrete beams, columns, and slabs. Introduction to pre-stressing. PREREQ: CE 362.

CE g565 Prestressed Concrete Structures 3 credits. Basic concepts in prestressed concrete design,

full versus partial prestressing, flexural design, ultimate load design, beams with constant and variable tendon eccentricity, design of reinforcement for shear and torsion. PREREQ: CE g564.

CE g566 Design of Wood Structures 3 credits. Design of solid and laminated wood members and connections. Includes the design of wooden diaphragms for resisting lateral loads. PREREQ: CE 362.

CE g567 Structural Engineering Laboratory 1 credit. Measurement of stresses and load distribution through concrete, steel and wood components and structures. Design of experiment. PREREQ: CE 362.

CE g568 Behavior of Composite Materials 3 credits. Macro and micromechanical behavior of laminae and laminates; bending, buckling and vibration of laminated beams and plates. Cross-listed as ME g568. PREREQ: ENGR 350 AND MATH 230.

CE g575 Essentials of Geomechanics 3 credits. Essentials of rock fracture relevant to geological engineering including stress and strain, properties and classification of rock masses, rock fracture mechanisms. Cross-listed as GEOL g575. PREREQ: GEOL 421 OR ENGR 350.

CE g576 Engineering Geology Project 1 credits. Team projects studying actual problems in engineering geology. Cross-listed as GEOL g576. PREREQ: GEOL g554 OR CE g554.

CE g580 Earthquake Engineering 3 credits. Topics include: mechanism and characterization of earthquakes; seismic risk analysis; site and structural response; applications from points of view of engineer and geologist. PREREQ: GEOL 313 or CE 332, OR PERMISSION OF INSTRUCTOR.

CE 652 Advanced Topics in Civil Engineering 3 credits. Discussion of current research topics conducted by engineering faculty from ISU and elsewhere. Topics can be arranged with instructor and advisor. PREREQ: PERMISSION OF INSTRUCTOR.

CE 664 Dynamics of Structures 3 credits. Evaluation of response of structures subjected to dynamic forces including earthquake-induced forces and deformations. Applications include single- and multi-degree of freedom systems, and continuous systems. PREREQ: CE/ME g540 OR PERMISSION OF INSTRUCTOR.

CE 665 Finite Element Methods 3 credits. Introduction to finite element methods applied to linear one- and two-dimensional problems. Application of the concept to specific problems in various fields of engineering and applied sciences. Cross-listed as ME 665. PREREQ: ENGR 264, ENGR 350, AND MATH 360.

CE 667 Structures and Mechanics Laboratory 3 credits. Strain gauge installation and circuitry. Strain measurements and analysis of variety of structural and mechanical systems. Dynamic measurements of various structures. PREREQ: CE 531 OR PERMISSION OF INSTRUCTOR.

Computer Science Graduate Courses

C S g520 Computer Security and Cryptography 3 credits. Public key and private key cryptography, key distribution, cryptographic protocols, requisite mathematics and selected topics in the development of security and cryptography. PREREQ: CS 385.

C S g542 GUI Development 3 credits. Planning and construction of Graphical User Interfaces and essential software engineering concepts. Includes the use of a modern toolkit language. COREQ: CS 385.

C S g544 Image and Audio Processing 3 credits. Image/audio acquisition, quantization, spatial and spectral filters, sharpening, smoothing, restoration, compression, segmentation, Fourier and Wavelet transforms. PREREQ: CS 287, MATH 352, MATH 360.

C S g545 Data Compression 3 credits. A survey of modern techniques of data compression, both lossy and loss-less, and encryption. COREQ: CS 386.

C S g551 Theory and Implementation 3 credits. Data models, relational algebra, SQL, data storage, index structures, query compilation and execution, concurrency control. PREREQ: CS 263, CS 385. COREQ: CS 386.

C S g560 Comparative Programming Languages 3 credits. Design of historical and contemporary programming languages, concentrating on promoting understanding of structural organization, data structures and typing, name structures, and control structures. PREREQ: CS 385. COREQ: CS g576.

CS g570 Parallel Processing 3 credits. Topics in high performance computing: parallel architectures, SIMD, MIMD, SMP, NUMA models, message passing, cache coherency issues, MPI, PVM, parallel programming languages, the Beowulf cluster approach, applications. COREQ: CS 386.

CS g576 Microprocessors 3 credits. Introduction to microprocessor architecture. Programming principles using machine and assembly languages, addressing modes, memory mapping, number representation and processing. Cross-listed as EE g526. PREREQ: CS 374.

CS g577 Operating Systems 3 credits. Processes description and control, threads, concurrency, memory management scheduling, I/O and files, distributed systems, security, networking. PREREQ: CS 263. COREQ: CS g576.

CS g580 Theory of Computation 3 credits. Finite representations of languages, deterministic and nondeterministic finite automata, context free languages, regular languages, parsing, Turing Machines, Church's Thesis, uncomputability, computational complexity classes. COREQ: CS 386.

CS g581 Compilers and Lexical Analysis 3 credits. Covers lexical analysis, syntax analysis, top-down, bottom-up, and LR parsing, syntax directed translation, type checking, code generation and optimization, and writing a compiler. COREQ: CS 386.

CS g587 Topics in Computer Science 3 credits. Selected topics in Computer Science will be chosen depending on the instructor's interests. PREREQ: CS 386.

CS g591 Ethical and Societal Issues in Computer Science 3 credits. Investigates various ethical issues arising in the profession, ranging from research to commercial settings. The societal impacts of computing and its prevalence in all aspects of the modern world are investigated. Seminar format: students will read papers, make oral presentations, conduct class discussion, and submit written reports.

Electrical Engineering Graduate Courses

EE g513 Techniques of Computer-Aided Circuit Analysis and Design 3 credits. Automatic formulation of equations and fundamental programming techniques pertinent to computer-aided circuit analysis, design, modeling. May include sensitivity calculations, system analogies, optimization. PREREQ: CS 370, ENGR 340, 342.

EE g517 Probabilistic Signals and Systems 3 credits. Introductory probability theory. Density functions, moments, random variables. Normal, exponential distributions, Estimation of mean and variance. Correlation, spectral density. Random processes, response of linear systems to random inputs. PREREQ: EE 345.

EE g518 Communication Systems 3 credits. Basic principles of analysis and design of modern analog and digital communication systems, including transmission and reception. PREREQ: EE 329 AND EE 345.

EE g525 Mechatronics 3 credits. Basic kinematics, sensors, actuators, measurements, electronics, microprocessors, programmable logic controllers, feedback control, robotics and intelligent manufacturing. Cross-listed as ME g525. PREREQ: ENGR 340, ENGR 342, MATH 360.

EE g527 Embedded Systems Engineering 2 credits. Integration of algorithms, software and hardware to design real-time and embedded systems for signal processing and control. PREREQ: CS g575. COREQ: EE g527L.

EE g527L Embedded Systems Engineering Laboratory 1 credit. Lab activities include the complete process of design and implementation of embedded signal processing and control systems through the integration of algorithms, software, and hardware. COREQ: EE g527.

EE g529 Advanced Electronics 2 credits. Introduction to operational amplifiers and their applications, current mirrors, active loads, differential amplifiers, feedback and stability, filters, oscillators, Schmitt triggers, power amplifiers and voltage regulators. PREREQ: EE 329, 345. COREQ: EE g529L.

EE g529L Advanced Electronics Laboratory 1 credit. Laboratory course emphasizing transistor

biasing, amplifiers and other basic analog circuit designs. COREQ: EE g529.

EE g532 Introduction to VLSI Design 3 credits. Photolithography, CMOS fabrication, MOSFET operation, CMOS passive elements, design rules and layout, CAD tools for IC design, invertors, static logic and transmission gates, dynamic logic. PREREQ: EE 329.

EE g533 Mixed Signal Design 3 credits. Analog IC design. Passive components, parasitic elements, component matching, IC layout techniques, amplifiers, current sources, comparators, op amps, noise, switched capacitor circuits. Includes lab work using design tools. PREREQ: EE g532.

EE g572 Electrical Machines and Power 3 credits. Theory and application of electrical machinery and transformers. Power and energy relationships in power systems, transmission lines, network solutions and symmetrical components. Includes 1-credit laboratory component. PREREQ: ENGR 340, ENGR 342, MATH 360.

EE g572L Electrical Machines and Power Laboratory 1 credit. Laboratory course emphasizing an experimental study of the fundamental physical phenomena and characteristics of transformers, induction motors, synchronous and direct current machines. COREQ: EE g572.

EE g573 Automatic Control Systems 3 credits. Study of continuous-time and control systems using both frequency-domain and state-space techniques; topics include design methodology, performance specifications, analysis and design techniques. PREREQ: EE 345 OR ME g505.

EE g574 Advanced Circuit Theory 3 credits. Methods of analog electrical circuit analysis and synthesis. Topics include signal flow graphs, multi-port networks, simulation techniques, and topological methods for formulation of network equations. PREREQ: ENGR 340.

EE g575 Digital Signal Processing 3 credits. Design of recursive and non-recursive digital filters; frequency-domain analysis, fast Fourier transform techniques, spectral analysis; applications. Includes 1-credit laboratory component. PREREQ: EE 345.

EE g576 Semiconductor Processing and Fabrication 3 credits. Silicon semiconductor processing and basic integrated circuit fabrication. Physics, chemistry and technology in basic processing steps in production of integrated circuits. PREREQ:. PHYS 211-212 AND MATH 170 OR EQUIVALENT.

EE g578 Semiconductor Devices 3 credits. Operating principles of basic building blocks of modern silicon-based semiconductor devices to include p-n junctions, field effect transistors and bipolar junction transistors. PREREQ: PHYS 212 OR EQUIVALENT.

EE g579 Advanced Semiconductor Devices 3 credits. Review of semiconductor band theory. Opto-electronics, quantum mechanics, heterojunctions, power and microwave semiconductor devices. PREREQ: EE g578 OR EQUIVALENT.

EE g582 Principles of Power Electronics 3 credits. Introduction to steady state converter modeling and analysis. Principles of converter dynamics and control including controller design. PREREQ: EE 329. COREQ: EE g573.

EE g584 Signal Processing Laboratory 1 credit. Design finite and infinite response digital filters in digital signal processing system applications. COREQ: EE g575.

EE g592 Digital Control Systems 3 credits. Design of advanced control algorithms; topics include: observers and state estimation, linear quadratic regulator, frequency-domain techniques for robust control, and an introduction to multivariable and nonlinear control. PREREQ: ENGR g573.

Environmental Engineering Graduate Courses

ENVE g504 Environmental Risk Assessment 3 credits. Quantitative and qualitative approaches to characterizing and controlling contaminant pathways. Risk assessment requirements and implications in superfund projects for engineers working on remediation. PREREQ: BIOL 521 AND ENGR 501 IF REQUIRED BY HWM.

ENVE g508 Water and Waste Water Quality 3 credits. Principles of chemistry in applications to water and waste water treatment systems for water quality control and reuse. PREREQ: CHEM 111, CHEM L111, CHEM 112, CHEM L112.

ENVE g509 Water and Waste Water Lab 1 credit. Fundamental analytical procedures for measurement of water and wastewater quality. Introduction to materials and protocols associated with general environmental analytical techniques. COREQ: ENGR g508.

ENVE g510 Introduction to Environmental Engineering 3 credits. Introduction to physical, chemical, and biological principles of solid and hazardous waste management, water and waste water treatment, air pollution control, and national environmental regulation. PREREQ: ENVE g508 OR EQUIVALENT.

ENVE g530 Air Pollution and Solid Waste 3 credits. Sources, characteristics, regulations, and effects of air pollution and solid waste on environmental quality; analysis and design of control systems, including the recovery of resources from solid waste. PREREQ: PERMISSION OF INSTRUCTOR.

ENVE 610 Introduction to Radioactive Waste Management 3 credits. Principles and practices of radioactive waste storage, transportation and disposal. Evolution of government regulations and current solutions developed in response to the regulations. PREREQ: ENGR 501.

ENVE 611 Treatment Systems for Environmental Engineering 3 credits. Fundamental principles and processes for physical, chemical, and biological treatment of wastes including mixing, flocculation, sedimentation, stripping, aeration, sorption and leaching. Some experiments required. PREREQ: ENVE 510.

ENVE 612 Treatment of Hazardous Chemical Waste 3 credits. Alternative processes and operations for the treatment of hazardous chemicals. PREREQ: MATH 360, ENVE 607, AND COURSE IN UNIT OPERATIONS.

ENVE 614 Hazardous Waste Site Remediation 3 credits. Characterizing waste sites, application of physical, chemical, biological corrective actions, site restoration. Case studies illustrate corrective action and site restoration. PREREQ: ENGR 341, ENVE 607 AND COURSE IN FLUID FLOW THROUGH POROUS MEDIA.

ENVE 615 Water Quality Modeling and Control 3 credits. Fundamental principles for mathematical modeling and analysis of environmental contaminant's fate and transport in lakes, rivers, estuaries, and groundwater. PREREQ: ENVE 510.

ENVE 616 Biological Treatment of Wastewater 3 credits. Fundamental principles, design, and operation of aerobic and anaerobic biological waste treatment processes. PREREQ: ENVE 510.

ENVE 617 Environmental Systems Engineering and Design 3 credits. Application of physical, chemical, and biological operations and processes to the design of water, waste water, and industrial waste treatment systems. PREREQ: ENVE 510 OR PREVIOUS DESIGN EXPERIENCE.

ENVE 629 Physical and Chemical Treatment of Water and Waste Water 3 credits. Fundamental principles, design and operations of physical and chemical water and waste water treatment processes. Removal of hazardous materials emphasized. PREREQ: ENVE 510 and CHEM 535.

ENVE 630 Air Pollution and Control 3 credits. An introductory air pollution course. Regulations, atmospheric dispersion models, control of emissions and sources and human health effects are emphasized. PREREQ: ENVE 510.

Measurement and Control Engineering Graduate Courses

MCE 640 System Modeling, Identification and Simulation 3 credits. Model development, off-line and on-line identification methods for engineering systems, diagnostic tests and model validation and analog and digital simulation methods. PREREQ: EE g573.

MCE 642 Advanced Control Systems 3 credits. State space analysis and design to include stability, controllability, observability, realizations, state feedback and estimation. PREREQ: EE/ME g573 OR EQUIVALENT.

MCE 643 Advanced Measurement Methods 3 credits. Instrumentation systems used in detection and signal conditioning of thermal-hydraulic process variables, radiation including lasers, and electrical and mechanical properties of materials. PREREQ: ME g505 OR EQUIVALENT.

MCE 644 Measurements and Controls Laboratory 3 credits. Work with measuring systems for a variety of process variables. Investigation of

characteristics of various process control components and systems. Transient and stationary conditions will be included. PREREQ: MCE 642 AND MCE 643 OR EQUIVALENT.

MCE 645 Advanced Control Theory and Applications 3 credits. Topics selected from advanced control theory and applications, depending upon the interest of students and faculty. May be repeated for credit when topics vary. PREREQ: MCE 642 OR PERMISSION OF INSTRUCTOR.

MCE 646 Intelligent Control Systems 4 credits. Analysis and design of systems using intelligent techniques such as neural networks, fuzzy logic, genetic algorithms, and artificial intelligence. PREREQ: PERMISSION OF INSTRUCTOR.

MCE 647 Nonlinear Control Systems 3 credits. Phase plane analysis. Lyapunov stability. Describing functions. Singular perturbation and feedback linearization. PREREQ: MCE 642 OR PERMISSION OF INSTRUCTOR.

MCE 649 Robotics and Automation 3 credits. Robotic manipulator kinematics, dynamics, trajectory planning, sensors, programming and control. The application concepts of robotics in industry will be briefly introduced. PREREQ: MCE 642.

MCE 653 Optimal Control Systems 3 credits. Performance index. Calculus of variations, Pontryagin maximum principle. Linear quadratic regulator. Time and fuel optimal control. Linear quadratic Gaussian problem. Kalman Filter. H optimal control. Industrial applications. PREREQ: MCE 642 OR PERMISSION OF INSTRUCTOR.

MCE 654 Adaptive Control Systems 3 credits. Real-time parameter estimation. Deterministic, stochastic, and predictive self-tuning regulators. Model reference adaptive systems. Auto tuning. Stochastic adaptive control. Properties of adaptive systems. PREREQ: MCE 642 OR PERMISSION OF INSTRUCTOR.

MCE 656 Robust Control Systems 3 credits. Analyze and design basic robust controllers using methods for robustness investigation such as v-analysis and H 4 control algorithms. PREREQ: MCE 642 OR PERMISSION OF INSTRUCTOR.

Mechanical Engineering Graduate Courses

ME g505 Measurement Systems Design 3 credits. Introduction to instrumentation systems analysis and design, including: statistical analysis, system modeling, actuators, transducers, sensor systems, signal transmission, data acquisition, and signal conditioning. PREREQ: ENGR 340, ENGR 342 AND MATH 360.

ME g506 Measurement Systems Laboratory 1 credit. Principles of measurement, measurement standards and accuracy, detectors and transducers, digital data acquisition principles, signal conditioning systems and readout devices, statistical concepts in measurement, experimental investigation of engineering systems. COREQ: ME g505.

ME g516 Thermal Power Cycles 3 credits. Application of thermodynamics to design of systems for conversion of thermal energy to power by various power cycles. PREREQ: ENGR 264 AND ME 341.

ME g519 Energy Systems and Resources 3 credits. Fundamentals of conventional (fossil, nuclear fission), and alternative (solar, wind, geothermal) energy systems. Electrical energy supply, building HVAC, resources utilized by transportation sector. PREREQ: ENGR 307, MATH 360. COREQ: ENGR 340, 342.

ME g525 Mechatronics 3 credits. Basic kinematics, sensors, actuators, measurements, electronics, microprocessors, programmable logic controllers, feedback control, robotics and intelligent manufacturing. Cross-listed as EE g525. PREREQ: ENGR 340, ENGR 342, MATH 360.

ME g540 Vibration Analysis 3 credits. Free vibration and forced response of single and multiple degree of freedom systems, normal modes, random vibrations, discrete, lumped mass, and continuous systems. Vibration control techniques. Cross-listed as CE g540. PREREQ: MATH 360 PREREQ OR COREQ: ME 323.

ME g543 Thermal Fluids Laboratory 1 credit. Measurement of thermal and fluid properties, experiments on fluid flow and heat transfer systems. Cross-listed as NE g543. PREREQ: CE/ME/NE 341 AND ME/NE g576.

ME g551 Compressible Fluid Flow 3 credits. Fundamentals of compressible flow and gas dynamics, development of basic principles, practical applications. Techniques developed for isentropic friction, heat addition, isothermal flow, shock wave analysis, propagation, expansion waves, reflection waves. PREREQ: ENGR 309 AND ENGR 341.

ME g568 Behavior of Composite Materials 3 credits. Macro and micromechanical behavior of laminae and laminates; bending, buckling and vibration of laminated beams and plates. Cross-listed as CE g568. PREREQ: ENGR 350 AND MATH 230.

ME g576 Heat Transfer 3 credits. Principles and engineering applications of heat transfer. Analysis of conduction, convection and radiation heat transfer. Design of heat exchangers. Cross-listed as NE g576. PREREQ: CE/ME/NE 341.

ME 607 Advanced Thermodynamics 3 credits. Thermodynamic property relationships, gas mixtures, thermodynamic optimization, irreversible thermodynamics, constructual theory, applications towards solar power, power generation, and refrigeration systems. PREREQ: ME 516, MATH 360.

ME 640 Advanced Vibrations 3 credits. Vibrational theory of continuous, multiple-degree-of-freedom systems, and random vibrations. Use of advanced numeric techniques. PREREQ: CE/ME g540. COREQ: ENGR/MATH g521.

ME 643 Thermal Fluids and Vibrations Lab 3 credits. Advanced thermal/fluid and vibrational system analysis measurements of mechanical systems. PREREQ: ME g506, ME g543.

ME 665 Finite Element Methods 3 credits. Introduction to finite element methods applied to linear one- and two-dimensional problems. Application of the concept to specific problems in various fields of engineering and applied sciences. Cross-listed as CE 665. PREREQ: ENGR 264, ENGR 350, AND MATH 360.

ME 676 Conduction Heat Transfer 3 credits. Single and multiple dimension steady and unsteady conduction heat transfer. Non-constant thermal conductivity. Emphasis on problem formulation, analytical solutions, and numerical techniques. PREREQ: ME g576. CO-REQ: MATH 521.

Nuclear Engineering Graduate Courses

NE 521 Applied Methods in Nuclear Engineering 3 credits. First and second order ordinary differential equations (ODEs), generalization to systems of ODEs, Laplace transforms, series solutions to second order ODEs, special functions and Sturm-Liouville systems; partial differential equations by separation of variables. Examples will emphasize practical problems of interest to nuclear engineers. PHYS 602 may be substituted for this course. PREREQ: MATH 360.

NE g543 Thermal Fluids Laboratory 1 credit. Measurement of thermal and fluid properties, experiments on fluid flow and heat transfer systems. Cross-listed as ME g543. PREREQ: CE/ME/NE 341 AND ME/NE g576.

NE g545 Reactor Physics 3 credits. Neutron balance equations in reacting systems, diffusion and diffusion-perturbation theory, introductory reactor kinetics, the multi-group energy approach, neutron slowing down and thermalization, introductory concepts in reactor systems. PREREQ: NE 402 or NSEN 685, NE 521 OR EQUIVALENT.

NE g546 Nuclear Fuel Cycle Systems Analysis 3 credits. Uranium mining, milling, conversion; enrichment technology including cascade analysis; fuel fabrication, criticality safety in the nuclear fuel cycle, introduction to ORIGEN and Monte-Carlo methods and codes, reactor fuel management, waste management (LLW, HLW, TRU waste). PREREQ: NE 402 or NSEN 684 OR EQUIVALENT.

N E g548 Design, Control and Use of Radiation Systems 3 credits. Generation detection and measurement systems design for control

and use of neutrons and gamma rays in industrial and medical applications. Radiation protection, regulations, environmental and economic considerations. COREQ: ENGR g545.

N E g576 Heat Transfer 3 credits. Principles and engineering applications of heat transfer. Analysis of conduction, convection and radiation heat transfer. Design of heat exchangers. Cross-listed as ME g576. PREREQ: CE/ME/NE 341.

NE g587 Medical Applications in Engineering and Physics 3 credits. Applications of engineering and physics, principles, particularly nuclear science, to medicine. Covers radioisotopes, x-ray imaging, magnetic resonance and ultrasound imaging, radiation protection, codes and standards. PREREQ: MATH 360 AND PHYS 212.

Nuclear Science and Engineering Graduate Courses

NSEN 601 Nuclear Engineering Experiments 3 credits. Experimental verification of theoretical models will be stressed. Kinetic behavior, neutron spatial distribution, perturbation, and other characteristic equations will be investigated. PREREQ: NE g545 OR EQUIVALENT.

NSEN 603 Thermal Hydraulics 3 credits. Advanced studies of both fluid flow and heat transfer in nuclear reactor cores. Conservation equations, constitutive relations, formulation and solution approaches for complete equation set. PREREQ: CE/ME/NE 341, ME g576.

NSEN 604 Dynamic Behavior of Nuclear Systems 3 credits. Kinetic behavior of nuclear reactors including feedback effects of power transients, fuel burn up, coolant perturbations, etc. Mathematical models developed to predict both short and long term behavior. PREREQ: NE g445.

NSEN 605 Nuclear Reactor Design 3 credits. Detailed treatment of current, advanced nuclear power reactor designs. Emphasis on the inherent and engineered safety features and on advantages and disadvantages of each design. PREREQ: NE g545.

NSEN 608 Radiation Transport 3 credits. Advanced treatment of radiation transport and shielding concepts; interaction and attenuation of neutral particles, including photons. Use of deterministic and Monte-Carlo computer codes. PREREQ: NE 521

NSEN 609 Radiation Detection, Measurements, and Applications 3 credits. Advanced treatment of radiation detectors measurement techniques, data acquisition, and signal processing. Emphasis on applications in science, industry and medicine. PREREQ: NE g545 or NSEN 608.

NSEN 615 Introduction to Practical Nuclear Engineering 3 credits. Basic concepts of nuclear reactor physics. Present nuclear plant descriptions. Evaluation of fossil, nuclear plant environmental impacts, cycle and overall efficiencies and economics. PREREQ: PERMISSION OF INSTRUCTOR.

NSEN 616 Special Applications of Nuclear Energy 3 credits. Isotopic power systems for remote applications, nuclear propulsion for space vehicles, process heat and space heat reactors, maritime nuclear power plants, medical and industrial applications of nuclear radiation. PREREQ: PERMISSION OF INSTRUCTOR.

NSEN 617 Applications of Nuclear Energy 3 credits. Continued study of nuclear power plant design, operation, and safety analysis of present plants, proposed future concepts. Examination of biological effects of radiation and nuclear medicine, food irradiation and waste heat applications. PREREQ: NSEN 615.

NSEN 618 Radioactive Waste Management 3 credits. Overview of the issue of radioactive waste management; definition and classification of wastes according to source, activity and volume; treatment and disposal options for HLW, ILW, LLW, mill tailings, and TRUs; design and assessment of waste repositories and radionuclide migration. PREREQ: NE 402, NE g446

NSEN 619 Nuclear Waste Immobilization 3 credits. Contaminants and hazards, nuclear waste regulations, nuclear waste management, treatment and immobilization of short-lived and long-lived radionuclides, novel immobilization technologies, nuclear waste disposal, performance assessment. PREREQ: ENGR 350, NE g446

NSEN 620 Radiation Health Physics and Safety 3 credits. Advanced health physics methods applied to nuclear plants. Radiation safety regulations and ALARA concept. Application of shielding codes to achieve compliance. PREREQ: NE 402 AND PHYS 532 OR EQUIVALENT.

NSEN 625 Two-Phase Flow 3 credits. Fundamentals of two-phase flow. Traditional models. Derivation and examination of conservation equations. Investigation of two-phase flow regimes. PREREQ: NSEN 603.

NSEN 628 Reliability and Risk Analysis 3 credits. Statistical and probabilistic methods of evaluating process and equipment reliability. Use of FMEA, fault tree techniques and Markov methods. Risk and efficacy assessment. PREREQ: ENGR/NE g578 OR MATH g550.

NSEN 631-632 Advanced Reactor Physics 3 credits. Study of advanced theories used in the calculation of nuclear reactor parameters including such topics as the Boltzman transport equation with energy and space dependence, multi-group, multi-region diffusion for reflected systems, perturbation theory, etc. Special emphasis will be given to the application of digital computers in nuclear reactor design problems. PREREQ: NSEN 608.

NSEN 636 Boiling and Condensation 3 credits. Study of the thermophysics of vaporization and condensation, including heat transfer equipment applications. Includes interfacial phenomena, phase stability, homogeneous and heterogeneous nucleation, pool boiling, and external condensation. PREREQ: NSEN 625.

NSEN 646 Two-Phase Flow Measurements Laboratory 2 credits. Design, calibration, operation of two-phase density and mass flow measurement systems. Qualitative and quantitative measurements of flow regime characteristic parameters. Single- and two-component flows. Measurement of upstream disturbance effects. PREREQ: MCE 644.

NSEN 678 Probabilistic Risk Assessment 3 credits. Probabilistic methods applied to analysis and design. Setting probabilistic design objectives and calculating probabilistic performance emphasized. PREREQ: NSEN 605

NSEN 684-685 Nuclear Engineering Basics 3 credits. For BS physical science graduates with little or no nuclear background. Lecture, laboratory each semester. Nuclear science; reactor physics, kinetics and thermal hydraulics; nuclear fuel cycle. PREREQ: PERMISSION OF NE DEPARTMENT CHAIR

NSEN 686 Modeling, Experimentation, and Validation 3 credits. 2 week summer course. Provides early career nuclear engineers with advanced studies in integrated modeling, experimentation, and validation. The course emphasis rotates yearly among thermal-hydraulics, reactor physics, fuels and materials, and simulations. PREREQ: PERMISSION OF NE DEPARTMENT CHAIR

Engineering and Applied Science Doctoral Graduate Courses

EAS 850 Doctoral Dissertation Variable Credit. Research toward completion of the dissertation for Ph.D. in Engineering and Applied Science. Graded S/U.


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Gale Life Science Complex
College of Health Related Professions
Dept. of Allied Health Professions
Master Dental Education Program
Dept. of Nursing
Dept. of Speech Pathology & Audiology
College of Arts & Sciences
Dept. of Biological Sciences
Dept. of Psychology

Kasiska College of Health Professions

Stephen S. Feit, Ph.D., Interim Dean
Linda L. Rankin, Ph.D., Assistant Dean
David N. Sorensen, Ph.D., Assistant Dean

Kasiska College of Health Professions Mission Statement

The mission of the Kasiska College of Health Professions (KCHP) is multifaceted. The primary responsibility of the college is the enhancement of the quality of life of the residents of Idaho and the greater community through the education of students in the health professions. This is facilitated through excellence in research, community service, teaching and application of technology, as well as strong leadership on issues related to health professions education and the delivery of health care services.

Five Goal Categories have been identified in the KCHP Strategic Plan in order to fulfill the mission of the college: Access, Teaching; Scholarly Activity; Community Service; and Interprofessional Activity.

1. **ACCESS**: Providing the citizens of Idaho with a wide variety of educational choices within the health professions through addressing availability of programs and resources, student recruitment, marketing, and publicity.
2. **TEACHING**: Addressing faculty development, faculty recruitment and retention, and improvement of instructional capabilities.
3. **SCHOLARLY ACTIVITY**: Facilitating and improving faculty and student research and scholarly activity in the health professions.
4. **COMMUNITY SERVICE**: Facilitating the interaction of KCHP programs, faculty, staff, and students with the general public and the professional communities within Idaho and the country.
5. **INTERPROFESSIONAL ACTIVITY**: Encouraging interaction and collaboration among the college departments, professional disciplines, and faculty on projects relating to teaching, research, and clinical activities in the health professions.

Department of Communication Sciences and Disorders, and Education of the Deaf

Chair and Clinical Professor: Kangas
Professors: Loftin, Longhurst, Schow, Seikel, Sorensen
Associate Professors: Brockett, Flipsen, Johnson, Mercaldo
Assistant Professors: Blaiser, Burke, Miller,
Clinical Professor:
Clinical Associate Professors: Bishop, Guryan, Holst, Norton, Willer
Clinical Assistant Professors: McElhinney, Turner
Clinical Instructors: Bullock, Hays, Mitchell

Doctor of Audiology (Au.D.)

Accreditation

The Doctor of Audiology (Au.D.) is a new degree program that replaces the master program in audiology. The master program was an accredited program approved by the American Speech/Language and Hearing Association (ASHA) for over 30 years. ASHA and the Council on Academic Accreditation (CAA) are currently reviewing this new doctoral program for accreditation. See online catalog or departmental website (http://www.isu.edu/csed) for current accreditation status.

Admission Requirements

For admission to the Au.D. degree program in audiology, an applicant is expected to:

1. Have completed a bachelor's degree in communication sciences and disorders (or equivalent) from a college or university accredited in the United States, or its equivalent from a school in another country.
2. Have obtained a 3.0 GPA on a 4.00 scale for upper-division course work taken during the last two years of undergraduate work.
3. Have submitted at least two scores equal to or better than the 40th percentile on any of the three general sections of the Graduate Record Examination (GRE).
4. Provide three letters of recommendation from those who can speak to the applicant's academic qualifications to pursue graduate education.

International Students

Students whose native language is not English must achieve at least the 50th percentile on the Verbal section of the GRE, and a total score of 250 on the Test of English as a Foreign Language (TOEFL). Once admitted, non-native English-speaking students must also receive a passing score on a test of spoken English to participate in clinic.

Program Capacity

A total of 24 students are admitted to the program. The number of seats available for new admissions will vary. Classes begin in the Fall Semester of each year. Meeting entry-level requirements for admission does not guarantee a seat in the program.

Curriculum

The curriculum is four years in duration, and includes one year (fourth year) of full-time clinical practicum. There are eight regular (fall and spring) semesters and three summer semesters. For the third year, students will be required to relocate to the ISU Boise campus to continue their academic and clinical instruction in a robust audiology community. Students will assume the financial, housing, and logistical responsibilities of the relocation.

Required Courses for Doctor of Audiology (Au.D.)

Year One, Fall Semester (14 credits)

CSED g516	Clinical Processes in Audiology	1 cr
CSED 603	Clinical Practicum: Audiology	1 cr
CSED 603L	Clinical Practicum Laboratory	0 cr
CSED 611	Auditory Assessment and Speech Audiometry	4 cr
CSED 621	Audiologic Rehabilitation	3 cr
CSED 645	Auditory Anatomy and Physiology	2 cr
CSED 670	Auditory Pathologies	2 cr
CSED 673	Instrumentation and Calibration	1 cr

Year One, Spring Semester (14 credits)

CSED 603	Clinical Practicum: Audiology	2 cr
CSED 603L	Clinical Practicum Laboratory	0 cr
CSED 623	Pediatric Audiology	3 cr
CSED 631	Immittance/Special Assessment	2 cr
CSED 633	Introduction to Evoked Potential Audiometry and Balance Function Assessment	3 cr
CSED 633L	Introduction to Evoked Potential Audiometry and Balance Function Assessment Laboratory	1 cr
CSED 641	Introduction to Hearing Aids	2 cr
CSED 641L	Introduction to Hearing Aids Laboratory	1 cr

Year One, Summer Semester (5-8 credits)

CSED 603	Clinical Practicum: Audiology	1-4 cr
CSED 603L	Clinical Practicum Laboratory	0 cr
CSED 691	Topical Seminar	1 cr
CSED 652	Speech Development: Deaf Students	3 cr

Year Two, Fall Semester (13 credits)

CSED g556	Psychosocial Aspects of Deafness	3 cr
CSED 603	Clinical Practicum: Audiology	2 cr
CSED 603L	Clinical Practicum Laboratory	0 cr
CSED 643	Advanced Technology in Hearing Aids and Cochlear Implants	2 cr
CSED 643L	Advanced Technology in Hearing Aids and Cochlear Implants Laboratory	1 cr
CSED 675	Hearing Conservation in Noise	2 cr
	**Advanced Elective	3 cr

Year Two, Spring Semester (14 credits)

CSED g517	Interdisciplinary Evaluation Team	1 cr
CSED g560	Educational Audiology	3 cr
CSED 600	Principles of Research in Communication Disorders	3 cr
CSED 603	Clinical Practicum: Audiology	2 cr
CSED 603L	Clinical Practicum Laboratory	0 cr
CSED 647	Auditory Physiology of Speech and Non-Speech Signals	2 cr
CSED 740	Advanced Vestibular and Balance Function Assessment	3 cr

Year Two, Summer Semester (7 credits)

CSED 705	Off-Campus Clinical Practicum	4 cr
CSED 705L	Off-Campus Clinical Practicum Laboratory	1 cr
CSED 810	Clinical Project	2 cr

Year Three, Fall Semester (14 credits)

CSED 680	Counseling in Audiology	3 cr
CSED 705	Off-Campus Clinical Practicum	2 cr
CSED 705L	Off-Campus Clinical Practicum Laboratory	1 cr
CSED 720	Audiology Practice Management and Dispensing	3 cr
CSED 810	Clinical Project	2 cr
CSED 710	Advanced Audiologic Rehabilitation	3 cr

Year Three, Spring Semester (12 credits)

CSED 691	Topical Seminar	1 cr
CSED 705	Off-Campus Clinical Practicum	2 cr
CSED 705L	Off-Campus Clinical Practicum Laboratory	1 cr
CSED 730	Advanced Evoked Potential Audiometry and Early Identification	3 cr
CSED 810	Clinical Project	2 cr
	**Advanced Elective #2	3 cr

Year Three, Summer Semester (5 credits)

CSED 705	Off-Campus Clinical Practicum	4 cr
CSED 705L	Off-Campus Clinical Practicum Laboratory	1 cr

Year Four, Fall Semester (5 credits)

CSED 705	Off-Campus Clinical Practicum	4 cr
CSED 705L	Off-Campus Clinical Practicum Laboratory	1 cr

Year Four, Spring Semester (5 credits)

CSED 705	Off-Campus Clinical Practicum	4 cr
CSED 705L	Off-Campus Clinical Practicum Laboratory	1 cr

TOTAL CREDITS: 111-114 cr

Minor curriculum changes due to accreditation standard changes may occur without notice.

**Advanced Electives 6 cr. Advanced electives to be chosen from the approved Audiology Program list or by approval of the faculty advisor in consultation with the Audiology Division Head.

General Requirements

Students receiving the degree of Doctor of Audiology must have satisfactorily completed all courses in the curriculum and passed all clinical practicum assignments. In addition, in spring semester of the third year, the student must pass the written comprehensive examination, and an oral comprehensive examination that includes defense of the doctoral project. According to university regulations, no student may be granted a graduate degree who does not have a 3.0 grade point average for courses listed on the Program of Study upon completion of all academic work. The Department of Communication Sciences and Disorders, and Education of the Deaf will terminate the graduate program of any student who has received grades of C+ or lower in two or more departmental courses, or if the cumulative GPA falls below 2.7 in the first year of study, or 3.0 by the completion of graduate studies. If a student's graduate education is terminated for reasons of poor academic performance, the student may reapply for admission no sooner than one full semester following the semester of dismissal.

Additionally, graduate students deemed by the faculty not to have made satisfactory progress in the acquisition of clinical skills may be required to enroll for further credits in clinical practicum in addition to the minimum required of all students. Students may be dismissed for failure to make satisfactory progress in clinical practicum.

Master of Science in Speech-Language Pathology OR Master of Science in Deaf Education

Admission Requirements

For admission to the M.S. degree program in Speech-Language Pathology or Deaf Education, the applicant must:

1. Possess a 3.0 or higher GPA . The method of calculating an Admission GPA is based on the last 60± semester undergraduate credits (90± quarter credits) for course work taken during the last two years of undergraduate training.
2. Submit three letters of recommendation.
3. The student must apply to, and meet all criteria for, admission to Graduate School.

In the Deaf Education program, preference is given to students who are certified regular/special education teachers and who have intermediate sign language skills.

International Students

International students whose native language is not English must achieve at least the 50th percentile on the Verbal section of the GRE. Applicants whose first language is not English need to meet the following TOEFL requirements for Classified admission: (1) Internet-based test (iBT): a total score of 80 with a score of at least 20 on each Section (graduate assistants who teach courses must score 23 or above on the Speaking Section) on the iBT; or (2) Computer-based test: a total score of 213 with a score of at least 21 on Section 1 (Listening Comprehension) on the computer test; or (3) Paper-based test: a total score of 550 with a score of at least 55 on Section l (Listening Comprehension) on the paper test or a score of 84 on the MTELP, or a score of 6 on the IELTS. Once admitted, non-native English-speaking students must also receive a passing score on a test of spoken English to participate in clinic.

Required Courses for Speech-Language Pathology Emphasis

CSED 600	Principles of Research in Communication Disorders	3 cr
	Clinical Practicum (combined credits of CSED 602 and CSED 604)	11 cr
CSED 602	Clinical Practicum: Speech-Language Pathology	
CSED 604	Off-Campus Clinical Practicum	
CSED 606	Externship in Speech-Language Pathology	8 cr
CSED 614	School-age Language Development and Disorders	3 cr
CSED 616	Augmentative and Alternative Communication	3 cr
CSED 620	Early Language Development and Disorders	3 cr
CSED 622	Speech Sound Disorders	3 cr
CSED 624	Disorders of Swallowing	2 cr
CSED 625	Advanced Issues in Language Disorders	3 cr
CSED 629	Neuropathologies I	3 cr
CSED 630	Fluency Disorders in Children and Adults	3 cr
CSED 632	Craniofacial Anomalies	2 cr
CSED 634	Voice Disorders	2 cr
CSED 639	Neuropathologies II	3 cr
CSED 648	Professional Issues	3 cr
CSED 650	Thesis (optional)	6 cr
Electives	Non-thesis option	3 cr
		Total 58-61 cr

Non-Thesis students are required to complete three credits from the following courses:

CSED 638	School Practice in Speech-Language Pathology	3 cr
CSED 640	Medical Practice in Speech-Language Pathology	3 cr
CSED 651	Master's Paper	3 cr
CSED 691	Topical Seminar	3 cr

Note that an adequate undergraduate background is assumed for entry to the graduate curriculum in speech-language pathology. When meeting with an advisor, if deficiencies are found, such as lack of a basic course, the student may be required to make up the course. An advisor must be consulted during registration week. Note also that an undergraduate or graduate course in statistics or experimental design is required if not previously taken in an undergraduate program, as is CSED 517, Interdisciplinary Evaluation Team.

Students in the Graduate Program in Speech-Language Pathology must have the following ISU courses or their equivalents from another institution, or provide evidence from course syllabi that the basic information was covered in their undergraduate program. Certain of these courses may be taken during the graduate program.

CSED 300	Speech Science	4 cr
CSED 315	Clinical Processes: Management	3 cr
CSED 321	Clinical Phonology	4 cr
CSED 325	Phonological Disorders	3 cr
CSED 330	Language Development	3 cr
CSED 335	Language Disorders	3 cr
CSED 341	Audiology I: Hearing Sciences and Audiometry	3 cr
CSED 405	Neurological Bases of Communication Disorders	3 cr
CSED 417	Interdisciplinary Evaluation Team	1 cr
CSED 345	Aural Rehabilitation	
	OR	
CSED 460	Educational Audiology	3 cr
CSED 420	Clinical Processes: Assessment	3 cr
MATH 253	Introduction to Statistics	3 cr

Required Courses for Deaf Education Emphasis

CSED g556	Psychosocial Aspects of Deafness	3 cr
CSED g560	Audiology III: Educational Audiology	3 cr
CSED 601	Developmental Psycho-linguistics and Reading	3 cr
CSED 607	Directed Observation in Deaf Education	2 cr
CSED 627	Reading/Writing Curriculum in Deaf Education	3 cr
CSED 628	Curriculum Organization in Deaf Education	3 cr
CSED 637	Philosophical/Theoretical Foundations of Deaf Education	2 cr
CSED 651	Master's Paper	3 cr
CSED 652	Speech Development: Deaf Students	3 cr
CSED 658	Teaching Language to the Deaf	3 cr
CSED 659	Teaching Academic Subjects to the Deaf	3 cr
CSED 691	Topical Seminar: Audiometry/ Tympanometry	2 cr
		TOTAL 33 cr

Applicants who do not have a teaching internship with Deaf and hard of hearing students, or who are not currently working in a self-contained classroom with Deaf and hard of hearing students may be required to take 4-8 credits of CSED 609. Applicants who have not taken intermediate sign language course work, or do not have a professional sign language interpreter certificate, or who have not passed a recognized intermediate level sign language quality assurance examination may have to take 2-6 credits of CSED 608.

Two options are available. SummersPlus students complete the coursework across three summers on-campus, and on-line classes in regular semesters. Traditional students attend on-campus two summers, and have two semesters of student teaching and on-line coursework.

General Requirements

Students must pass written and oral comprehensive examinations. For the Master of Science in Speech-Language Pathology or in Deaf Education, the written exam may be fulfilled by either a portfolio or a thesis.

According to the university regulations, no student may be granted a graduate degree who does not have a 3.0 grade point average for courses listed on the program of study upon completion of all academic work. In addition, the Department of Communication Sciences & Disorders, and Education of the Deaf will terminate the graduate program of any student who has received grades of C+, or lower, in two or more departmental courses, or if the cumulative GPA falls below 2.7 in the first year of study and 3.0 by the completion of graduate studies. If a student's graduate education is terminated for reasons of poor academic performance, he/she may reapply for admission no sooner than one full semester following the semester of dismissal.

Students with inadequate backgrounds in speech pathology and audiology may be required to take up to one year of undergraduate course work in addition to the above courses. In addition to the required graduate courses, students may have to take other courses in the department and related areas such as psychology and statistics. In addition to taking clinical practice (CSED 602, 603, or 604) in the department, all graduate students must complete a minimum of an eight-week, full-time externship in some professional program or agency. Exceptions may be made depending on the student's background. Graduate students deemed by the faculty not to have made satisfactory progress in the acquisition of clinical skills may be required to enroll for further credits in clinical practicum in addition to the minimum required of all students. Students may be dismissed for failure to make satisfactory progress in clinical practicum.

Speech-Language Pathology, Audiology, and Deaf Education Graduate Courses

CSED g500 Organic Speech Disorders 4 credits. Comprehensive review of organic speech disorders. Focus on Neurological disorders, voice, cleft palate and stuttering. Emphasis will be given to assessment and management of these disorders. PREREQ: CSED 300 OR PERMISSION OF INSTRUCTOR.

CSED g505 Neurological Bases of Communication Disorders 3 credits. Provides fundamental knowledge of neuroanatomy and physiology as related to speech, language and hearing disorders. Introduction to communication disorders related to neurological damage (e.g., dysarthria, apraxia, aphasia). PREREQ: CSED 300 OR PERMISSION OF INSTRUCTOR

CSED g517 Interdisciplinary Evaluation Team 1 credit. Introduction to the principles and techniques associated with interdisciplinary evaluation. Disciplines emphasized: Audiology, Nursing, Physical Therapy, Psychology, Social Work, Special Educa-

tion, Speech-Language Pathology. Cross-listed as PSYC g517, SOWK, g517, NURS g517.

CSED g520 Clinical Processes: Assessment 3 credits. Diagnostic principles, procedures, tests and clinical examination in the evaluation of speech, language and hearing disorders. Covers norms, reliability and validity. PREREQ: PSYCH 445, CSED 315, AND STATISTICS, AND/OR APPROVAL OF INSTRUCTOR.

CSED g525 Clinical Processes: Methods and Applications 3 credits. Application of assessment and treatment components of speech and language disorders through classroom observation and indirect/direct clinical experiences. PREREQ: CSED 315, CSED 325, CSED 335, CSED g520, PERMISSION OF CLINICAL DIRECTOR.

CSED g540 Special Topics Workshop 1-3 credits. Presentation of professionally related topics in workshop format. Meets for a minimum of 16 contact hours per credit with appropriate outside assignments, readings, or papers. May be repeated for up to 6 credits. Graded S/U.

CSED g556 Psychosocial Aspects of Deafness 3 credits. Psychological, educational and social influences of the hearing community on deaf persons and the structure of the deaf community as a socio-cultural entity. PREREQ: CSED 351 WITH A "B" OR BETTER.

CSED g560 Educational Audiology 3 credits. Overview of school-based audiology services including working within the public school system and with related professionals, legal issues, and options for providing comprehensive services to children with hearing loss and their families.

CSED g582 Independent Study 1-4 credits. Study of problems selected by students and faculty. May be repeated up to 8 credits.

CSED g591 Seminar 1-4 credits. Reading, preparation, and discussion of reports and projects in all areas of speech and hearing science, speech pathology and audiology. May be repeated up to 12 credits.

CSED 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. May be graded S/U.

CSED 600 Principles of Research in Communication Disorders 3 credits. Issues of validity, credibility, reliability and confirm-ability. Methodology including quantitative and qualitative approaches. Evaluation of research and use of evidence-based practice. Use of informational resources to develop a research proposal. PREREQ: STATISTICS OR PERMISSION OF INSTRUCTOR.

CSED 601 Developmental Psycholinguis-tics and Reading 3 credits. Oral language development in young children and its relationship to early reading. Classroom language problems of older elementary and secondary students and language intervention to improve reading and writing discussed.

CSED 602 Clinical Practicum: Speech-Language 1 credit. Students, under supervision, gain experience in the diagnosing, staffing, programming, and counseling of cases with speech and language disorders. May be repeated up to 16 credits. Approval of Clinic Director required.

CSED 603 Clinical Practicum: Audiology 1-4 credits. Students gain experience in diagnosing, programming, and counseling cases with hearing disorders, and implementing rehabilitation programs for persons with hearing losses. May be repeated up to 13 credits. PREREQ: APPROVAL OF ADVISOR AND AUDIOLOGY CLINIC COORDINATOR. COREQ: CSED 603L.

CSED 603L Clinical Practicum Laboratory 0 credits. Weekly staffing, grand rounds discussion, and professional presentations of new trends in audiology. COREQ: CSED 603.

CSED 604 Off-Campus Practicum 1-4 credits. Designed to provide clinical experience under supervision of speech-language pathologist within placement setting. Placements include private clinics, hospitals, residential care facilities, developmental centers, and schools. PREREQ: CLINIC DIRECTOR APPROVAL. Graded S/U.

CSED 605 Externship in Audiology 4-8 credits. Designed to give Audiology students full-time practical experience in a professional setting, i.e., schools, hospitals, clinics, and private practices. PREREQ: COMPLETION OF ACADEMIC PROGRAM. Graded S/U.

CSED 606 Externship in Speech-Language Pathology 4-9 credits. Designed to give Speech-Language Pathology students full-time practical experience in a professional setting, i.e., schools, hospitals, clinics, and private practices. PREREQ: COMPLETION OF ACADEMIC PROGRAM. Graded S/U.

CSED 607 Directed Observation in Education of the Deaf 1 credit. Directed observations at multiple levels and reporting of casual interactions and diagnostic/intervention approaches by instructor with Deaf or hard of hearing individuals (minimal 150 clock hours). May be repeated up to 3 credits. PREREQ: CSED 601 AND/OR PERMISSION OF INSTRUCTOR.

CSED 608 Communication Practicum 2 credits. Supervised experiences applying research and theory to language intervention practices for Deaf or hard of hearing individuals. May be repeated up to 6 credits. PREREQ: CSED 601, CSED 607, OR PERMISSION OF INSTRUCTOR.

CSED 609 Teaching Internship in Deaf Education 4-8 credits. Directed classroom and clinical teaching experience with Deaf or hard of hearing students under supervision. Minimum 250 clock hours at the level specialization. PREREQ: APPROVED APPLICATION. Graded S/U.

CSED 610 Teaching Internship in Interpreter Training 1-8 credits. Supervised directed classroom teaching experience with college/university students in interpreter training program. Minimum 250 clock hours. May be repeated for up to 8 credits. PREREQ: APPROVED APPLICATION. Graded S/U.

CSED 611 Auditory Assessment and Speech Audiometry 4 credits. Thorough study in the historical, theoretical, and clinical aspects of fundamental audiological procedures such as pure-tone air- and bone-conduction testing, speech audiometry, and masking.

CSED 614 School-Age Language Development and Disorders 3 credits. Advanced study of language development and disorders in school-age children and youth. Methods of assessing later language disorders in educational settings. PREREQ: CSED 330, CSED 335, CSED 620.

CSED 616 Augmentative and Alternative Communication 3 credits. Functional approaches to enhancing communication for people with severe disabilities. Includes introduction to electronic communication devices, low technology strategies, empowering clients, and inclusive practices. PREREQ: CSED 629, CSED 639 OR EQUIVALENT.

CSED 620 Early Language Development and Disorders 3 credits. Study of language development and disorders in children (0-5 years of age). Includes theories of development and disorders, assessment and intervention of child and environment. PREREQ: CSED 330, CSED 335, OR EQUIVALENT.

CSED 621 Audiologic Rehabilitation 3 credits. Study of current audiologic rehabilitation models, auditory processing disorders, and ASHA guidelines.

CSED 622 Speech Sound Disorders 3 credits. Characteristics of children with speech sound disorders. Current approaches to assessment and theoretically-based treatment of speech sound errors, including multicultural applications. PREREQ: CSED 321, CSED 325, OR PERMISSION OF INSTRUCTOR.

CSED 623 Pediatric Audiology 3 credits. Advanced study of hearing disorders and hearing test procedures in children. Topics include development of the auditory mechanism, auditory pathologies, developmental milestones, auditory testing, differential diagnosis, and management.

CSED 624 Disorders of Swallowing 3 credits. Provides assessment and treatment of disorders associated with all stages of swallowing in adults and children. Includes oromyofunctional, oral preparatory, oral, pahryngeal, and esophageal swallowing disorders. PREREQ: CSED 435, CSED 405, OR PERMISSION OF INSTRUCTOR.

CSED 625 Advanced Issues in Language Disorders 3 credits. Critical issues in childhood language disorders including linguistic and cultural diversity, classroom-based strategies, and children with mental retardation, autism, learning disability and deafness. PREREQ: CSED 614 OR EQUIVALENT.

CSED 627 Reading/Writing Curriculum in Deaf Education 3 credits. Theory, research and practices for teaching and assessing written

language for Deaf and hard of hearing students. Applications of principles of language acquisition and development to reading and writing. PREREQ: PERMISSION OF INSTRUCTOR.

CSED 628 Curriculum Organization in Deaf Education 3 credits. Organizing, adapting and implementing curriculum across all areas to meet the special needs of Deaf or hard of hearing students. Includes assessment, behavior management, instructional technology, and individualized planning. PREREQ: PERMISSION OF INSTRUCTOR.

CSED 629 Neuropathologies I 3 credits. Examines etiologies, characteristics, assessment and treatment of dysarthria, apraxia, and dementia. PREREQ: CSED 405 OR PERMISSION OF INSTRUCTOR.

CSED 630 Fluency Disorders in Children and Adults 3 credits. Advanced study of assessment and treatment for fluency disorders in adults and children. Includes theory, developmental issues, cluttering, and specific treatment for adults and children. PREREQ: CSED 400 OR PERMISSION OF INSTRUCTOR.

CSED 631 Immittance/Special Assessment 2 credits. Study of immittance and other special audiological tests used in site of lesion (differential) diagnostic workshops. Background, rationale, administration, and interpretations of immittance and other special tests will be considered along with the concept of Clinical Decision Analysis (CDA).

CSED 632 Craniofacial Anomalies 2 credits. Consideration of the speech-language pathologist's role in the habilitation of patients with craniofacial anomalies. Clefts of the lip and palate are discussed. Team approaches to assessment and management are presented.

CSED 633 Introduction to Evoked Potential Audiometry and Balance Function Assessment 3 credits. Introduction to the study of evoked potential audiometry, balance function testing, and otoacoustic emissions. Emphasis will be on the physiologic processes and instrumentation. COREQ: CSED 633L.

CSED 633L Introduction to Evoked Potential Audiometry and Balance Function Assessment Laboratory 1 credit. An introductory hands-on study and clinical practice of ABR, ENG/VNG, and OAE tests. Emphasis on clinical protocol, interpretation of test findings, and methods of reporting interpretations to referring sources. COREQ: CSED 633.

CSED 634 Voice Disorders 2 credits. Study of the anatomical, physiological, and behavioral aspects of voice production. Consideration of voice disorders by the speech-language pathologist. Principles of assessment and treatment will be discussed.

CSED 635 Speech Audiometry 1 credit. Review of basic and advanced audiometric tests which utilize speech as an approach to hearing assessment. Course treatment includes historic development of speech tests and description of psychophysical principles which underlie speech audiometry.

CSED 637 Philosophical/Theoretical Foundations of Deaf Education 2 credits. A comprehensive study of the philosophies and theories that influence current practice and research in the education of Deaf or hard of hearing students. PREREQ: PERMISSION OF INSTRUCTOR.

CSED 638 School Practice in Speech-Language Pathology 3 credits. Advanced preparation for practice in school settings. In-depth study of caseload management, Interdisciplinary Education program requirements, legal mandates, collaborative strategies, and inclusive practices. PREREQ: CSED 614 OR EQUIVALENT.

CSED 639 Neuropathologies II 3 credits. Examines etiologies, characteristics, assessment, and treatment of aphasia, traumatic brain injury, and right hemisphere disorder. PREREQ: CSED 405 AND 629 OR PERMISSION OF INSTRUCTOR.

CSED 640 Medical Practice in Speech-Language Pathology 3 credits. Examines methods and practices specific to medical settings, including billing procedures, record-keeping, referral procedures, ethics, treatment models related to settings. PREREQ: CSED 639 OR EQUIVALENT.

CSED 641 Introduction to Hearing Aids 2 credit. Study of hearing aid electronics and styles, principles of amplification, selection and fitting, ANSI standards, signal processing, orientation, and outcome measures. COREQ: CSED 641L.

CSED 641L Introduction to Hearing Aids Laboratory 1 credit. Study and practice of clinical skills required for fitting hearing aids. Emphasis on earmold impressions, electroacoustic measurements, selection of hearing aids, and counseling. COREQ: CSED 641.

CSED 643 Advanced Technology in Hearing Aids and Cochlear Implants 2 credits. Study of advanced amplification technology including acoustic hearing aids and cochlear implants. Emphasis on digital signal processing, special fitting strategies, and programmable hearing aid software management. PREREQ: CSED 641. COREQ: CSED 643L.

CSED 643L Advanced Technology in Hearing Aids and Cochlear Implants Laboratory 1 credit. Clinical application and development of skills in advanced amplification technology including acoustic hearing aids and cochlear implants. Emphasis on digital signal processing, special fitting strategies, and programmable hearing aid software management. PREREQ: CSED 641L. COREQ: CSED 643.

CSED 645 Auditory Anatomy and Physiology 2 credits. Comprehensive treatment of the anatomy, physiology, and neuroanatomy of the auditory system from the outer ear to the auditory cortex.

CSED 647 Auditory Physiology of Speech and Non-Speech Signals 2 credits. Continuation of advanced study of the auditory system, including central pathways, auditory perception of speech and non-speech signals, and psychoacoustics, with focus on pitch and loudness phenomenon, masking, and binaural effect. PREREQ: CSED 645.

CSED 648 Professional Issues 3 credits. Advanced preparation for professional practice in speech-language pathology. Includes study of policies and practices in employment settings, service delivery models, ethics, counseling, supervision. PREREQ: TWO SEMESTERS OF CSED 602.

CSED 650 Thesis 1-6 credits. Research project under supervision of academic faculty member. PREREQ: ABILITY TO DEAL WITH TECHNICAL LITERATURE, PROVEN WRITING ABILITY. APPROVAL OF ADVISOR AND INSTRUCTOR. Graded S/U.

CSED 651 Master's Paper 1-3 credits. Major paper or project synthesizing aspects of a specialized area of speech-language pathology, audiology, or education of the deaf. A large component of the paper must reflect the student's own original thinking. Graded S/U.

CSED 652 Speech Development: Deaf Students 3 credits. Speech and hearing development in children; developmental speech instructional strategies for teachers serving deaf and hard of hearing students with an emphasis on children with cochlear implants. PREREQ: CSED 601 OR PERMISSION OF INSTRUCTOR.

CSED 658 Teaching Language to the Deaf 3 credits. Students gain theoretical and practical knowledge in the evaluation and habilitation of language/communication problems in Deaf and hard of hearing children and adolescents. PREREQ: CSED 601 OR PERMISSION OF INSTRUCTOR.

CSED 659 Teaching Academic Subjects to the Deaf 3 credits. Students gain theoretical and practical knowledge of how to teach academic subjects to children and Deaf and hard of hearing adolescents. PREREQ: PERMISSION OF INSTRUCTOR.

CSED 670 Auditory Pathologies 2 credits. Study and discussion of a wide range of auditory pathologies. Emphasis will be placed on the relationship between the pathology and the corresponding audiometric findings.

CSED 673 Instrumentation and Calibration 1 credit. Basic electronics, sound, acoustics, instrumentation, and the calibration of a wide variety of audiometric equipment.

CSED 675 Hearing Conservation in Noise 2 credits. Hearing conservation programs from historical and current-model perspectives. Additionally, OSHA and other applicable regulations along with the effects of noise on human hearing will be discussed.

CSED 680 Counseling in Audiology 3 credits. Examination of counseling theory and application to audiology.

CSED 691 Topical Seminar 1-4 credits. Reading and discussions involving subjects of concern. May be repeated up to 12 credits.

CSED 699 Advanced Graduate Study 1-6 credits. Structured advanced study of specific topic or area.

CSED 705 Off-Campus Clinical Practicum 1-4 credits. Designed to give Audiology students full-time practical experience in a professional setting, e.g., schools, hospitals, clinics, and private practices. May be repeated. COREQ: CSED 705L. Graded S/U.

CSED 705L Off-Campus Clinical Practicum Laboratory 1 credit. Grand rounds seminar conducted online with other students in clinical experience settings. May be repeated. PREREQ: CSED 603. COREQ: CSED 705. Graded S/U.

CSED 710 Advanced Audiologic Rehabilitation 3 credits. Advanced topics include rehabilitation issues in cochlear implants, early intervention, auditory processing disorders, and tinnitus. Methods and a review of various perspectives will be given. Audiologic rehabilitation outcome measures and efficacy will also be considered. PREREQ: CSED 621.

CSED 720 Audiology Practice Management and Dispensing 3 credits. Practice management, particularly hearing aid dispensing, including legal issues, ethics, best practice, marketing, and business management theory. PREREQ: CSED 641, 643.

CSED 730 Advanced Evoked Potential Audiometry and Early Identification 3 credits. Comprehensive discussion of advanced evoked potentials including test protocols, measurement, and interpretation. Topics in early identification of individuals with hearing loss will also be covered. PREREQ: CSED 633.

CSED 740 Advanced Vestibular and Balance Function Assessment 3 credits. Advanced vestibular and balance function assessment including underlying causes of balance disorders, rotary chair, computerized posturography, VEMP, advances in VNG/ENG technology, and collaborative approaches to vestibular rehabilitation. PREREQ: CSED 633.

CSED 810 Clinical Project 1-6 credits. Clinically-based scholarly project completed under the supervision of the audiology faculty. May be repeated for a total of 6 credits. Graded S/U.

Department of Counseling

Chair and Professor: Feit
Professors: Allen, Kleist
Associate Professors: Crews, Hill, Paulson
Assistant Professors: Doughty, Harrawood, Vereen
Clinical Assistant Professor: Singarajah
Adjunct Associate Professor: Schmidt
Adjunct Assistant Professor: Curtis, Johnsen, Watts
Adjunct Instructor: Bolinger
Emeritus Faculty: Edgar, Lloyd

Department Mission Statement

The principle mission of the Department of Counseling is to prepare quality counselors for various settings in Idaho and the nation. More specifically, we seek to prepare quality School Counselors for public schools in K-12 settings, Mental Health Counselors and Marital, Couple, and Family Counselors for community agencies and other mental health settings, and Student Affairs Counselors for working in college settings such as advising, residence halls, and career centers.

We prepare doctoral-level counselor educators and supervisors to work primarily in institutions of higher learning as faculty members.

We believe that it is also our mission to instill a strong sense of professional identity, help students gain an appreciation for the rich knowledge base in counselor education, develop expertise in the skills of counseling, aid students to become certified and/or licensed, and aid graduates in their initial job placement.

The Department of Counseling also has a mission within the Kasiska College of Health Professions (KCHP), which is to represent the mental health perspective within KCHP and to consult with KCHP faculty and departments in encouraging a holistic perspective toward health care services.

Counselor Education

Graduate-level preparation for (1) counselors who seek employment in schools, universities, community mental health, and various other settings, and (2) college student affairs professionals.

Pre-Counseling and Pre-Student Affairs

Preparation should consist of a broad undergraduate course of study, including some work in psychology (learning and personality theory), sociology, and the communication skills. For those seeking positions in public elementary and secondary schools, state certification requirements should be considered.

Degree Programs

Degree programs offered by the department include Doctor of Philosophy, Educational Specialist, and Master of Counseling. Majors are available in Counselor Education and Counseling (Ph.D.); Counseling (Ed.S.); Marital, Couple, and Family Counseling (M.Coun); Mental Health Counseling (M.Coun.); School Counseling (M.Coun.); and Student Affairs Counseling (M.Coun.).

Accreditation

The program for preparation of school counselors is accredited by the State of Idaho (2008).

The Master of Counseling and Doctor of Philosophy counselor education programs are approved by the Council for Accreditation of Counseling and Related Educational Programs through June 30, 2017.

Progression in Clinical Track Classes - Master's

Students who obtain lower than a 3.0 in any clinical track class OR withdraw from any clinical track class (i.e., COUN 621, COUN 696, COUN 697, COUN 699) CANNOT continue taking Counseling classes the following semesters without petitioning and obtaining the approval of the Department of Counseling graduate faculty.

Departmental Dismissal Policies

Master's Degree Retention and Dismissal Policy

Department of Counseling faculty are confident that each student admitted has the potential to be successful in graduate study. To assure success, the student's major advisor plays an important role in giving feedback to the student.

A faculty member may consult with other Department of Counseling faculty regarding the apparent impediments to progress of an individual student. If other faculty have made similar observations, the major advisor, or other faculty member, will initiate a meeting with the student to discuss the perceived difficulty. Remedies and expected behavior changes will be discussed and outlined in verbal and/or written form.

If, after feedback is given, a student's impediments to progress are not remedied, the faculty may recommend dismissal from the program. Dismissal of a master's student will be subject to the following:

1. Dismissal criteria established by the Graduate School.
2. Dismissal from the program occurs if any one of the following conditions exist. Students earn:
   a) three final course grades lower than 2.7,
   b) OR six credits below 2.7,
   c) OR below a 3.0 GPA.
3. All degree-seeking students in the Department of Counseling will be evaluated near the end of the first semester by the Department of Counseling graduate faculty members. Based on this evaluation, students not making satisfactory progress toward the completion of a degree may be: (1) removed from graduate study, (2) provided with an alternate option for graduate study, or (3) placed on departmental probationary status.

   This evaluation will include progress on all course work, anticipated GPA, non-academic conditions (outlined in 4. and 5. following) and any other concerns. Students will be notified of any of these actions by written and/or oral communication with the major advisor or the Department Chair.
4. Academic dishonesty includes, but is not limited to, cheating and plagiarism. Academic dishonesty at the graduate level is considered a serious offense and may result in dismissal from a graduate program. For the complete statement on academic dishonesty, please refer to the Graduate School "Academic Dishonesty" policy in this *Catalog*. More information on academic dishonesty is also available in the *ISU Student Handbook* (http://www.isu.edu/references/st.handbook) (Student Conduct).
5. An ethnical violation is viewed by the faculty of the Department of Counseling as a serious offense and may result in dismissal from the program. The Department uses the latest edition of the *ACA Code of Ethics*. It is the student's responsibility to be knowledgeable of these standards. Refer to the current "Master of Counseling Graduate Program Handbook" for more information.
6. Admission into the Department of Counseling does not guarantee graduation. Success in academic coursework is only one component of becoming a successful counseling student. The following nonacademic conditions may result in dismissal if they are observed to impair the student's ability to work with others in class, practicum, or internship settings: (1) personal concerns or psychopathology, (2) interpersonal relationship issues, (3) personal attitudes or value systems that conflict with effective counseling relationships, and (4) unethical behavior.

Doctoral Degree Retention and Dismissal Policy

Department of Counseling faculty are confident that each student admitted has the potential to be successful in graduate study. To assure success, the student's major advisor plays an important role in giving feedback to the student.

A faculty member may consult with other Department of Counseling faculty regarding apparent impediments to progress of an individual student. If others have made similar observations, the major advisor, or other faculty member, will initiate a meeting with the student to discuss the perceived difficulty. Remedies and expected behavior changes will be discussed and outlined in verbal and/or written form.

If, after feedback is given, a student's impediments to progress are not remedied, the faculty may recommend dismissal from the program. Dismissal of a doctoral student will be subject to the following:

1. Dismissal criteria established by the Graduate School.
2. Dismissal from the program occurs if any one of the following conditions exist. Students earn:
   a. three final course grades lower than 2.7,
   b. OR six credits below 2.7,
   c. OR below a 3.0 GPA,
3. All degree-seeking students in the Department of Counseling will be evaluated near the end of the first semester by the Department of Counseling graduate faculty members. Based on this evaluation, students not making satisfactory progress toward the completion of a degree may be: (1) removed from graduate study, (2) provided with an alternate option for graduate study, or (3) placed on departmental probationary status.

   This evaluation will include progress on all course work, anticipated GPA, non-academic conditions (outlined in 6. below) and any other concerns. Students will be notified of any of these actions by written and/or oral communication with the major advisor or the Department Chair.
4. Academic dishonesty includes, but is not limited to, cheating and plagiarism. Academic dishonesty at the graduate level is considered a serious offense and may result in dismissal from a graduate program. For the complete statement on academic dishonesty, please refer to the Graduate School "Academic Dishonesty" policy in this *Catalog*. More information on academic dishonesty is also available in the *ISU Student Handbook* (http://www.isu.edu/references/st.handbook) (Student Conduct).
5. An ethnical violation is viewed by the faculty of the Department of Counseling as a serious offense and may result in dismissal from the program. The Department uses the latest edition of the *ACA Code of Ethics*. It is the student's responsibility to be knowledgeable of these standards. Refer to the current "Doctor of Philosophy Program Handbook" for more information.
6. Admission into the Department of Counseling does not guarantee graduation. Success in academic coursework is only one component of becoming a successful counseling student. The following nonacademic conditions may result in dismissal if they are observed to impair the student's ability to work with others in class, practicum, or internship settings: (1) personal concerns or psychopathology, (2) interpersonal relationship issues, (3) personal attitudes or value systems that conflict with effective counseling relationships, and (4) unethical behavior.

Doctor of Philosophy in Counselor Education and Counseling

The Doctor of Philosophy (Ph.D.) is the highest university award given in recognition of completion of academic preparation for professional practice in counseling. Candidates are provided primarily with courses and practicum/internship experiences that will be instrumental in assisting them to function more effectively as professional counselor educators, as counseling practitioners, and as researchers.

Goals

The Doctor of Philosophy (Ph.D.) in Counselor Education and Counseling is designed to prepare counselor educators for work in counselor education programs and for work in supervisory roles in university counseling centers and other counseling sites. The major emphasis of this program is to prepare graduates for careers in university teaching in counseling programs.

Counselor education and counseling students at Idaho State University will be:

1. Prepared to teach courses in counseling skills and counseling theories.
2. Prepared to supervise counselors and counseling students who are providing individual counseling, group counseling, and/or couple and family counseling.
3. Prepared to teach selected courses in one or more of the CACREP major areas.
4. Prepared to teach selected courses in the general CACREP common core.
5. Prepared to evaluate counselor education programs and counseling sites.
6. Knowledgeable of professional issues in the counselor education and counseling fields.
7. Knowledgeable of ethical issues and practices of counselor education and counseling.
8. Experienced in developing and conducting research.
9. Experienced in writing for professional publication.
10. Experienced in the advisement and mentoring of Master of Counseling students.
11. Knowledgeable and skilled in providing advanced clinical counseling skills.
12. Knowledgeable of the sociological manifestations of cultural diversity.

Admission Criteria

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, persons applying for admission to the doctoral program in Counselor Education and Counseling must meet the following criteria for selection. Applicants must have:

1. a master's degree from a CACREP accredited program and be licensed as a counselor in Idaho or a state with comparable requirements

OR

a master's degree in counseling and be a Nationally Certified Counselor and apply for an Idaho Counseling License upon admission to the doctoral program

OR

a master's degree in counseling, one year of full time post-master's degree counseling experience, graduate coursework curriculum requirements in all of the CACREP common core areas, and be a Nationally Certified Counselor or Idaho Licensed Counselor. (Persons who do not meet these requirements may be considered for admission as Classified (w/PR) while removing deficiencies in coursework and/or credentials.).

2. taken the Graduate Record Examination or the Miller Analogies Test. Preference will be given to scale scores of 50 percentile or more.
3. a professional resume.
4. a one-page statement of post doctoral career objectives.
5. submitted three (3) letters of recommendation.
6. completed both Idaho State University Graduate School and Department of Counseling application forms.
7. completed an interview by the Department of Counseling Admissions Committee.

The Admissions Committee will make the final recommendation regarding admission. This decision will be based on grade point and test score ranking, as well as on the committee's impression of the applicant's interpersonal style and compatibility of personality with the program's training philosophy, and on the student's written statement.

Selection Schedule for Doctoral Study

Application forms will be mailed after August 1. Applications must be postmarked by January 15. Selection of applicants for on-campus interviews will be announced by February 1. Notification of successful applicants for admission and alternates will be announced by approximately March 1. A maximum of 3-4 students are admitted to the program each year. Classes begin in the Fall semester of each year.

Master's Degree Curriculum Review

Doctoral students who have earned their master's degree from a CACREP accredited program will be assumed to have entry level knowledge in core and major course areas. Those not graduating from a CACREP accredited program will have their transcripts evaluated by a faculty committee to determine knowledge base deficiencies. A remediation plan of study will be developed and approved by the faculty as necessary.

Specialization Areas

Doctoral students will choose a prescribed program of study that develops counselor education specializations in the CACREP core and major areas.

The Area of Specialization will be approved by the faculty before the end of the first semester of doctoral study.

The Area of Specialization must be completed prior to the scheduling of the final oral examination.

Admission to Candidacy

Each student demonstrating an adequate foundation for doctoral study, based upon the selection criteria and the master's degree curriculum review, may apply for degree candidacy. The application for candidacy will include:

1. A course of study designed to remove entry level deficiencies as indicated by the master's degree curriculum review.
2. An approved plan for completion of specialization areas in both core and major areas.
3. An approved final program of study.

After receiving the written approval of the major professor and a second graduate faculty committee member from the department, the application may then be submitted to the department for approval and the appointment of a third departmental committee member. The balance of the committee will consist of a fourth member appointed by the Dean of the Kasiska College of Health Professions and a fifth member appointed by the Dean of the Graduate School.

Comprehensive Examination

The comprehensive examination will address information in the coursework required in the doctoral program, counselor education professional issues, and specific areas identified by the candidate's committee. If failed, the comprehensive examination may only be retaken once after one year of additional study.

Dissertation

After the student is admitted to degree candidacy, the dissertation proposal and preliminary research that the candidate and first two committee members have agreed upon will be presented to the complete five-member committee for recommendations and approval. Following the approval of the proposal and the completion of the comprehensive examination, the candidate is authorized to proceed with the dissertation in preparation for a final oral examination defense. The final defense is open to any member of the graduate faculty directing a request through the Dean of the Graduate School and the chair of the committee.

Residence

Following the bachelor's degree, each applicant must complete the equivalent of ten semesters of graduate study including the master's degree and three semesters of doctoral internship. At least six of the semesters must be at the doctoral level and four of these must be consecutive semesters (not including summer sessions) of full-time graduate study on campus. Students are strongly encouraged to attend all six of these semesters on a full-time basis.

Continuous Enrollment

Following admission to doctoral study, the student must register for course work, practicum, internship, independent study, or dissertation credit each semester until the completion of the degree.

Required Courses

COUN 701	Advanced Statistics	2 cr
COUN 702	Advanced Research and Experimental Design	2 cr
COUN 703	Qualitative Research	2 cr
COUN 704	Qualitative Methodology	2 cr
COUN 705	Instructional Theory for Counselor Educators	3 cr
COUN 710	Practicum in College Teaching	2 cr
COUN 712	Advanced Psychological Testing and Assessment	2 cr
COUN 724	Advanced Diversity Issues	3 cr
COUN 727	Advanced Theories of Counseling	3 cr
COUN 774	Advanced Group Procedures	3 cr
COUN 790	Theories of Counseling Supervision	2 cr
COUN 791	Supervision of Counseling Practicum	2 cr
COUN 800	Research and Professional Issues	1-4 cr
COUN 848	Doctoral Practicum in Counseling	3-6 cr
COUN 849	Doctoral Internship	1-18 cr
COUN 850	Dissertation	1-12 cr

Suggested Electives

COUN 723	Advanced Vocational Theory	3 cr
COUN 758	Independent Problems	1-4 cr
COUN 775	Advanced Practicum in Group Counseling	2 cr

Educational Specialist Degree

Education Specialist in Counseling

The Ed.S. program is designed for persons who have completed a master's degree in counseling and wish to increase their skills for advanced certification requirements or other professional objectives.

Admission Requirements

The applicant must:

1. Hold a master's degree in counseling from a CACREP accredited school counseling program or equivalent CACREP course work.
2. Submit Graduate School application forms and application fee.
3. Submit departmental application form and application fee by specified application date.
4. Submit three (3) letters of recommendation; two (2) letters must be from Department of Counseling faculty who agree to serve on the graduate committee.
5. Have a minimum of two (2) years of work experience as a school counselor (post-master's), and be currently employed as a certified school counselor.
6. Be recommended for admission by the Department of Counseling Admissions Committee.

Degree Requirements

The student must complete a minimum of 70 credit hours of course work (including the master's degree) and a case study. All post-master's degree course work must be approved in advance by Department of Counseling faculty. A minimum grade point average of 3.0 is required over all course work taken in the Ed.S. program. An oral examination is required that involves the presentation of a case study and demonstration of advanced counseling skills.

Major Requirements

At the post-master's degree Ed.S. level, all course work must be in Counseling-related areas and must include:

HRD 501	Foundations of Professional-Technical Education	3 cr
COUN 693	Supervision of Counselors	1 cr
COUN 694	Psychodiagnosis and Psychotropic Drugs	3 cr
COUN 723	Advanced Vocational Theory	3 cr
COUN 759	Ed.S. Internship (school counseling setting)	3 cr

Educational Specialist Case Study

The case study presented during the oral examination reflects (both in written and video form) advanced counseling skills and theoretical orientation. It reflects therapeutic goals, client themes and counseling techniques necessary to facilitate client growth.

Time Requirement

All requirements for the Ed.S. must be completed within a period of seven (7) years from the date of completion of the first post-master's degree course to be applied toward the degree.

Master of Counseling in Marital, Couple, and Family Counseling, Mental Health Counseling, School Counseling, or Student Affairs Counseling

Goals

The general objective of the Master of Counseling (M.Coun.) degree is to prepare students to be professional counselors. The

Department of Counseling faculty believe that the development of a strong professional identity, a rich knowledge base, and expertise in the skills of counseling are essential to functioning as a professional in each counseling setting.

The Master of Counseling degree is designed to be the strong foundation upon which graduates enter a lifetime career in the helping professions. This program prepares counselors to respond to the multitude of changes in society, and to enter the ever-expanding counseling profession. In addition to knowledge and experience in the following eight common-core areas, graduates also have specialized knowledge and skills as identified in the objectives of the Marital, Couple, and Family Counseling, Mental Health Counseling, School Counseling, and Student Affairs Counseling majors.

Curricular Objectives:

1. Students will have knowledge of Human Growth and Development so that they can understand the nature and needs of individuals at all developmental levels.
2. Students will have knowledge of Social and Cultural Foundations to be effective in a multicultural and diverse society.
3. Students will be knowledgeable and skillful in Counseling and Consultation processes.
4. Students will be knowledgeable about group development, dynamics, counseling theory, group counseling methods, and group work approaches.
5. Students will be knowledgeable and understand career development and related factors.
6. Students will understand and be knowledgeable about individual and group approaches to assessment and evaluation.
7. Students will be knowledgeable about various research methods and basic statistics.
8. Students will be knowledgeable about the profession of counseling including history, organizational structures, ethics, standards, and credentialing.

Student Professional Objectives:

In addition to the above curricular objectives, the Department of Counseling has program-wide objectives. These include:

9. School counseling students will obtain certification as school counselors.
10. Mental Health and Marital, Couple and Family students will obtain the appropriate state licensure.

Admission Requirements

Admission into the counseling program is competitive. A preset number of students will be admitted, according to faculty resources. The Admissions Committee will make the final recommendation regarding admission based on grade point and test score rankings, as well as on the committee's impression of the applicant's interpersonal style and compatibility of personality with the program's training philosophy, and on the student's written statement.

The student must apply to, and meet all criteria for, admission to the Graduate School inclusive of the submitting of the Graduate School application forms and application fee. In addition, the applicant must:

1. Have a bachelor's degree from an accredited college or university in the United States, or its equivalent from a school in another country. (Must complete degree before onset of classes in the Fall semester in year of acceptance.)

   NOTE: Preference will be given to those applicants who meet both GPA and GRE/MAT criteria. The Graduate School does consider requests by the department to waive either the GPA or the GRE/MAT so applicants are eligible to apply for admission if they meet one of the two criteria.

2. Prospective students are expected to come to campus (Pocatello or Boise) for an interview. Selected applicants will be interviewed by the Department of Counseling Admissions Committee as part of the admissions procedure. Ultimately, a student's GPA and test scores qualify the student to take part in the interview process. Students are generally selected for admission based on the interview.

3. Submit three (3) letters of recommendation from individuals who have knowledge of the applicant's academic capabilities, work performance, professional potential, and character.

4. Submit departmental application forms and application fee.

5. Read and sign the Department of Counseling Conditions for Admission/Retention/Dismissal form.

Only applicants who have submitted all application materials on or before the application deadline will have their material reviewed by the Admissions Committee to determine status as a competitive, qualified applicant (incomplete, late, or inaccurate files/forms will not be reviewed). Due to the competition for limited seats in the Master of Counseling program, satisfactory completion of the entry level requirements does not guarantee acceptance.

Selected applicants will be interviewed by the Department of Counseling Admissions Committee as part of the admissions procedure.

Selection Schedule

After August 1, application forms will be mailed upon request, or they are available for download at http://www.isu.edu/hpcounsl. Application review begins February 15, and continues until all seats are filled. Generally, the application process is complete by April 15. Selection of applicants for on-campus interviews will be announced approximately by March 15. Notification of selected applicants for admission, and alternates, will be announced approximately by April 1. A maximum of 20-25 students are admitted to the Master of Counseling program each year. Classes begin in the Fall semester of each year.

Classified w/Performance Requirements Status

Students who meet the undergraduate grade point average of 3.0 or higher for all upper division undergraduate classes but have not received their scores for the GRE or MAT or are registered to take one of these examinations at the next possible testing may be admitted Classified (w/PR) status, and may be considered for openings not filled by Classified applicants in the Department of Counseling program.

Students must request a change of status from Classified (w/PR) status to Classified status upon completion of their first semester of graduate study. The change from Classified (w/PR) to Classified status must be approved by the Department of Counseling and the Dean of the Graduate School.

Unclassified Status

Unclassified (non-degree seeking) status can only be used by students who have completed a master's degree in a helping profession and who agree in writing that they are taking elective courses for continuing education credit.

Approval of Master's Degree Final Program of Study

A student who has been admitted to the Master of Counseling (M.Coun.). Program may submit a final program of study following the completion of COUN 621, 627, 696 and during the semester in which COUN 697 is being completed. The final program of study must include all coursework required to complete the selected M.Coun. major and must be approved by two counseling faculty members who have graduate faculty status (one of whom will serve as committee chair). Prior to the semester of the proposed graduation, the final program of study must receive the approval of a majority of the Counseling graduate faculty.

General Requirements

For the Master of Counseling (M.Coun.) degree the student is required to complete the equivalent of at least four full semesters of resident graduate study beyond the bachelor's degree. For Marital, Couple, and Family Counseling majors, a minimum of 64 semester hours must be completed in the Core and Major Course Requirements. For the Mental Health Counseling, School Counseling, and Student Affairs Counseling majors, a minimum of 60 semester hours must be completed in the Core and Major Course Requirements.

Core Course Requirements

COUN 611	Applied Statistics and Research	3 cr
COUN 612	Psychological Testing for Counselors	2 cr
COUN 621	Professional Orientation and Ethics	3 cr
COUN 623	Lifestyle and Career Development	2 cr
COUN 624	Cultural Counseling	2 cr
COUN 627	Conceptualizing Counseling Theory	2 cr
COUN 628	Applications of Counseling Theory	2 cr
COUN 630	Substance Abuse Counseling	2 cr
COUN 660	Theories of Family Counseling	3 cr
COUN 676	Small Group Activity	1 cr
COUN 677	Group Counseling Techniques	3 cr
COUN 696	Prepracticum Counseling Techniques	3 cr

Major Course Requirements:

Major in Marital, Couple, and Family Counseling

COUN 661	Issues in Family Counseling	3 cr
COUN 662	Theories of Couple Counseling	2 cr
COUN 663	Parent Education	2 cr
COUN 664	Family Assessment	2 cr
COUN 665	Advanced Family Systems Theory	2 cr
COUN 669	Family/Couple Counseling Practicum	3 cr
COUN 694	Psychodiagnosis and Psychotropic Drugs	3 cr
COUN 697	Practicum in Counseling	3 cr
COUN 699	Internship in Counseling (marriage and family setting)	14 cr

Major in Mental Health Counseling

COUN 662	Theories of Couple Counseling	2 cr
COUN 690	Mental Health Counseling Foundations	2 cr
COUN 691	Issues in Mental Health Counseling	2 cr
COUN 694	Psychodiagnosis and Psychotropic Drugs	3 cr
COUN 697	Practicum in Counseling (mental health setting)	3 cr
COUN 699	Internship in Counseling (mental health setting)	17 cr

Major in School Counseling

COUN 640	School Counseling Services	3 cr
COUN 641	Elementary School Counseling	1 cr
COUN 642	Secondary School Counseling	1 cr
COUN 644	Special Issues in School Counseling	1 cr
COUN 660	Theories of Family Counseling	3 cr
COUN 697	Practicum in Counseling (school setting)	3 cr
COUN 699	Internship in Counseling (school setting)	17 cr

Major in Student Affairs Counseling

COUN 680	Foundations of Student Affairs	3 cr
COUN 683	Administration of Student Affairs	3 cr
COUN 697	Practicum in Counseling (student affairs setting)	3 cr
COUN 699	Internship in Counseling (students affairs setting)	17 cr

Requirements for the Idaho Counseling License

The Idaho Counseling License requirements include: (1) Master's degree in a counseling major (any one of the four M.Coun. majors meets this requirement), (2) 60 graduate credits in a planned counseling program (including the courses in one of the M.Coun. majors), (3) 1000 hours of counseling experience supervised by a licensed counselor (including the hours received as part of a M.Coun. program), and (4) a passing score on the Idaho Counseling License Examination (or the National Board for Certified Counselors Examination).

Counseling Graduate Courses

COUN g550 Peer Counseling Seminar 1-2 credits. Supervised experience in assisting another student. Students meet out of class on a weekly contact basis. Course provides ongoing training for the peer counselors. May be repeated up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

COUN g584 Guidance Principles and Practices 3 credits. Survey of the various guidance practices in secondary education. Each service is discussed from the point of view of its role in the total educational program.

COUN g585 Independent Problems 1-2 credits. Individual work under staff guidance. Field and/or library research on specific educational problems of interest to majors in education. Experience in research composition. PREREQ: PERMISSION OF INSTRUCTOR.

COUN g591 Seminar 1-3 credits. Critical analysis of the literature in one or more areas. Limited enrollment. May be graded S/ or on a letter-grade basis in separate sections. May be repeated up to 8 credits. PREREQ: PERMISSION OF INSTRUCTOR.

COUN g594 Elementary School Guidance 2 credits. Study of (1) the function of guidance in relation to children's needs; (2) principles and techniques of elementary school guidance; (3) analysis of representative programs of guidance in the elementary schools; and (4) research related to elementary school guidance and resulting trends.

COUN 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/U.

COUN 606 Family Violence 2 credits. Delineates the implications for assessment and treatment of the family with violence. Topics of physical abuse, sexual abuse and psychological/emotional abuse of adults and children within a family structure will be addressed.

COUN 607 The Family and Mental Illness 2 credits. Addresses therapeutic and community support that enhances the family unit as the primary care system. Mental illness as it relates to the family system is presented.

COUN 608 The Family and Chemical Dependency 2 credits. Addresses family systems under the influence of addictions with primary emphasis on alcohol dependency. Models and patterns of addictions will be examined.

COUN 609 The Family and the Aged 2 credits. Emphasizes the impact of aging on family systems from an economic, emotional, social, spiritual, and physiological perspective.

COUN 611 Applied Statistics and Research 3 credits. Basic understanding of applied statistics. Procedures for designing, interpreting, critiquing, and presenting professional research.

COUN 612 Psychological Testing for Counselors 2 credits. An overview of the standardized tests most commonly used by counselors. In addition to learning the underlying concepts of standardized testing, students will also be taught how to select and use tests appropriate to their proposed work settings.

COUN 613 Basic Projective Techniques 2 credits. Projective theory and its relationship to psychoanalysis, dynamic theory, and learning theory. Techniques including problems of clinical practicality, prediction of behavior, and personality assessment. Practical experiences available in laboratory courses.

COUN 619 Individual Intelligence Testing 3 credits. Supervised practice in administering, scoring, and interpreting the results of individual intelligence tests. Each section limited to 6 students. PREREQ: COUN 612 OR EDUC 614 AND PERMISSION OF INSTRUCTOR.

COUN 621 Professional Orientation and Ethics 3 credits. Introduction to profession of counseling: history, accreditation, licensure, organizational structure, advocacy, and use of technology. Ethical problems in counseling with specific attention given to the *American Counseling Association Code of Ethics*.

COUN 623 Lifestyle and Career Development 2 credits. Career development theories and decision-making models for counselors including career resources and materials. PREREQ: COUN 621 AND COUN 696, OR PERMISSION OF INSTRUCTOR.

COUN 624 Cultural Counseling 2 credits. The roles of minority groups, gender, age and other factors influencing adjustment in a pluralistic society. PREREQ: COUN 621 AND COUN 696, OR PERMISSION OF INSTRUCTOR.

COUN 627 Conceptualizing Counseling Theory 2 credits. The conceptual study of selected counseling theories related to historical development, personality development, client maturation, and learning theory.

COUN 628 Applications of Counseling Theory 2 credits. The applied study of selected counseling theories with emphasis on the evolution of maladjustment, process of change, and appropriate interventions for generating change. PREREQ: COUN 627 OR PERMISSION OF INSTRUCTOR.

COUN 630 Substance Abuse Counseling 2 credits. Acquaint students with the concepts of drug and alcohol dependence as a disease that impacts the entire family system and functioning. The course will explore the developmental model of addiction, recovery, and relapse prevention.

COUN 640 School Counseling Services 3 credits. History, philosophy, recent legislation, consultation and the professional role of the school counselor.

COUN 641 Elementary School Counseling 1 credit. Specialized role and responsibilities for the elementary school counselor.

COUN 642 Secondary School Counseling 1 credit. Specialized role and responsibilities of the secondary school counselor.

COUN 644 Special Issues in School Counseling 1 credit. Current information and strategies for counseling issues specific to school counselors such as: child study teams, drug abuse and peer relations. PREREQ: PERMISSION OF INSTRUCTOR.

COUN 650 Thesis 1-6 credits. Graded S/U.

COUN 651 Master's Paper 3 credits. A paper involving extensive familiarity with research findings written under the supervision of a faculty member in the department.

COUN 652 Specialist Paper 3 credits. A paper involving extensive familiarity with research findings under the supervision of a faculty member of the department.

COUN 658 Independent Problems 1-3 credits. Individual work under staff guidance. Field and/or library research on specific educational problems. Experience in research composition. May be repeated up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

COUN 659 Seminar 1-3 credits. Critical analysis of the literature in one or more areas of education. Enrollment limited. May be repeated up to 8 credits. PREREQ: PERMISSION OF INSTRUCTOR.

COUN 660 Theories of Family Counseling 3 credits. The study of the development of the family-counseling field and the issues and theories related to its practice. PREREQ OR COREQ: COUN 621, COUN 627, COUN 696, OR PERMISSION OF INSTRUCTOR.

COUN 661 Issues in Family Counseling 3 credits. Examination of the effects of violence, chemical dependency and issues of sexuality on family dynamics and their impact on family counseling. CO-REQ: COUN 660 OR PERMISSION OF INSTRUCTOR.

COUN 662 Theories of Couple Counseling 2 credits. The study of the development of the couple-counseling field and the issues and theories related to its practice. PREREQ OR COREQ: COUN 621, COUN 627, COUN 660, COUN 696, OR PERMISSION OF INSTRUCTOR.

COUN 663 Parent Education 2 credits. Theoretical and research-based discussion of parent education programs. PREREQ: COUN 627 AND COUN 660, OR PERMISSION OF INSTRUCTOR.

COUN 664 Family Assessment 2 credits. Introduction to family assessment models and instruments as well as evaluation of programs/ agencies providing family counseling. PREREQ: COUN 660, COUN 662, OR PERMISSION OF INSTRUCTOR.

COUN 665 Advanced Family Systems Theory 2 credits. Advanced theoretical study with emphasis on researched applications of family counseling. PREREQ: COUN 660 OR PERMISSION OF INSTRUCTOR.

COUN 669 Family/Couple Counseling Practicum 3 credits. Practicum experience counseling families and couples. PREREQ: COUN 660, COUN 663, COUN 697, OR PERMISSION OF INSTRUCTOR.

COUN 676 Small Group Activity 1 credit. Designed to give direct experiences as a group participant and provide preparation for COUN 677. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

COUN 677 Group Counseling Techniques 3 credits. Essential research, selected group development and therapy theories, leadership orientations and strategies, structural group dynamics, and applications. Skills development in a laboratory setting. PREREQ: COUN 621, COUN 676, AND COUN 696 OR PERMISSION OF INSTRUCTOR.

COUN 680 Foundations of Student Affairs 3 credits. History, philosophy, purpose, and function of student affairs practice including review of "The Student Personnel Point of View," theories of student development, and current trends. PREREQ: PERMISSION OF INSTRUCTOR.

COUN 683 Administration of Student Affairs Practice 3 credits. Leadership and management theories and practice in higher education and student services. Essential research, consultation, good practices, and assessment techniques for all student populations and services. PREREQ: COUN 680 OR PERMISSION OF INSTRUCTOR.

COUN 687 Field Work in Personnel Services 1-2 credits. Observation and learning the duties performed by the persons in the field work setting. A combination of fifty hours of experience and supervision equals one hour of academic credit. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

COUN 689 Internship in Student Personnel 3-12 credits. A combination of fifty hours of experience and supervision equals one hour of academic credit. PREREQ: PERMISSION OF INSTRUCTOR.

COUN 690 Mental Health Counseling Foundations 2 credits. Orientation to the professional foundation and contextual dimensions of mental health counseling. Topics include roles, functions, identity, ethics, and practice parameters of mental health counseling.

COUN 691 Issues in Mental Health Counseling 2 credits. Current information and strategies for counseling issues specific to mental health counseling. Topics include: managed care, public policy, needs assessment, and consultation. PREREQ: COUN 690 OR PERMISSION OF INSTRUCTOR.

COUN 692 Wellness and Prevention in Counseling 1 credit. The course will familiarize students with the wellness model and how it is integrated into counseling practice. The course will overview prevention program development, implementation, and evaluation as well as the theoretical and empirical underpinnings of such programming.

COUN 693 Supervision of Counselors 1 credit. The study of current practices used in the clinical supervision of counselors. Current literature will be reviewed as well as standards for supervision which have been established by accrediting bodies and professional associations.

COUN 694 Psychodiagnosis and Psychotropic Drugs 3 credits. Psychological classification systems, mental status evaluations, and the use of psychotropic drugs in treatment programs. PREREQ: COUN 621 AND COUN 696, OR PERMISSION OF INSTRUCTOR.

COUN 696 Prepracticum Counseling Techniques 3 credits. The study and practice of counseling techniques including micro-counseling and role-playing. PREREQ: COUN 621, AND COUN 627 (OR CONCURRENT ENROLLMENT) AND PERMISSION OF INSTRUCTOR.

COUN 697 Practicum in Counseling 3 credits. Supervised counseling experience. A combination of fifty hours of experience and supervision equals one hour of academic credit. Each section limited to 5 students. PREREQ: COUN 696 AND PERMISSION OF INSTRUCTOR.

COUN 699 Internship in Counseling 1-17 credits. A combination of fifty hours of experience and supervision equals one hour of academic credit. May be repeated for a maximum of 17 credits. PREREQ: COUN 697 AND PERMISSION OF INSTRUCTOR.

COUN 701 Advanced Statistics 2 credits. Statistical application appropriate for doctoral research and writing. PREREQ: COUN 611 OR EQUIVALENT, AND PERMISSION OF THE INSTRUCTOR.

COUN 702 Advanced Research and Experimental Design 2 credits. Quantitative methods of conducting research in doctoral study. PREREQ: COUN 701.

COUN 703 Qualitative Research 2 credits. Explores and contrasts philosophical assumptions of qualitative and quantitative research. Various methodologies and approaches to qualitative research are reviewed and applications discussed. PREREQ: COUN 701

COUN 704 Qualitative Methodology 2 credits. Design, data collection, analysis and writing qualitative research. Practice using data collection procedures, traditional analytic methods and qualitative data processing programs for coding and matrix construction. Emphasizes grounded theory approach. PREREQ: COUN 703.

COUN 705 Instructional Theory for Counselor Educators 3 credits. Instructional theory and methods relevant to counselor education including models and methods of appraisal.

COUN 710 Practicum in College Teaching 2 credits. Observation of and assisting in the teaching and evaluation of a college course under the supervision of the course instructor. The student will prepare and deliver at least five lectures which will be observed by the instructor and will, in addition to observing the balance of the course, meet individually with the instructor for periodic discussions of procedure and methodology. PREREQ: COUN 705, COMPLETION OF THE COURSE IN WHICH THE PRACTICUM WILL BE SERVED, AND PERMISSION OF THE FACULTY.

COUN 712 Advanced Psychological Testing and Assessment 2 credits. Advanced psychological testing concepts, test administration, test construction and interpretation. Advanced information of standardized tests commonly used in the counselor education field. PREREQ: COUN 612 OR PERMISSION OF INSTRUCTOR.

COUN 723 Advanced Vocational Theory 3 credits. Theory of vocational development, sociological aspects of vocational choice and entry, development of interests and aspiration levels, and research relating to entry into work, satisfaction in work, dissatisfaction in topics. Course is structured around the major theories of vocational development as they relate to individual development. Various approaches to vocational testing are included. PREREQ: COUN 623.

COUN 724 Advanced Diversity Issues 3 credits. Pedagogy relevant to current social and cultural issues. Role of diversity issues in counselor education, supervision, and counseling.

COUN 727 Advanced Theories of Counseling 3 credits. Analysis of various counseling theories and their relationships to specific philosophies concerning humanity. PREREQ: COUN 627 AND COUN 697.

COUN 758 Independent Problems 1-4 credits. Individual work under staff guidance. Field and/or library research on specific educational problems. Experience in research composition. May be repeated up to 8 credits. PREREQ: PERMISSION OF INSTRUCTOR.

COUN 759 Ed.S. Internship 1-9 credits. Placement in a post-master's degree counseling setting. A combination of fifty hours of experience and supervision equals one hour of academic credit. May be repeated. PREREQ: ADMISSION AS AN ED.S. STUDENT AND PERMISSION OF INSTRUCTOR.

COUN 774 Advanced Group Procedures 3 credits. Advanced group leadership theory and techniques. PREREQ: COUN 677.

COUN 775 Advanced Practicum in Group Counseling 2 credits. Fifty hours of group counseling as the group facilitator, plus a coordinating seminar. Includes the theoretical basis for group leaders and development of group leadership skills. PREREQ: COUN 677 AND PERMISSION OF INSTRUCTOR.

COUN 790 Theories of Counseling Supervision 2 credits. Analysis of systems for conducting counseling practicum. For individuals who will be supervising student or practicing counselors. PREREQ: PERMISSION OF INSTRUCTOR.

COUN 791 Supervision of Counseling Practicum 2 credits. Practical experience in the supervision of counseling practicum students, including field supervision and analysis of counseling audio and video tapes. PREREQ: COUN 790 OR PERMISSION OF INSTRUCTOR.

COUN 800 Research and Professional Issues 1 credit. Critical analysis of the literature in counselor education including topics such as program models, current research, and professional associations. May be repeated up to 4 credits. PREREQ: ADMISSION TO DOCTORAL STUDY.

COUN 848 Doctoral Counseling Practicum 3 credits. Counseling under supervision and an intensive examination of the students own counseling philosophy and its relationship to client behavioral and attitudinal change. A combination of fifty hours of experience and supervision equals one hour of academic credit. Each section limited to 5 students. PREREQ: COUN 727 AND PERMISSION OF INSTRUCTOR.

COUN 849 Doctoral Internship 1-18 credits. Placement in a doctoral level counseling or counselor education setting. May be repeated. A combination of fifty hours of experience and supervision equals one hour of academic credit. PREREQ: COUN 848 AND PERMISSION OF INSTRUCTOR.

COUN 850 Dissertation 1-12 credits. Graded S/U.

Department of Dental Hygiene

Director and Associate Professor Boyd
Professors: Bowen, Herzog, Hodges, Paarmann
Associate Professors: Calley, Rogo

Master of Science in Dental Hygiene

The Master of Science degree in Dental Hygiene is an advanced degree; therefore, the program is designed for students who are licensed dental hygienists with baccalaureate degrees. Graduates will be prepared for various career opportunities within the health care arena.

Goals

Program goals of this graduate level dental hygiene program are to prepare professional dental hygienists to:

1. Assume leadership roles in academics, rural and community health settings, research, professional associations or commercial industry.
2. Develop advanced clinical abilities that improve oral health and access to dental hygiene care.
3. Acquire research abilities that contribute to the scientific dental hygiene body of knowledge.
4. Assume responsibility for professional development through life-long learning capability.
5. Provide a foundation for future doctoral education.

Admission Requirements

The student must fulfill the following requirements:

- Graduation from an accredited entry level dental hygiene program
- Bachelor's degree in dental hygiene or a related field
- Minimum grade point average of 3.0

in upper division and dental hygiene coursework

- Current dental hygiene licensure in good standing

1. The student must apply to, and meet all criteria for, admission to the Graduate School, and submit a completed application, residency form, fee payment, and transcripts. International students should refer to the "Admission of International Students" section of this Catalog for TOEFL and other requirements. Information is online at www.isu.edu/departments/graduate

   Send results of the Graduate Record Examination (GRE) or the Miller Analogy Test (MAT) to the Graduate School.

2. Complete the Dental Hygiene Department application form for the Master of Science degree program (available at www.isu.edu/departments/dentalhy/dhmasters/msadmissions.shtml).

3. Submit two recommendation forms provided by the department. One recommendation must be completed by an individual who has personal knowledge of the applicant's clinical skills such as a faculty member from a dental hygiene program, employer, or colleague. The second recommendation must be completed by an individual who has personal knowledge of the applicant's academic and professional qualifications for graduate study such as a faculty member, officer of a professional association, or colleague.

4. Submit to the Graduate School official transcripts to provide evidence of:

   - Graduation from an accredited entry level dental hygiene program
   - Bachelor's degree in dental hygiene or a related field
   - Minimum grade point average of 3.0 in upper division courses and a 3.0 in dental hygiene coursework.

5. Previous education in local anesthesia and nitrous oxide administration is not a requirement for admission; however, this requirement must be completed prior to enrollment in DENT 616, *Progressive Dental Hygiene Practice*. If previous education in these pain control methods was completed, provide evidence of successful completion of classroom **and** clinical experiences in local anesthesia and nitrous oxide administration. Evidence could include transcripts, course descriptions, expanded functions or continuing education certificates. If classroom **and** clinical experience were not part of the coursework, then DENT 598P or an equivalent continuing education course must be completed. Continuing education courses must be approved by the graduate program director. DENT 598P credits may not be applied toward a graduate degree.

6. Send a photocopy of a license to provide evidence of current dental hygiene licensure in good standing.

7. Complete a telephone or personal interview.

Applicants can contact the Department at the following address:

Graduate Program Director
Department of Dental Hygiene
Division of Graduate Studies
Idaho State University
12301 W. Explorer Dr., Suite 102
Boise, ID 83713

E-mail address: msdh@mm.isu.edu
Telephone: (208) 373-1800

General Requirements

A total of 36 credits, including a thesis (3-6 credits), will be required for degree completion. Requirements include 7 courses (19-20 credits) in the core curriculum, 4 courses (a minimum of 11 credits) in an area of emphasis, and 6 credits of electives.

The core courses advance the theory and practice of dental hygiene and prepare students in research methodology to apply during the thesis process. A thesis is required because the Master of Science degree in Dental Hygiene is the terminal degree in the discipline and a research foundation is imperative to advance the theoretical knowledge base of the profession. In addition to the core curriculum, graduates complete an area of emphasis in dental hygiene education or rural and community health. Two required dental hygiene courses in the emphasis area, coupled with a practicum experience and a related elective course, provide a strong basis for advanced study and thesis work. To enhance the breadth of knowledge, students are required to complete a minimum of 6 credits of electives selected from related graduate coursework offered outside the Department of Dental Hygiene.

The program is an online graduate curriculum with on-campus visitations required for orientation, DENT 616, and oral examination for thesis defense. The advanced clinical course will be offered in Pocatello at the on-campus clinical facility during the Summer Semester. A maximum of 9 credits may be transferred officially to Idaho State University.

Core Course Requirements

DENT 605	Program Development and Evaluation	3 cr
DENT 610	Special Care Populations	2 cr
DENT 615	Progressive Dental Hygiene Theory	3 cr
DENT 616	Progressive Dental Hygiene Practice	1-2 cr
DENT 618	Leadership Strategies to Improve Health Care	3 cr
DENT 648	Literature Analysis and Synthesis*	2 cr
DENT 649	Dental Hygiene Research Methodology	2 cr
DENT 650	Thesis	3-6 cr
	TOTAL	19-20 cr

*Undergraduate-level statistics or BIOLtatistics must be taken as a prerequisite or corequisite to DENT 648. A minimum grade of "C" or better is required.

Dental Hygiene Education Emphasis

DENT 620	Advanced Educational Theory and Methods	3 cr
DENT 621	Dental Hygiene Clinical Instruction and Administration	3 cr
DENT 625	Dental Hygiene Education Practicum	2-4 cr
Elective course in emphasis area (Program Director approval required)		3 cr
	TOTAL	11-13 cr

Rural and Community Health Emphasis

DENT 630 or MPH/HE 620	Rural and Community Health Programs	3 cr
DENT 631	Management Strategies for Health Care	3 cr
DENT 635	Rural and Community Health Practicum	2-4 cr
Elective course in emphasis area (Program Director approval required)		3 cr
	TOTAL	11-13 cr
Elective course requirements (Program Director approval required)		6 cr

TOTAL DEGREE CREDITS: 36 cr

Academic Requirements

1. Once admitted, students must complete a plan of graduate study with their dental hygiene graduate advisor no later than the end of the first semester after enrollment. This plan must be approved by the Program Director.

2. Any student who, after admission to the Master of Science program, falls below a 3.0 GPA, or who receives a grade of C+ or below in two graduate courses during his or her program of study will be deemed to be performing at an unsatisfactory level and will be dismissed.

3. Any student who, after admission to the Master of Science program, receives a C, C-, D, F, or grade in any graduate course in his or her program of study will be dismissed. Courses with grades or C or lower may not be used to satisfy graduation requirements.

4. Current CPR, related screenings and/or immunizations are required prior to attending the on-campus orientation.

Graduation Requirements

1. Successfully conduct and defend a thesis as outlined in the Department of Dental Hygiene, Division of Graduate Studies, Graduate Student Handbook.
2. Complete the coursework on the study plan approved by the Program Director, Department of Dental Hygiene, Division of Graduate Studies, and by the ISU Graduate School.

Dental Hygiene Graduate Courses

DENT 598P Professional Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May be applied to graduate degrees under special circumstances. Graded S/U.

DENT 605 Program Development and Evaluation 3 credits. An overview of general principles of teaching, learning and evaluation in academic and community oral health programs. Emphasis on assessment, planning, implementation and evaluation of programs.

DENT 610 Special Care Populations 2 credits. Concepts related to providing oral health care for special care populations. Emphasis on assessment, planning, implementation and evaluation of care for individuals with transient or lifelong physical, mental, medical or social health needs.

DENT 615 Progressive Dental Hygiene Theory 3 credits. Critical analysis of the dental hygiene process of care related to advanced preventive and therapeutic interventions to various population groups, technology and outcomes.

DENT 616 Progressive Dental Hygiene Practice 1 credit. This clinical course provides students with experiential learning opportunities to enhance self-assessment and peer/student evaluation in clinical dental hygiene. Formative assessment techniques are applied to the process of dental hygiene care: assessment, diagnosis, care planning, implementation and evaluation. The course will culminate in an individualized professional development plan constructed by each student based upon faculty, self and peer assessments as well as career goals. May be repeated for up to 2 credits. PREREQ: DENT 615 OR PERMISSION OF INSTRUCTOR. Graded S/U.

DENT 617 Progressive Dental Hygiene Practice II. 1 credit. Clinical application of advanced dental hygiene care with the use of state-of-the-art technology throughout the process of dental hygiene care. PREREQ: DENT 616 OR PERMISSION OF INSTRUCTOR. Graded S/U.

DENT 618 Leadership Strategies to Improve Health Care 3 credits. Application of leadership theory and models to professional issues, policy development, advocacy, coalition building, strategic planning, communication, conflict resolution and professional advancement.

DENT 620 Advanced Educational Theory and Methods 3 credits. Study of theory, principles, and research related to the faculty role in active teaching and learning, development of ethical reasoning, critical thinking and reflective judgment, development of curricular frameworks, outcomes and competencies, and course delivery methods. PREREQ: DENT 605 OR DEPARTMENTAL APPROVAL.

DENT 621 Dental Hygiene Clinical Instruction and Administration 3 credits. Theory and practices of clinical instruction and supervision, related to psychomotor skill development, competency-based evaluation, student mentoring and remediation. Examination of organizational and administrative philosophy and practice in curriculum planning, implementation, and evaluation based on accreditation standards. PREREQ: DENT 620 OR DEPARTMENTAL APPROVAL.

.**DENT 625 Dental Hygiene Education Practicum 2-4 credits**. Individualized experience to apply principles and theories in dental hygiene education. Approval required for practicum sites. May be repeated for a maximum of 6 credits. PREREQ: DENT 616 and 620, OR DEPARTMENTAL APPROVAL. Graded S/U.

DENT 630 Rural and Community Health Programs 3 credits. Study of theories, epidemiology, cultural competence, and trends impacting rural and community health care programs. Emphasizes needs assessment, planning, implementation, and evaluation of health promotion/disease prevention programs and service-learning opportunities. Cross-listed as MPH 620 or HE 620. PREREQ OR COREQ: DENT 605 OR DEPARTMENTAL APPROVAL.

DENT 631 Management Strategies for Health Care 3 credits. Study of organizational leadership and management theory in a variety of health care delivery settings. Includes planning, organization, decision making, financial management, delivery of care, insurance and reimbursement practices. PREREQ: DENT 605 OR 630 OR DEPARTMENTAL APPROVAL.

DENT 635 Rural and Community Health Practicum 2-4 credits. Individualized service-learning experience designed to apply theories in rural and community health to improve access to care. Approval required for practicum sites. May be repeated for a maximum of 6 credits. PREREQ: DENT 616 AND 630 OR DEPARTMENTAL APPROVAL. Graded S/U.

DENT 640 Independent Study in Dental Hygiene 2-3 credits. Specific problems selected on the basis of interest and preparation. Individualized student effort under the guidance of the instructor. May be repeated up to 6 credits.

DENT 648 Literature Analysis and Synthesis 2 credits. Introduction to the research process and the use of scientific literature to define a theoretical basis for future research. Requires gathering evidence, searching databases, analyzing and synthesizing literature to write a literature review. PREREQ OR COREQ: UNDERGRADUATE STATISTICS OR BIOSTATISTICS COURSE.

DENT 649 Dental Hygiene Research Methodology 2 credits. Application of principles of problem and research question formulation, sampling, design and methods, reliability and validity, and applied statistics in dental hygiene. Requires preparation of a research proposal. PREREQ: DENT 648.

DENT 650 Thesis 1-6 credits. Research project under supervision of academic faculty member. May be repeated. Minimum of 3 credits required. PREREQ OR COREQ: DENT 649 AND PERMISSION OF PROGRAM DIRECTOR. Graded S/U.

Department of Dental Science

Chair, IAGD Director, and Associate Professor: Crawford
IDEP Director and Assistant Professor: Ybarguen
Adjunct Faculty: Nielsen

Certificate in Idaho Dental Education Program (IDEP)

The Department of Dental Science administers the Idaho Dental Education Program (IDEP) for predoctoral dental students, and the Idaho Advanced General Dentistry Residency (IAGD) as a postdoctoral program.

The Idaho Dental Education Program is designed to provide residents of Idaho with access to a high quality dental education as if Idaho had its own dental school. The IDEP program is fully accredited as a Satellite Program of Creighton University School of Dentistry by the American Dental Association. The program involves a first year curriculum at Idaho State University in Pocatello, followed by completion of the second through fourth years at Creighton University in Omaha, Nebraska. Students completing the four year program receive the Doctor of Dental Surgery (D.D.S.) degree and are eligible to take the licensure examinations necessary

to become a practicing dentist. Students may also elect to pursue advanced training through residencies or specialty programs, eventually becoming board certified in one of the recognized dental specialties.

There are eight positions available for Idaho residents. Applicants to the program must have completed the necessary prerequisites in English, Biology, Inorganic Chemistry, Organic Chemistry, Physics and other requirements as outlined in the Department of Dental Science Bulletin. In addition to fulfilling the minimal prerequisites, most students accepted into the program will have a bachelor's degree at the time of entry into IDEP. Occasionally, some exceptional students who have completed the junior level (upper division) of college course work are admitted into the program.

Students are encouraged to work closely with their pre-dental academic advisor in making course selections which fulfill dental school and degree completion requirements.

Formal application for admission to the IDEP program follows the guidelines printed in the Department of Dental Science Bulletin and the Creighton University School of Dentistry Bulletin. The application process involves: taking the Dental Aptitude Test (DAT), completion of the American Dental Education Association Application Service centralized application, the Creighton Supplemental Application and the IDEP Residency Certification Form. Although the application process can be completed as late as January 1 of the year the student plans to enter the program, earlier application is strongly encouraged to allow adequate time for completion of admission requirements and consideration by the admission committee.

Further information concerning the program, admission requirements, Bulletins and Residency Certification forms can be obtained by contacting the program at the following address:

Brian R. Crawford, D.D.S
Department of Dental Science
Box 8088
Idaho State University
Pocatello ID 83209-8088
Phone: (208) 282-3289
Email: funkmarl@isu.edu
Website: www.isu.edu/departments/dentsci

Required Basic Science Courses

BIOL g500	Oral History and Embryology	3 cr
BIOL g500L	Oral Histology and Embryology Lab	0 cr
BIOL g519	Mammalian Histology	4 cr
BIOL g519L	Mammalian Histology Lab	0 cr
BIOL g532	Biochemistry	3 cr
BIOL g540	Human Gross Anatomy	4 cr
BIOL g540L	Human Gross Anatomy Lab	0 cr
BIOL g546	Selected Topics in Physiology	1 cr
BIOL g550	Head and Neck Anatomy	3 cr
BIOL g550L	Head and Neck Anatomy Lab	0 cr
BIOL g555	Pathogenic Microbiology	3 cr
BIOL g560	Neuroanatomy	2 cr
BIOL g568	Oral Microbiology	1 cr

Required Dental Science Courses

IDEP g513	Dental Anatomy Lecture I	1 cr
IDEP g514	Dental Anatomy Laboratory	3 cr
IDEP g515	Dental Materials Science I	2 cr
IDEP g517	Interpersonal Relationships and Communication	1 cr
IDEP g523	Preventive Dentistry	2 cr
IDEP g525	History of Dentistry	1 cr
IDEP g526	Dentistry Field Experience	1 cr
IDEP g533	Oral Hygiene Technique	1 cr
IDEP g534	Dental Materials Science II	3 cr
IDEP g535	Occlusion Laboratory	1 cr
IDEP g544	Values and Ethics	1 cr
IDEP g554	Occlusion Lecture	1 cr
IDEP g563	Dental Radiology I	1 cr
IDEP g564	Dental Radiology Technique	1 cr
NTD g595	Dental Nutrition	1 cr

Optional Dental Science Courses

IDEP 617	Education Program	2 cr

Idaho Advanced General Dentistry Residency Program (IAGD)

The Department of Dental Sciences sponsors the Idaho Advanced General Dentistry Residency. The goal of the program includes increasing the knowledge and clinical skills of the general dentist beyond that achieved in the predoctoral education. Through an integrated multidisciplinary learning environment, residents are able to increase their competence in the application of modern standards of care and practice management.

This one-year residency focuses on providing comprehensive care in a variety of clinical settings, emphasizing rural, underserved, and at-risk populations. Residents also receive training with patients who have emergency or episodic needs. A certificate is awarded upon the successful completion of the program.

The IAGD is fully accredited by the American Dental Association Commission on Dental Accreditation until 2008.

Further information concerning this program, e.g., admission requirements, forms, etc., can be obtained by contacting the Program Director.

Idaho Advanced General Dentistry Courses

IAGD 610 General Dentistry Practicum I 12 credits. Supervised provision of general dental services with emphasis on increasing skills in routine general dental procedures and introduction to selected specialty procedures. Course may include periodic lectures on selected topics. PREREQ: ACCEPTANCE INTO IAGD PROGRAM.

IAGD 620 General Dentistry Practicum II 12 credits. Continued provision of general dental services with emphasis on increasing skills in advanced general dental procedures and completion of selected specialty procedures. Course may include periodic lectures on selected topics. PREREQ: IAGD 610.

IAGD 624 Dental Practice Management I 1 credit. An experiential course in dental practice management. Enrollees will participate in aspects of the management of the AEGD program's dental clinic. PREREQ: ACCEPTANCE INTO THE IAGD PROGRAM.

IAGD 625 Dental Practice Management II 1 credit. Continuing experiential course in dental practice management. Enrollees will participate in aspects of the management of the AEGD program's dental clinic. PREREQ: IAGD 624.

IAGD 626 Dental Practice Management III 1 credit. Advanced course in dental practice management. Enrollees will participate in all aspects of the management of the AEGD program's dental clinic. PREREQ: IAGD 625.

IAGD 630 Dental Implantology I 1 credit. A coordinated lecture, laboratory and clinical experience in treatment planning, placement and restoration of dental implants. This course emphasizes the theory and basic biology of dental implants. PREREQ: ACCEPTANCE INTO THE IAGD PROGRAM.

IAGD 631 Dental Implantology II 1 credit. Continuing lecture, laboratory and clinical experience in treatment planning, placement, restoration and maintenance of dental implants. This course emphasizes problem solving and incorporation of implants in general dental practice. PREREQ: IAGD 631.

IAGD 632 Dental Implantology III 1 credit. Continuing lecture, laboratory and clinical experience in treatment planning, placement, restoration and maintenance of dental implants. This course emphasizes problem solving and incorporation of implants in general dental practice. PREREQ: IAGD 631.

IAGD 635 Dental Medicine Seminar I 1 credit. Participation in the ISU Family Medicine residents' seminar series covering topics of internal and specialty medicine. PREREQ: ACCEPTANCE INTO THE IAGD PROGRAM.

IAGD 636 Dental Medicine Seminar II 1 credit. Continuing participation in the ISU Family Medicine residents' seminar series covering topics of internal and specialty medicine. PREREQ: IAGD 635.

IAGD 637 Dental Medicine Seminar III 1 credit. Continuing participation in the ISU Family Medicine residents' seminar series covering topics of internal and specialty medicine. PREREQ: IAGD 636.

IAGD 640 Dental Conscious Sedation I 2 credits. Integrated lecture and clinical experience in safe and efficacious delivery of conscious sedation. The two-semester experience is designed to fulfill the ADA guidelines. PREREQ: ACCEPTANCE INTO THE IAGD PROGRAM.

IAGD 641 Dental Conscious Sedation II 2 credits. Continuing lecture and clinical experience in safe and efficacious delivery of conscious sedation. PREREQ: IAGD 640

IAGD 645 General Dentistry Videoteleconference I 4 credits. Participation in the weekly two-way videoteleconference general dentistry series originating from Lutheran Medical Center in Brooklyn, NY, designed for AEGD programs. PREREQ: ACCEPTANCE INTO THE IAGD PROGRAM.

IAGD 646 General Dentistry Video teleconference II 4 credits. Continuing participation in the weekly two-way video- teleconference general dentistry series originating from Lutheran Medical Center in Brooklyn, NY, designed for AEGD programs. PREREQ: IAGD 645.

IAGD 647 General Dentistry Video teleconference III 3 credits. Continuing participation in and presentation for the weekly two-way video teleconference general dentistry series originating from Lutheran Medical Center in Brooklyn, NY, designed for AEGD programs. PREREQ: IAGD 646.

IAGD 650 Dental Literature Review I 1 credit. Critical review of current and historical dental literature in general dentistry and selected recognized specialty areas of dentistry. PREREQ: ACCEPTANCE INTO THE IAGD PROGRAM.

IAGD 651 Dental Literature Review II 1 credit. Continuing review of current and historical dental literature in general dentistry and selected recognized specialty areas of dentistry emphasizing outcomes and parameters of care. PREREQ: IAGD 650.

Idaho Dental Education Program Courses

IDEP g513 Dental Anatomy Lecture I 1 credit. Nomenclature, chronology and methods of designation of human teeth. Form, size and contour of the teeth, including external and internal anatomy of the permanent and deciduous dentitions, intertooth relations and occlusion.

IDEP g514 Dental Anatomy Laboratory 3 credits. Carving of plaster teeth larger than average measurements and carving of wax teeth to natural size. Mounting of study casts on a functional articulator and waxing of teeth in occlusion.

IDEP g515 Dental Materials Science I 2 credits. Composition, properties and application of the materials used in dentistry. Basic information on the design of preparatory work necessary for the mouth incident to the reception of these materials.

IDEP g517 Interpersonal Relationships and Communication 1 credits. To assist their orientation and adjustment to professional education, freshmen will participate in group introductions followed by a discussion on interpersonal relationships with classmates, administrators, faculty, and staff; dealing with stress; and establishing study habits.

IDEP g523 Preventive Dentistry 2 credits. Introducing the philosophy and need for preventive dentistry by developing the student's knowledge of and skills for effective oral hygiene. Concepts of self motivation, knowledge of dental diseases and abnormalities; application of the principles of flouridation, nutrition, patient motivation, and home care.

IDEP g525 History of Dentistry 1 credit. To acquaint the student with the history of dentistry from ancient times to present, emphasis is placed upon contributions by individuals and groups of individuals leading to the current status of dentistry in the United States.

IDEP g526 Community Dentistry Field Experience 1 credit. Designed to acquaint students with area health problems and with area health services and agencies. Field experience is gained during dental health and/or career presentations in public schools. To provide a variety of experiences, visits are made, for example, to the chronically ill, aged, or handicapped; to water purification facilities; to Indian groups.

IDEP g533 Oral Hygiene Technique 1 credit. Introduction to the instruments and their usage in performing a complete scaling prophylaxis of the teeth. Perodontal charting and instrument sharpening techniques are also performed. Didactic, laboratory, and clinical introduction.

IDEP g534 Dental Materials Science II 3 credits. Continuation of ISU DENT g515. PREREQ: ISU DENT g515.

IDEP g535 Occlusion Laboratory 1 credit. Various exercises simulating clinical diagnostic and treatment procedures are employed to exemplify principles of maxillomandibular relationships.

IDEP g544 Values and Ethics 1 credit. Designed to identify and understand one's own ethical decision-making processes and the relationship of religion with values and ethics. Students will discuss the areas of value of care for people as individuals, challenges of personal and professional opportunities, code of ethics of the ADA and dental care delivery systems.

IDEP g554 Occlusion Lecture 1 credit. Basic principles of maxillomandibular relationships, static and functional, as related to the occlusal surfaces of the teeth.

IDEP g563 Dental Radiology I 1 credit. History, theory and application of ionizing radiation resulting in radiography of the oral structures; including exposure and developing parameters along with basic interpretation. COREQ: IDEP g564.

IDEP g564 Dental Radiology Technique 1 credit. Practical experience in exposing and developing dental radiographs. The course will include techniques required to complete a diagnostic full mouth series, bitewing films and panoramic radiographs. COREQ: IDEP g563.

IDEP g565 Dental Radiology II 1 credit. History, theory, and application of radiographic methods in dentistry including cephalometric, panoramic, and digital modalities. COREQ: IDEP g 563 and IDEP g564.

IDEP 617 Extramural Dental Education Program 2 credits. Community clinical experience at the ISU dental clinic. Under direct supervision, dental students observe and participate in total patient care and office management while serving Idaho residents who would not normally receive dental care.

Department of Health and Nutrition Sciences

Chair and Professor McAleese
Professors: Dundas, Olsen, Rankin
Assistant Professors: Blanton, Housman, Kirkpatrick, Louis, Murillo
Joint Appointment Faculty: Celucci, Piland
Clinical Faculty: Batacan, Grimm, McKnight, Munn, Schneider
Adjunct Faculty: Davis, Hannah, Hanson, Lovell, Piland, St. Hilaire, Thomas, Vance, Wiggins

Master of Health Education (MHE)

The master's degree program in Health Education is designed to prepare students to teach strategies in health promotion/disease prevention. Coursework emphasizes the acquisition of skills to assess, plan, implement, and evaluate health education programs in the school, community, or worksite setting.

Admission Requirements

To be accepted as a applicant for the Master of Health Education degree, the student must apply to, and meet all criteria for, admission to the Graduate School. In addition, the Department of Health and Nutrition Sciences may require: (1) the applicant to have necessary background in the related natural sciences, and (2) that the applicant have the necessary background in tests and measurements and basic statistical

procedures. Both thesis and non-thesis options are available.

Entrance Procedure

The Program Director and Department Chair will review MHE applications. Admission standards and application procedures are presented in the Graduate Catalog. The Program Director and the Chair will admit prospective students who satisfy the MHE Program and Graduate School admission requirements. Applicants who do not completely satisfy requirements are referred to the Health and Nutrition Sciences (HNS) Admissions Committee (the Chair, MHE Director, and HNS graduate faculty) to determine recommended admission or denial.

For classified admission into the program, applicants must satisfy the following criteria:

1. The student must apply to, and meet all criteria for, admission to the Graduate School.
2. Submit all previous college transcripts and have a cumulative undergraduate grade point average of at least 3.0 in upper division courses. An applicant who currently holds a graduate degree must submit transcripts, but the undergraduate GPA requirement will not be part of departmental consideration.
3. Submit two letters of recommendation from individuals (non-relatives) who are familiar with their abilities. The letters should be sent to the Department of Health and Nutrition Sciences at the same time the application is sent to the Graduate School.
4. Applicants must submit a typed essay (one to two pages, single spaced) describing their interest in pursuing the MHE degree and their vision of how it will facilitate their career goals.

Applicants currently holding degrees at the doctoral level from an accredited institution will not be required to submit GRE general test scores, except for applicants who have a professional doctoral degree (e.g., PharmD and Juris Doctorate). Those holding degrees at the baccalaureate and master's level must submit GRE general test results to the Graduate School.

Course Requirements

HE 510	Behavior Change Theory and Applications	3 cr
HE 605	Leadership and Administration	3 cr
HE 620	Curriculum and Supervision	3 cr
HE 639	Teaching Strategies in Health	3 cr
MPH 620	Health Program Planning and Evaluation	3 cr
MPH 640	Research and Writing in Health	3 cr
In addition, one of the following:		
HE 623	Curriculum and Supervision	3 cr
MPH 604	Social and Cultural Perspectives in Public Health	3 cr
		Total 18 cr

Thesis Option

HE 650	Thesis	6 cr
Approved Electives		6 cr

Non-Thesis Option

HE 651	Master's Project in Health Education	3 cr
Approved Electives		12 cr
		TOTAL 33 cr

Master of Public Health (MPH)

Public health has as a basic goal to improve the health of populations through planning, implementing, and evaluating health promotion and disease prevention programs. Public health professionals design these intervention programs by using a combination of health education and related organizational, economic, legislative, and environmental supports to enhance the probability of creating a healthier populace.

The Master of Public Health Program curriculum prepares individuals to carry out the following core public health functions as defined by the American Public Health Association: assess both the health needs and the resources available in a community, assist in health policy development that supports programs in prevention, and assure that necessary, high quality, effective services including education are available to every citizen.

To meet this challenge, the MPH degree at Idaho State University is designed to meet the needs of two types of students: (1) those practicing health professionals who desire to augment their previous preparation so they may better implement health promotion strategies in their current work setting or community, and (2) those professionals who wish to train for careers in public health.

Core courses focus on the acquisition of requisite public health knowledge and skills in the disciplines of epidemiology, biostatistics, health policy management, social and behavioral sciences and environmental health. Elective courses allow the student to focus additional coursework in her/his chosen area of interest.

Admission Requirements

For classified admission into the program, applicants must satisfy the following criteria:

1. The student must apply to, and meet all criteria for, admission to the Graduate School.
2. Meet **one** of the following **GPA and GRE criteria** *(NOTE: GPA calculation based on the last 60 hours of undergraduate work)*:

If **GPA is 3.5** or higher, then **NO GRE** is required.
If GPA is **3.0 - 3.49**, then a **score in the 40th percentile** on at least one are of the GRE is required.
If GPA is **2.5 - 2.999**, then **a combined (verbal/quantitative) GRE** minimum score of **1000** is required

3. An applicant who currently holds a graduate degree must submit all transcripts, undergraduate and graduate. College transcripts must be submitted to the Idaho State University Graduate School.
4. No other instruments such as the MCAT, LSAT, or GMAT may be substituted. Applicants currently holding degrees at the doctoral level from an accredited institution will not be required to submit GRE general test scores (this includes professional doctoral degrees such as PharmD, Juris Doctorate, Medical Doctor, Doctor of Osteopathy, Doctor of Veterinary Medicine). Those holding degrees at the baccalaureate and master's level must submit GRE general test scores if they do not meet the 3.5 GPA standard in item 2 above. Students who are admitted as Classified w/PR status without GRE scores must take the general test within their first semester of enrollment. Continuation in the program is contingent on the student meeting GRE score requirements. GRE scores must be submitted to the Idaho State University Graduate School.
5. Have two letters of recommendation from non-relative individuals familiar with applicant's academic or professional abilities (no personal references) sent to the Department of Health and Nutrition Sciences at the same time application is sent to the Graduate School. The letters must be sealed with the signature of the recommender across the envelope flap.
6. Two years of experience working in the health field is preferred for admission. A B.S. or B.A. degree in health or a health-related discipline may substitute for working experience. Applicants will be evaluated on an individual basis.

7. Submit a typed essay (one to two pages, single spaced) describing applicant's interest in pursuing the MPH degree and vision of how it will facilitate the applicant's career goals.

8. International students who have not graduated from an accredited college or university in the United States, and whose native language is not English, must achieve satisfactory scores on the Test of English as a Foreign Language (TOEFL). Satisfactory TOEFL requirements for classified admission are described in the Idaho State University *Graduate Catalog* under "Admission of International Students." In addition, international student applicants who have not graduated from an accredited college or university in the United States must take the GRE and are required to score in the 40th percentile on at least one area of the GRE.

General Requirements:

Applicants' transcripts will be evaluated by the Departmental Graduate Admissions Committee at the time of application to determine if deficiencies exist in the undergraduate coursework. Any deficiency that is identified must be made up prior to beginning the MPH program. Committee members will specify to the student courses that must be taken to rectify any deficiency.

Students pursuing the MPH degree must complete a minimum of 48 credits of coursework, including a 6-credit thesis and 9 credits of elective course work.

All students must maintain a satisfactory record of scholarship. A 3.0 grade point average (GPA) is required for any graduate degree or certification at Idaho State University. A grade of C+ or lower is essentially failing at the graduate level. However, the department may accept a C+ grade in one or two courses as long as the minimum overall 3.0 GPA is maintained.

Course Requirements

MPH/HE 510	Behavior Change Theory and Applications	3 cr
MPH 601	Applications in Epidemiology	3 cr
MPH 602	Biostatistics	3 cr
MPH 604	Social and Cultural Perspectives in Public Health	3 cr
MPH/HE 605	Leadership, Policy and Administration	3 cr
MPH 606	Environmental and Occupational Health	3 cr
MPH 607	US and Global Health Systems	3 cr
MPH 608	Technological Applications in Public Health	3 cr
MPH 609	Seminar in Public and Community Health	3 cr
MPH 620	Health Program Planning and Evaluation	3 cr
MPH 640	Research and Writing in Health	3 cr
MPH 650	Thesis	1-6 cr
	Approved Electives	1-9 cr

Health Education Graduate Courses

HE g501 Issues in Health and Wellness 1-3 credits. Contemporary health and wellness issues emphasizing education interventions and application. Topics may include: death and dying, computer technology in health, healthy aging, motivation, emergency preparedness, alternative and complementary medicine, international health. May be repeated to 6 credits with different content. PREREQ: PERMISSION OF INSTRUCTOR.

HE g510 Behavior Change Theory and Applications 3 credits. Provides a basic understanding of the social, emotional, and lifestyle factors related to health behavior. Strategies designed to identify barriers to behavior and to enhance the health of selected populations are examined. Cross-listed with MPH g510. PREREQ: PERMISSION OF INSTRUCTOR.

HE g525 Patient Education Skills 2 credits. Explores the foundations and application of organizational and communication skills which promote a positive atmosphere for patient education in clinical and worksite settings. PREREQ: HE 340 AND g410 OR PERMISSION OF INSTRUCTOR.

HE g541 Driver and Traffic Safety Education II 2 credits. Development of student learning activities in driver and traffic safety education. Directed laboratory teaching experience includes teaching of beginning drivers in classroom and behind-the-wheel phases. PREREQ: HE 350.

HE g542 Environmental Health and Health Education 3 credits. Study of a variety of issues related to protecting and preserving the environment with an emphasis on school and community educational programs. PREREQ: ADMISSION TO HEALTH AND NUTRITION SCIENCES PROGRAM OR PERMISSION OF INSTRUCTOR.

HE g543 Substance Abuse and Health Education 3 credits. Study of the physical, psychological, sociological, and environmental factors related to drug use with emphasis on school and community prevention programs. PREREQ: ADMISSION TO HEALTH AND NUTRITION SCIENCES PROGRAM OR PERMISSION OF INSTRUCTOR.

HE g545 Human Sexuality and Health Education 3 credits. Study of the multifaceted nature of human sexuality with an emphasis on school and community-level educational programs. PREREQ: ADMISSION TO HEALTH EDUCATION PROGRAM OR PERMISSION OF INSTRUCTOR.

HE g585 Independent Problems in Health Education 1-3 credits. Individual work under staff guidance. Field and/or library research on specific health education problems of interest to majors and minors. Permission of instructor. May be repeated up to 6 credits.

HE g591 Health Education Workshop 1-3 credits. A critical analysis of one or more areas of health education. Limited enrollment. May be repeated up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

HE 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/U.

HE 605 Leadership Policy and Administration 3 credits. Development of leadership and administrative skills which contribute to implementation of effective public health policies and programs. Students will learn strategic planning, facilitation techniques, communication strategies, budget development, and management. Cross-listed with MPH 605.

HE 620 Health Program Planning and Evaluation 3 credits. Theory and processes of assessment, planning, implementing, and evaluating health education, promotion, and disease prevention programs. Principles taught in this course will be applied to community situations. Cross-listed as MPH 620.

HE 623 Curriculum and Supervision 3 credits. Consideration of the health education curriculum in public schools and in colleges and universities. Recent developments and current trends that influence the curriculum and supervision policies. Observation techniques, standards in judging instruction, the supervisory conference, cooperative supervision, basic foundation of curriculum construction, and lesson planning.

HE 639 Teaching Strategies in Health 3 credits. An advanced study of strategies and innovative methods of teaching health education. Emphasis on application to a variety of educational levels.

HE 648 Problems in Health Education 1-3 credits. Individual and group study of problems in the area of health. May be repeated to 6 credit hours. PREREQ: APPROVAL OF ADVISOR AND/OR CHAIRPERSON. Graded S/U.

HE 650 Thesis 1-6 credits. Graded S/U .

HE 651 Master's Project in Health Education 3 credits. Graded S/U .

HE 655 Internship 1-3 credits. Administration, supervision and operation of a community health program. Students work under the direction of a graduate faculty member and practicing administrator. May be repeated up to 3 credits. PREREQ: APPROVAL OF ADVISOR AND/OR CHAIR. Graded S/U.

Master of Public Health Graduate Courses

MPH g510 Behavior Change Theory and Applications 3 credits. Provides a basic understanding of the social, emotional, and lifestyle factors related to health behavior. Strategies designed to identify barriers to behavior and to enhance the health of selected populations are examined. Cross-listed

with HE g510. PREREQ: PERMISSION OF INSTRUCTOR.

MPH 601 Applications in Epidemiology 3 credits. Facilitates an epidemiological approach to problem solving in the health sciences through practical application of field epidemiology concepts and methods. PREREQ: HE 383.

MPH 602 Biostatistics 3 credits. This course will equip students with a conceptual understanding of the calculation and interpretation of inferential statistics in public health research. PREREQ: 300-400 LEVEL STATISTICS COURSE.

MPH 604 Social and Cultural Perspectives in Public Health 3 credits. Exploration of multicultural health beliefs, health disparities and needs of our society focusing on local cultures to develop culturally competent interventions. Learn about ethical issues, social justice, community systems, coalition building, and development of community partnerships.

MPH 605 Leadership Policy and Administration 3 credits. Development of leadership and administrative skills which contribute to implementation of effective public health policies and programs. Students will learn strategic planning, facilitation techniques, communication strategies, budget development, and management. Cross-listed with HE 605.

MPH 606 Environmental and Occupational Health 3 credits. Understanding the interaction of humans with their environment and the implications of human actions. Learn about assessment and control of health risks posed by chemical and biological contaminants and physical exposures (noise, heat, and radiation) in occupational and non-occupational environments.

MPH 607 U.S. and Global Health Systems 3 credits. Explore the historical and contemporary multi-layered social, cultural, political, and economic determinants in the US and internationally that shape health status, health behavior, and health inequalities. Practical application of creating appropriate interventions specific to the target population.

MPH 608 Technological Applications in Public Health 3 credits. Introduction and application of software programs utilized in public health practice. Examples include SPSS, MS Excel, GIS, EpiInfo, MS Publisher. PREREQ: MPH 601, 602, AND HE 202.

MPH 609 Seminar in Public and Community Health 3 credits. Study of topics, trends and challenges within public health.

MPH 620 Health Program Planning and Evaluation 3 credits. Theory and processes of assessment, planning, implementing, and evaluating health education, promotion, and disease prevention programs. Principles taught in this course will be applied to community situations. Cross-listed as HE 620.

MPH 632 Community Health 3 credits. A study of the role of health education/health promotion in the community setting. Emphasis on methods to build coalitions to address community health concerns and on the role of needs assessment.

MPH 640 Research and Writing in Health 3 credits. Application of principles of research design in the health sciences. Requires preparation of a thesis/project proposal. Cross-list with MHE 640

MPH 650 Thesis 1-6 credits. Completion of a thesis/manuscript. Practical application of knowledge/skills in a public health setting. Graded S/U. PREREQ: MPH 601, 602, 603, 620, AND 640.

MPH 655 Public Health Internship 3 credits. Application of skills in a public health agency, organization or other entity to provide the student with practical experience in the field. Graded S/U.

Nutrition and Dietetics Graduate Courses

NTD g509 Professional Readings 1-3 credits. Identification and investigation of conceptual ideas about the relationship of programs, trends, legislation, and developments in food and nutrition. PREREQ: PERMISSION OF INSTRUCTOR.

NTD g520 Nutrition Education Strategies 2 credits. Methods, materials, and evaluation procedures utilized in teaching nutrition to various audiences. Practical experiences for students in effectively educating consumers about nutrition. PREREQ: CFS 139 OR CFS 239.

NTD g539 Sports Nutrition 3 credits. Nutrition recommendations for competitive and recreational athletic performance. Rationale for nutrition practices through an examination of individual nutrient metabolism. Controversies and misinformation addressed. PREREQ: NTD 239 SUGGESTED.

NTD g557 Experimental Foods 3 credits. Development of experimental methods and their application to cookery and food technology; preparation of student for independent investigation in foods; acquaintance with literature in the field. Two hours lecture/four hours laboratory. Cross-listed as CFS 457. PREREQ: CFS 104.

NTD g561 Nutritional Biochemistry I 3 credits. Advanced study of nutrition science, including protein, carbohydrate, lipid, vitamin, and mineral metabolism. Introduction to research methodology and professional literature. PREREQ: NTD 239, CHEM 102.

NTD g585 Nutritional Biochemistry II 3 credits. Human metabolism in health and disease. Emphasizes interrelationships among hormones, carbohydrates, proteins, lipids, vitamins and minerals within tissues and organs. PREREQ: CHEM 101 AND CHEM 102, AND CHEM 111, CHEM L111, CHEM 112, CHEM L112, CHEM 113, CHEM L113 AND CHEM 301.

NTD g591-592 Special Problems in Nutrition and Dietetics 1-2 credits. Students select problems on the basis of special needs, interests or abilities, and work on them independently in the laboratory, library, or community with regular conferences with the advisor. PREREQ: PERMISSION OF INSTRUCTOR.

NTD g595 Dental Nutrition 1 credit. This course reviews the role of nutrition in attaining and maintaining optimal oral health. The course explores how the essential nutrients influence oral health. This course is only available to students in the Idaho Dental Education Program in the Department of Dental Science.

NTD 620 Nutritional Epidemiology 2 credits. Specialized study of epidemiology including nutritional assessment methods, interrelationships between disease, diet, and health status, and implications for public health policy.

NTD 622 Maternal, Infant, and Child Nutrition 2 credits. Advanced study of nutrition in human growth and development during pregnancy, lactation, infancy, childhood, adolescence. Therapeutic nutritional management of diseases specific to pregnancy, infancy, and childhood are addressed.

NTD 624 Nutrition and Aging 2 credits. Exploration of the physiological, psychosocial, and chronic degenerative conditions associated with aging and the nutritional implications of each. Epidemiological basis for setting dietary goals and program development to support the nutritional needs of the elderly is addressed.

Department of Health Care Administration

Associate Professor and Chair: Cellucci
Professor: Wiggins
Assistant Professor: Farnsworth

Health Care Administration Graduate Courses

(No Graduate Degrees Offered)

HCA g573 Marketing for Health Care Organizations 3 credits. Current marketing trends in the health care marketplace. Consumer orientation; health care marketing plans and strategy development. PREREQ: MKT 325.

HCA 610 Industry in Transition 2 credits. Current readings from the popular and academic literature are used to explore and to understand the critical aspects of access, cost, and quality health care delivery across all areas of the industry.

HCA 615 Health Services Management 3 credits. Determination and fulfillment of mission, plans, and structure, motivating individuals, and managing activities to support people in their work and in the achievement of their goals. PREREQ: HCA 610.

HCA 620 Economics and Reimbursement 2 credits. In-depth synthesis of the insurance and reimbursement practices in today's health care

environment, and the economic foundations upon which they are based.

HCA 625 Healthcare Law and Bioethics 3 credits. Comprehensive coverage of legal issues and the ethical implications of the law as applied to regulation and licensure, health care financing, Medicare and Medicaid, health care reform, and other relevant current issues. PREREQ: HCA 610 AND HCA 620.

HCA 630 Financial Management 3 credits. The application of financial management principles, practices, and techniques used in health care organizations. Financial tools as decision making, strategy, and planning tools.

HCA 635 Healthcare IT and Quality 2 credits. Healthcare IT management framework, hardware and software, project management, and the collection, use, security of health information, external accreditation processes, and internal quality improvement programs.

HCA 640 Healthcare Policy 2 credits. The formulation of priorities, development of legislation, implementation of legislative provisions through administrative action, and their effect on population health. PREREQ: HCA 610 AND MPH 601.

HCA 645 Strategic Management 3 credits. An integration of the principles of organization management, finance, and marketing. Market analysis and positioning including strategic planning and new program development. The leader's role in strategy formulation and implementation. PREREQ: HCA 615 AND HCA 625.

HCA 651 Master's Project 1-3 credits. Under the guidance of a supervising committee, each student will conduct an in-depth project specific to a current issue or problem in health care management. Written documentation and an oral defense of the project are required. Must be taken for three credits the first time this course is taken. May be repeated for variable credit thereafter.

HCA 660 Applied Research 3 credits. Students will develop the knowledge and skills needed to investigate and address important issues in health organizations using the methods of health services research, as well as to effectively use and evaluate the published literature. How to identify and define a question that is researchable, appropriately use primary and secondary data, choose and execute appropriate research designs, and select and apply appropriate qualitative, quantitative, survey, and evaluation methods.

HCA 665 Health Insurance and Reimbursement 3 credits. Introduction to, and analysis of, health insurance in the United States. Select topics include reimbursement systems, public and private health insurance; their impact on patients, organizations, society, care delivery modes, and clinical and managerial quality. PREREQ: HCA 682.

HCA 680 Applied Topics in Health Care 3 credits. Advanced readings and analysis in the areas of health economics, health finance, social aspects of medicine, bioethics, public health and epidemiology. PREREQ: HCA 682.

HCA 682 US Health Systems and Policy 3 credits. An examination of US health industry, systems, and organizations from the four-point perspective of access, quality, finance, and policy.

HCA 691 Independent Problems in Health Care Administration 1 - 3 credits. Individual work under faculty guidance may be repeated for up to 6 credits.

School of Nursing

Associate Dean/Director and Associate Professor: Ashton

Assistant Director for Graduate Programs and Assistant Director for Undergraduate Programs and Assistant Professor: Renn

Professor: Neill

Associate Professors: Arvidson, Molinari, Patillo

Clinical Associate Professors: Mlandenka, Murphy, Reynolds

Clinical Assistant Professors: Brook, Damstrom, Friel, Goodwin, Hewett, Jardin-Dickerson, Klaus, Lassere, Marquette, Ovitt, Punkoney, Pesnell, Reiland

Clinical Instructor: Quiroz

Emeriti Faculty: Jacobson, McLaughlin, McRoberts, Sato

Master of Science in Nursing

This program is offered fully online and requires 39-53 credits depending upon the option. Full- and part-time study programs are available in the following options: Clinical Nurse Leader, Clinical Nurse Specialist, Family Nurse Practitioner, Nursing Education, and Nursing Leadership. All students are required to enroll in 5 core courses (16 credits). To develop clinical expertise, students are introduced to advanced knowledge and practice of nursing. Two pathways are available for the MS degree: AD-MS and BS-MS. A certificate program in available in all options for nurses with a master's degree who seek advanced preparation in a specialty.

Students enrolled in the Clinical Nurse Leader option are prepared to direct outcomes management for a distinct patient population, actively provide direct patient care and implement evidence-based practice to ensure patients benefit from the latest care delivery innovations. Students enrolled in the Clinical Nurse Specialist option will be prepared to care for adults with complex medical-surgical problems in a variety of acute and long term care settings. Students enrolled in the Family Nurse Practitioner option will gain expertise in primary care of families and individuals in rural and non-rural communities. Students enrolled in the Nursing Education option will be prepared to teach in an academic nursing program. Students enrolled in the Nursing Leadership option will be prepared as administrators and leaders in a variety of health care settings.

Application Requirements (BS-MS Pathway)

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, the following must be complied with:

1. Application forms to the School of Nursing AND the Graduate School. Each application requires a separate application fee. Deadline for application is February 2.
2. GRE scores.
3. Transcript of undergraduate work for BS-MS applicants. Transcripts of undergraduate and graduate work for Certificate applicants.
4. Three professional (not personal) references submitted on the School of Nursing forms.
5. An interview will complete the admission process.

Admission Requirements (BS-MS Pathway)

1. A completed application as described previously.
2. Graduation from a nationally accredited baccalaureate nursing program.
3. Undergraduate cumulative grade point average of at least 3.0 in the last two years of undergraduate study.
4. GRE scores.
5. Active Idaho Registered Nurse license in good standing (or compact state).
6. Minimum of 3 credits of descriptive and inferential statistics with a grade of C or better.

NOTE: Admission is competitive. Achievement of minimum GPA and GRE requirements do not guarantee admission to the program. Consideration for admission includes all application data.

Progression of Master's Students

1. Progression criteria established by the Graduate School.
2. Maintenance of a cumulative GPA of 3.0.
3. The following will constitute grounds for dismissal from the graduate program:
   - A grade of "C-" or below or "U " in any Program of Study course.
   - A grade of "C+" or below in any Program of Study course with an associated Lab.
   - More than three credits of "C+" or "C" in any Program of Study course **not** associated with a Lab.
4. Removal of incompletes by midterm of the subsequent semester.
5. Current CPR (BLS) certification, TB screening, up-to-date immunizations, and criminal background check are required.

Graduation Criteria

To qualify for graduation with a MS in Nursing, students must:

1. Successfully pass a written and oral comprehensive examination.

AND

2. The student must apply to, and meet all criteria to fulfill graduation requirements.

AD-MS Pathway

This degree pathway is designed to provide an accelerated program for nurses with an Associate Degree (AD) to be directly admitted into the master's nursing program. The AD nurse will receive a BS degree while completing coursework directly related to completing one of the nursing graduate program options.

Following admission to the School of Nursing graduate program, students will be eligible to take NURS 404, the required five (5) credit nursing baccalaureate bridge course. Another 14 credits of undergraduate coursework must be completed prior to taking graduate courses. These 19 credits must be taken at a four-year institution. Students who received their AD out-of-state or prior to 1995 may be required to complete additional coursework.

Application deadline is October 1. Baccalaureate bridge coursework will be completed the subsequent spring semester and students will begin the graduate program the next summer/fall. The application and admission process is available on the School of Nursing website.

Requirements for Application (AD-MS Pathway)

1. A completed School of Nursing application.
2. A completed Graduate School application.
3. Graduation from an accredited nursing program with an Associate of Arts, Associate of Science, or Associate of Arts and Sciences degree.
4. Cumulative GPA of 3.0 or better.
5. Active Idaho Registered Nurse license in good standing (or compact state).

NOTE: Admission is competitive. Achievement of minimum GPA and GRE requirements do not guarantee admission to the program. Consideration for admission includes all application data.

AD-MS Required Baccalaureate Bridge Courses

MATH 253	Introduction to Statistics	3 cr
ANTH 237/238/239	(People & Cultures: Old World/ New World/Latino)	
OR		
SOC 101	Introduction to Sociology	
	Total of 3 credits ANTH or SOC	3 cr
BIOL 305	Introduction to Pathobiology	3 cr
NURS 330	Nursing Research	3 cr
NURS 404	Professional Role Expansion (offered only at Idaho State University)	5 cr
	Elective	2 cr
	Total Bridge Credits:	19 cr

MS Programs of Study

Core Courses (required for all MS options)

NURS 600	Theoretical Foundations for Nursing Practice	3 cr
NURS 602	Health Care Policy and Finance	3 cr
NURS 610	Advanced Evidence Application	4 cr
NURS 612	Health Care of Rural Communities	3 cr
NURS 621	Advanced Nursing Roles	3 cr

Clinical Nurse Leader

BIOL 563	Human Pathophysiology	4 cr
PHAR 645	Pharmacotherapeutics for APN	3 cr
NURS 611	Advanced Health Assessment	2 cr
NURS 611L	Advanced Health Assessment Lab (144 lab/clinical hours)	3 cr
NURS 652	Administrative Approaches to Nursing Leadership	3 cr
NURS 660	Care Environment Management	2 cr
NURS 660L	Care Environment Management Lab (48 clinical hours)	1 cr
NURS 661	Clinical Outcomes Management	2 cr
NURS 661L	Clinical Outcomes Management Lab (96 clinical hours)	2 cr
NURS 662	CNL Practicum (288 clinical hours)	6 cr
	TOTAL OPTION CREDITS:	**44**
	TOTAL CLINICAL HOURS:	**576**

Clinical Nurse Specialist

BIOL 563	Human Pathophysiology	4 cr
PHAR 645	Pharmacotherapeutics for APN	3 cr
NURS 611	Advanced Health Assessment	2 cr
NURS 611L	Advanced Health Assessment Lab (144 lab/clinical hours)	3 cr
NURS 604	Health Promotion	2 cr
NURS 657	Advanced Adult Health Nursing I	3 cr
NURS 657L	Advanced Adult Health Nursing I Lab (48 clinical hours)	1 cr
NURS 658	Advanced Adult Health Nursing II	3 cr
NURS 658L	Advanced Adult Health Nursing II Lab (96 clinical hours)	2 cr
NURS 659	Advanced CNS Practicum (288 clinical hours)	6 cr
	TOTAL OPTION CREDITS:	**45**
	TOTAL CLINICAL HOURS:	**576**

Family Nurse Practitioner

BIOL 563	Human Pathophysiology	4 cr
PHAR 645	Pharmacotherapeutics for APN	3 cr
NURS 611	Advanced Health Assessment	2 cr
NURS 611L	Advanced Health Assessment Lab (144 lab/clinical hours)	3 cr
NURS 604	Health Promotion	2 cr
NURS 642	Primary Care of the Young Adult	3 cr
NURS 642L	Primary Care of the Young Adult Lab (96 clinical hours)	2 cr
NURS 643	Primary Care of the Child & Adolescent	3 cr
NURS 643L	Primary Care of the Child & Adolescent Lab (96 clinical hours)	2 cr
NURS 644	Primary Care of the Middle & Older Adult	3 cr
NURS 644L	Primary Care of the Middle & Older Adult Lab (96 clinical hours)	2 cr
NURS 646	NP Practicum (384 clinical hours)	8 cr
	TOTAL OPTION CREDITS:	**53**
	TOTAL CLINICAL HOURS:	**816**

Nursing Education

BIOL 563	Human Pathophysiology	4 cr
NURS 633	Rethinking Nursing Education	3 cr
NURS 635	Curriculum Issues and Development	3 cr
NURS 639	Teaching and Learning Strategies	3 cr
NURS 640	Evaluation Issues and Strategies	3 cr
NURS 647	Advanced Practicum in Nursing Education (288 practicum hours)	6 cr
	Elective	2-3 cr
	TOTAL OPTION CREDITS:	**40-41**

Nursing Leadership

NURS 652	Administrative Approaches to Nursing Leadership	3 cr
NURS 653	Organizational Behavior in a Changing Health Care System	3 cr
NURS 654	Financial Management	3 cr
NURS 655	Advanced Leadership	3 cr
NURS 655L	Advanced Leadership Lab (96 practicum hours)	2 cr
NURS 656	Advanced Leadership Practicum (192 practicum hours)	4 cr
	Electives	5-6 cr
	TOTAL OPTION CREDITS:	**39-40**
	TOTAL PRACTICUM HOURS:	**288**

Post-Master's Nursing Certificate Option

Applicants must have received a graduate degree from a nationally accredited program. To receive a Post-Master's Certificate, students must:

1. Meet all School of Nursing and Graduate School admission and progression criteria for the Master of Science in Nursing degree for the option in which they enroll (no GRE required).
2. Successfully complete a minimum of 12 credits from Idaho State University.
3. Successfully complete all prerequisite courses with a grade of B or better.

The Graduate Nursing Council approves prerequisite courses prior to or at the time of admission to the certificate program. In addition, students may transfer up to 9 credit hours of required coursework with approval of the Nursing Graduate Council.

Prerequisites for Admission to All Options:

NURS 600	Theoretical Foundations for Nursing Practice	3 cr
NURS 602	Health Policies and Issues	3 cr
NURS 610	Advanced Evidence Application	4 cr
NURS 621	Advanced Nursing Roles	3 cr

Additional Prerequisites for CNL, CNS, FNP Options

NURS 611	Advanced Health Assessment	2 cr
NURS 611L	Advanced Health Assessment Lab	3 cr
BIOL 563	Human Pathophysiology	4 cr
PHAR 645	Pharmacotherapeutics for Nurse Practitioners	3 cr

Additional Prerequisite for Education Option

BIOL 563	Human Pathophysiology	4 cr

Required Coursework: Clinical Nurse Leader Option

NURS 612	Health Care of Rural Communities	3 cr
NURS 652	Administrative Approaches to Nursing Leadership	3 cr
NURS 660	Care Environment Management	2 cr
NURS 660L	Care Environment Management Lab	1 cr
NURS 661	Clinical Outcomes Management	2 cr
NURS 661L	Clinical Outcomes Management Lab	2 cr
NURS 662	CNL Practicum	6 cr

Required Coursework: Clinical Nurse Specialist Option

NURS 604	Health Promotion	2 cr
NURS 612	Health Care of Rural Communities	3 cr
NURS 657	Advanced Adult Health Nursing I	3 cr
NURS 657L	Advanced Adult Health Nursing I Lab	1 cr
NURS 658	Advanced Adult Health Nursing II	3 cr
NURS 658L	Advanced Adult Health Nursing II Lab	2 cr
NURS 659	Advanced CNS Practicum	6 cr

Required Coursework: Family Nurse Practitioner Option

All students who are currently licensed nurse practitioners (adult, pediatric, geriatric, etc.) and desire the FNP post-master's certificate must complete a combined 816 clinical contact hours from their first NP program and the ISU NP program.

NURS 604	Health Promotion	2 cr
NURS 612	Health Care of Rural Communities	3 cr
NURS 642	Primary Care of the Young Adult	3 cr
NURS 642L	Primary Care of the Young Adult Lab	2 cr
NURS 643	Primary Care of the Child and Adolescent	3 cr
NURS 643L	Primary Care of the Child and Adolescent Lab	2 cr
NURS 644	Primary Care of the Middle and Older Adult	3 cr
NURS 644L	Primary Care of the Middle and Older Adult Lab	2 cr

Students who are not licensed nurse practitioners must also complete the following additional course:

NURS 646	NP Practicum	8 cr

Required Coursework: Nursing Education Option

NURS 612	Health Care of Rural Communities	3 cr
NURS 633	Rethinking Nursing Education	3 cr
NURS 635	Curriculum Issues and Development	3 cr
NURS 639	Teaching and Learning Strategies	3 cr
NURS 640	Evaluation Issues and Strategies	3 cr
NURS 647	Advanced Practicum in Nursing Education	6 cr

Required Coursework: Nursing Leadership Option

NURS 612	Health Care of Rural Communities	3 cr
NURS 652	Administrative Approaches to Nursing Leadership	3 cr
NURS 653	Organizational Behavior in a Changing Health Care System	3 cr
NURS 654	Financial Management	3 cr
NURS 655	Advanced Leadership	3 cr
NURS 655L	Advanced Leadership Lab	2 cr
NURS 656	Advanced Leadership Practicum	4 cr

Nursing Graduate Courses

NURS 404 Professional Role Expansion 5 credits. A study of nursing theories and philosophy as well as an integration of community, leadership, management, and informatic principles to prepare the Associate Degree to Master of Science nurse to function in the changing health care environment. PREREQ: ADMISSION TO THE AD-MS PROGRAM.

NURS g517 Interdisciplinary Evaluation Team 1 credit. Introduction to the principles and techniques associated with interdisciplinary evaluation. Disciplines emphasized: Audiology, Nursing, Physical Therapy, Psychology, Social Work, Special Education, Speech-Language Pathology. Cross-listed as PSYC g517, SOWK g517, CSED g517.

NURS 600 Theoretical Foundations for Nursing Practice 3 credits. Critical examination of the development of nursing knowledge; critique, evaluate and apply a variety of theories from nursing, family and related disciplines as a base for advanced nursing practice.

NURS 602 Health Care Policy and Finance 3 credits. Analysis of policy research relevant to health care, finance and integrated care systems. Evaluate effects of local, regional, national, and international health policy and trends on delivery systems and advanced nursing practice. PREREQ: NURS 600.

NURS 604 Health Promotion and Disease Prevention for Advanced Practice Nurses 2 credits. Identification of risk factors and critical examination of screening and therapeutic interventions employed in health promotion and disease prevention across age and culture in diverse populations. PREREQ: NURS 600.

NURS 610 Advanced Evidence Application 4 credits. Application of evidence to advance nursing practice. Includes issue identification, research process, statistical principles, and outcomes evaluation PREREQ: NURS 600.

NURS 611 Advanced Health Assessment 2 credits. Concepts of advanced health assessment required for advanced nursing practice in various settings and diverse populations. Introduction to differential diagnosis and clinical reasoning skills. PREREQ: BIOL 563; COREQ: NURS 600, 611L.

NURS 611L Advanced Health Assessment Lab 3 credits. Acquisition and application of advanced health assessment, skills in diverse populations. Skills include health history, physical assessment and health promotion. PREREQ: BIOL 563; COREQ: NURS 611. Graded S/U.

NURS 612 Health Care of Rural Communities 3 credits. Utilize appropriate epidemiological, social, and environmental data sources to conduct rural community assessment. Emphasis on developing culturally relevant care systems at the community level. PREREQ: NURS 610.

NURS 621 Advanced Nursing Roles 3 credits. Integration of theory and research related to role development, transition and ambiguity in advanced nursing practice. Emphasis on evaluation of health care delivery, ethical decision-making, partnership development, collaborative practice and accountability for quality. COREQ: ONE OF THE FOLLOWING COURSES DEPENDING UPON OPTION: NURS 646, 647, 656, 659, OR 662.

NURS 633 Rethinking Nursing Education 3 credits. Theoretical perspective on teaching and learning in nursing education, creating a theoretical base for the education curriculum. The learners

will examine theories of learning and adult learning and explore their application to nursing education.

NURS 635 Curriculum Issues and Development 3 credits. Examination of various external and internal issues influencing nursing curriculum. Curriculum components and designs will be explored and a model curriculum developed. PREREQ: NURS 633.

NURS 636 Special Problems 1-3 credits. Independent study under faculty guidance. May be repeated up to 6 credits. PREREQ: PERMISSION OF INSTRUCTOR.

NURS 639 Teaching and Learning Strategies in Nursing Education 3 credits. Exploration of a variety of strategies to facilitate achievement of curriculum outcomes. The use of current technology and learner-centered strategies are emphasized. PREREQ: NURS 633.

NURS 640 Evaluation Issues and Strategies in Nursing Education 3 credits. Examination of issues surrounding program and student evaluation. Plans for formative and summative evaluation will be developed. COREQ: NURS 633.

NURS 642 Primary Care of the Young Adult 3 credits. Management and evaluation of primary care problems in the young adult. Provides the student with knowledge to assist individuals with common health problems, while integrating the concepts of health promotion. PREREQ: NURS 611, 611L, PHAR 645; COREQ: 642L.

NURS 642L Primary Care of the Young Adult Lab 2 credits. Delivery of advanced nursing care to young adults and their families. Clinical application of theoretical knowledge with ongoing refinement of essential skills used by nurse practitioners in primary health care. Identification and management of a broad range of common health problems including health promotion in various clinical settings. PREREQ: NURS 611, 611L, PHAR 645; COREQ: NURS 642. Graded S/U.

NURS 643 Primary Care of the Child and Adolescent 3 credits. Management and evaluation of primary care problems of children, adolescents and their families in a variety of ambulatory settings. The initiation of health promotion and health maintenance activities is stressed. PREREQ: NURS 642, 642L; COREQ: NURS 643L.

NURS 643L Primary Care of the Child and Adolescent Lab 2 credits. Delivery of advanced nursing care to children and adolescents and their families. Clinical application of theoretical knowledge with ongoing refinement of essential skills used by nurse practitioners in primary health care. Identification and management of a broad range of common health problems including health promotion in various clinical settings. PREREQ: NURS 642, 642L; COREQ: NURS 643. Graded S/U.

NURS 644 Primary Care of the Middle and Older Adult 3 credits. Management and evaluation of primary care problems of middle and older adults, including acute episodic and chronic illnesses. The initiation of health promotion and maintenance activities is stressed. PREREQ: NURS 642, 642L; COREQ: NURS 644L.

NURS 644L Primary Care of the Middle and Older Adult Lab 2 credits. Delivery of advanced nursing care to middle and older adults and their families. Clinical application of theoretical knowledge with ongoing refinement of essential skills used by nurse practitioners in primary health care. Identification and management of a broad range of common health problems including health promotion in various clinical settings. PREREQ: NURS 642, 642L; COREQ: NURS 644. Graded S/U.

NURS 646 NP Practicum 8 credits. Application of theoretical content, research findings and intervention strategies to advanced nursing practice in both rural and non-rural settings. PREREQ: NURS 604, 612, 643, 643L, 644, 644L. Graded S/U.

NURS 647 Advanced Practicum in Nursing Education 6 credits. Application of learning theories, strategies and evaluation in a nursing program. The learners will explore and practice various facets of the faculty role. PREREQ: NURS 633, 635, 639, 640. Graded S/U.

NURS 652 Administrative Approaches to Nursing Leadership 3 credits. Synthesis and evaluation of organizational theory in leadership and management of health care organizations. Emphasis on system-wide structures, processes, and outcomes.

NURS 653 Organizational Behavior in a Changing Health Care System 3 credits. Examination of administration and organizational behavior in relation to population-based needs. Includes examination of organization and management theory in relation to strategic planning, management of the changing health care delivery system, program planning and evaluation, decision-making, and change. PREREQ: NURS 600, 652.

NURS 654 Financial Management 3 credits. Application of basic strategies for evaluating financial resources for health care systems; models of forecasting, prediction, and politics of budgeting and health care finances.

NURS 655 Advanced Leadership 3 credits. Examination of nursing leadership in health care delivery systems. Theoretical knowledge required for program management and interprofessional collaboration. Examination of quality and risk management, legal and ethical implications, shared governance, and conflict management. PREREQ: NURS 600, 610, 653; COREQ: NURS 655L.

NURS 655L Advanced Leadership Lab 2 credits. Application of knowledge and practice of skills required for program management and interprofessional collaboration. Application of quality and risk management, legal and ethical implications, shared governance, and conflict management. PREREQ: NURS 600, 610, 653; COREQ: NURS 655. Graded S/U.

NURS 656 Advanced Leadership Practicum 4 credits. Critical examination and application of leadership in health care delivery systems with an emphasis on individualized leadership experiences. PREREQ: NURS 655, 655L. Graded S/U.

NURS 657 Advanced Adult Health Nursing I 3 credits. Physiological concepts of health and illness and the role of the Clinical Nurse Specialist in assisting patients, families, and caregivers to manage simple health situations in adult populations. PREREQ: NURS 611, 611L; COREQ: 657L.

NURS 657L Advanced Adult Health Nursing I Lab 1 credit. Delivery of advanced nursing care to adults and their families. Clinical application of theoretical knowledge with ongoing refinement of essential skills used by clinical nurse specialists. Management of simple health situations in various clinical settings. PREREQ: NURS 611, 611L; COREQ: NURS 657. Graded S/U.

NURS 658 Advanced Adult Health Nursing II 3 credits. Physiological concepts of health and illness and the role of the Clinical Nurse Specialist in assisting patients, families, and caregivers to manage complex health situations in specialty adult populations. PREREQ: NURS 657, 657L; COREQ: NURS 658L.

NURS 658L Advanced Adult Health Nursing II Lab 2 credits. Delivery of advanced nursing care to adults and their families. Clinical application of theoretical knowledge with ongoing refinement of essential skills used by clinical nurse specialists. Management of complex health situations in various clinical settings. PREREQ: NURS 657, 657L; COREQ: NURS 658. Graded S/U.

NURS 659 Advanced CNS Practicum 6 credits. Synthesis and application of clinical specialty and CNS role knowledge and skills in select areas of adult medical-surgical practice. PREREQ: NURS 658, 658L. Graded S/U.

NURS 660 Care Environment Management 2 credits. Prepares the student for generalist practice in care environment management. Includes concept of horizontal leadership, unit level microsystems of care delivery, quality management, risk reduction, patient safety and informatics. PREREQ: NURS 611, 611L, 652; COREQ: NURS 660L, PHAR 645.

NURS 660L Care Environment Management Lab 1 credit. Clinical application of theoretical concepts of care environment management in a variety of clinical settings. . PREREQ: NURS 611, 611L; COREQ: NURS 660, PHAR 645. Graded S/U

NURS 661 Clinical Outcomes Management 2 credits. Prepares the student for generalist practice in clinical outcomes management. Includes care management, outcome measurements, epidemiology, and clinical decision making. PREREQ: NURS 660, 660L; COREQ: 661L.

NURS 661L Clinical Outcomes Management Lab 2 credits. Clinical application of theoretical concepts of clinical outcomes management in a variety of clinical settings. PREREQ: NURS 660, 660L; COREQ: NURS 661. Graded S/U.

NURS 662 Clinical Nurse Leader Practicum 6 credits. An immersion experience designed as a full-time CNL practice role with a designated clinical preceptor. Emphasis on implementation and synthesis of the CNL role and skills in a selected care delivery system. PREREQ: NURS 661, 661L. Graded S/U.

Department of Physical and Occupational Therapy

Chair and Associate Professor: Helgeson
Occupational Therapy Program Director and Assistant Professor: Eakman
Professor: Urfer
Associate Professors: Creelman, Devine
Assistant Professors: Dye, Gee, Jackman, Peterson, Seiger, Ralphs

Mission Statement

The mission of the Department of Physical and Occupational Therapy is to educate and train students at graduate levels who are able to competently assume roles as entry-level clinical practitioners in physical and occupational therapy in rural and urban practice settings. The department faculty is focused on providing an optimal learning environment for students through the development of a cohesive interdisciplinary curriculum, the pursuit of research and scholarly activity, encouragement of diversity in student learning experiences, emulation of professional and ethical conduct, and dissemination of current concepts and skills to the clinical and professional communities in the state and region.

Program Mission

The primary mission of the Doctor of Physical Therapy Program is to provide entry-level education in a supportive learning environment fostering diverse and interdisciplinary didactic and clinical experiences, clinical skills acquisition, and a desire for lifelong learning to enhance the delivery of physical therapy services and the profession. Further, the program emphasizes faculty and student enrichment through scholarly endeavors, teaching, service, and clinical practice contributions within their areas of expertise.

Goals of the Doctor of Physical Therapy Program

- **Prepare physical therapists at the graduate level who have the skills and abilities necessary to become professionals.**

1. Provide students with entry-point physical therapy examination, evaluation, prognostic, diagnostic, and intervention skills.
2. Educate students to evaluate and apply research based on the evidence for physical therapy intervention and practice validation.
3. Reinforce the concept that lifelong learning and professionalism are essential in the practice and promotion of physical therapy.
4. Encourage students to participate in determining the future development of the profession of physical therapy.
5. Facilitate critical thinking and problem solving abilities of students through the use and application of the foundational and clinical sciences related to the practice of physical therapy.

- **Promote and provide physical therapy services to residents of Idaho including under-served populations**.

1. Facilitate faculty and student involvement in various components of service learning related to physical therapy.
2. Provide the opportunity for patients to receive physical therapy services as a part of the program's health professions training mission

- **Increase the availability and diversity of continuing education and interdisciplinary collaboration for physical therapists in the state of Idaho and surrounding regions**.

1. Develop programs with a diversity of health care providers.
2. Foster collaboration and participation with health care agencies to enhance the practice of rehabilitation science.
3. Encourage educational advancement through degree enhancement, specialization, and certification.

- **Development of faculty and student scholarly research activities**.

1. Identify relevant clinical and academic research problems.
2. Provide consultation and cooperative efforts to support research and scholarly endeavors.
3. Identify funding resources to support research programs.

Doctor of Physical Therapy

The graduate entry level program in Physical Therapy is a professional entry level program designed to prepare students for licensure to practice as physical therapists. The program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

The Doctor of Physical Therapy program (DPT) was granted re-accreditation status by the Commission on Accreditation in Physical Therapy Education (CAPTE) in October 2006. Prospective students having questions about the program's accreditation status should contact the Commission on Accreditation of Physical Therapy Education, 111 North Fairfax Street, Alexandria, VA 22314; accreditation@apta.org; (703)684-2782 or (703)706-3245.

Admission Requirements

The student must apply to, and meet all criteria for admission to the Graduate School. In addition, the following conditions must be met:

1. Completion of bachelor's degree from a college or university accredited in the United States or its equivalent from a school in another country. (Must complete degree before onset of classes in PT Program of the Fall Semester in year of acceptance.)
2. Grade point average of 3.0 or above on the equivalent of the most recent four full-time semesters of academic work. GPA is calculated on upper division courses only.
3. Grade point average of 3.0 or above in each prerequisite set of science courses. Please contact the Department of Physical Therapy for clarification.
4. Applicants must take the Graduate Record Examination (GRE) or Miller Analogies Test (MAT).
   a) GRE must meet the following requirements to be competitive: A total combined score of at least 950 in the verbal and quantitative portions. Verbal must be at least 400. Minimum of 4.5 on the analytical portion.

b) MAT must meet the following requirements to be competitive: A total score of 390.

c) Applicants whose first language is not English need to meet the following TOEFL requirements for Classified admission: (1) Internet-based test (iBT): a total score of 80 with a score of at least 20 on each Section (graduate assistants who teach courses must score 23 or above on the Speaking Section) on the iBT; or (2) Computer-based test: a total score of 213 with a score of at least 21 on Section 1 (Listening Comprehension) on the computer test; or (3) Paper-based test: a total score of 550 with a score of at least 55 on Section l (Listening Comprehension) on the paper test or a score of 84 on the MTELP, or a score of 6 on the IELTS.

d) Applicants with scores lower than the requirements may not be considered.

e) The scores of the GRE/MAT/TOEFL must be received by the Graduate School by the application deadline (December 15) for an application to be considered. The ISU code for these three tests is: 4355.

5. At least 80 hours of salaried or voluntary experience in two or more physical therapy practice settings. Experience must be supervised and documented by licensed physical therapists. This experience must have occurred within the last five years.

6. Three letters of recommendation. Two letters must be from licensed physical therapists under whom the student has obtained hours of experience. One letter must be from a professor.

7. Applicants meeting all of the above requirements, and who have been more successful in gaining entry, will be given preference for admission into the program. The admissions committee reviews all applicants on a competitive case-by-case basis during any admissions cycle.

8. Qualified applicants may be invited for a personal interview with physical therapy admissions committee.

Prospective applicants should contact the department for specific descriptions of the above general requirements.

A maximum of 24 students are admitted to the program each year. Classes begin in the Fall Semester of each year. Meeting entry level requirements for admission does not guarantee a seat in the program. Admission is on a competitive basis, and 75% of the seats are offered to Idaho residents. Please contact the Department of Physical Therapy for details.

General Requirements

The curriculum is 3 years in duration and includes 5 clinical affiliations. There are 8 semesters and 2 full-time summer sessions encompassing a total of 101 credits. The clinical affiliations mandate student travel and housing with the usual expenses borne by the student. Out-of-state travel for affiliations is required.

Doctor of Physical Therapy Curriculum*

Fall - Semester 1

PTOT 512	Professional Communication	2 cr
PTOT 513	Physical Therapy Profession	2 cr
BIOL 574/574L	Human Anatomy - PT emphasis	5 cr
BIOL 586/586L	Human Systemic Physiology	5 cr
PTOT 623	Physical Agents	3 cr
PTOT 643	Physical Agents Lab	1 cr
		Total 18 cr

Spring - Semester 2

PTOT 501	Clinical Kinesiology	4 cr
PTOT 502	Clinical Neuroscience	5 cr
PTOT 606	Clinical Therapeutic Exercise	3 cr
PTOT 620	Clinical Procedures	2 cr
PTOT 640	Clinical Procedures Lab	1 cr
PTOT 621	Manual Evaluation and Treatment	2 cr
PTOT 641	Manual Evaluation and Treatment Lab	1 cr
PTOT 618	Practicum	1 cr
		Total 19 cr

Summer - Semester 3

PTOT 514	Research Methodology	4 cr
PTOT 608	Pharmacology for Physical and Occupational Therapists	3 cr
PTOT 631	Clinical Affiliation I	3 cr
		Total 10 cr

Fall - Semester 4

PTOT 616	Professional Project	1 cr
PROR 6`7	Research Practicum	1-2 cr
PTOT 618	Practicum	1 cr
PTOT 622	Musculo-Skeletal System Management	4 cr
PTOT 642L	Musculo-Skeletal System Management Lab	1 cr
PTOT 624	Cardiac and Pulmonary System Management	5 cr
PTOT 632	Clinical Affiliation II	3 cr
		Total 18 cr

Spring - Semester 5

PTOT 616	Professional Project	1 cr
PTOT 619	Practicum	1 cr
PTOT 626	Neurological Systems Management	5 cr
PTOT 646L	Neurological Systems Mgmt Lab	1 cr
PTOT 715	Resource Management	3 cr
		Total 11 cr

Summer - Semester 6

PTOT 733	Clinical Affiliation III	5 cr
PTOT 616	Professional Project	1 cr
		Total 6 cr

Fall - Semester 7

Oral & Comprehensive Exams

PTOT 616	Professional Project (elective)	1 cr
PTOT 619	Practicum	1 cr
PTOT 725	Multi-Systems Management	4 cr
PTOT 727	Geriatric Management	1 cr
PTOT 728	Lifespan Development	4 cr
		Total 11 cr

Spring - Semester 8

PTOT 734	Clinical Affiliation IV	5 cr
PTOT 735	Clinical Externship	5 cr
PTOT 648	Graduate Special Topics (Elective)	1 cr
		Total 10 cr

TOTAL CREDITS 101 cr

*Minor curriculum changes and progression alteration may occur without notice in line with accreditation standards.

Degree and Licensure Requirements

Students receiving the degree of Doctor of Physical Therapy must satisfactorily complete all courses in the curriculum, prepare and present study papers on a regular basis, prepare and present a professional project, attend and successfully complete all clinical affiliations, and satisfactorily pass comprehensive oral and written departmental examinations. For state licensure, students must have met the degree requirements and pass the National Board Examinations for Physical Therapy.

NOTE: Admitted students should be aware that some required external clinical rotation sites will require criminal background and drug checks. In addition, students who have a record of criminal activity may have difficulty procuring a license to practice in some states after completing the program.

Grade Requirements

The Graduate School and the Department of Physical Therapy requires that an overall GPA of 3.0 be maintained in all graduate course work and all clinical affiliations must be completed with an S (satisfactory) grade. In addition, the Department of Physical Therapy will terminate the graduate program of any student who has received grades of “B- or lower” in more than 6 credits or a maximum of two program courses. Students should consult specific departmental grading policies for specific information.

Transitional DPT Program Transfer Option

The Department offers a concise sequence of web-based courses leading to the DPT degree for those physical therapy practitioners holding an entry-level credential and completed graduate-level degree. The sequence of courses emphasizes clinical decision making, evidence-based practice, advanced practice in the areas of musculoskeletal, neurological, cardiopulmonary, and multi-systems management. The sequence of courses is completed with development of several case presentations based upon the clinical practice environment of the student. The program provides a unique blend of distance learning, independent investigation, and clinical case study development and presentation. Admission to this transfer degree format is based on previous graduate work in physical therapy and/or related areas, admission to the graduate program, and clinical experience. Interested clinicians should contact the department for further information.

Master of Occupational Therapy

The graduate entry level program in Occupational Therapy is a professional entry level program preparing students for licensure to practice as occupational therapists. The following information provides the specific requirements for applying to the Idaho State University Occupational Therapy (OT) Program.

Occupational therapy is a profession that uses occupation to promote well-being and health among people of all ages and abilities. Occupations are goal-directed, meaningful pursuits that occupy a person's time each day. Occupations include work and productive activities, self care or care of others, and leisure/recreational activities. Occupational therapists adapt the environment, tasks, or techniques to meet individual needs while helping each client develop new skills necessary to function productively. Occupational therapists view every aspect of a client's life as important to his/her health.

Occupational therapy seeks to improve the quality of life for individuals who are at risk for physical, cognitive, mental or psychosocial impairments. Demand for occupational therapy will increase to address the needs of a growing population of aging adults, children with developmental disabilities and those who struggle with traumatic injuries and illness. When one experiences physical or mental illness or injury, it is the job of the occupational therapist to help the individual return to work, family roles and satisfying life.

The curative nature of occupational therapy is extremely broad and requires individuals with an interest in the complexity of humanity and occupations. One also needs an ability to think critically and creatively and be able to address occupational performance problems resulting from disease, trauma and mental illness. To be well prepared, a student must enter the profession with a foundation in the liberal arts, biological, physical, and social sciences.

Goals

- **Instill the meaning and use of occupation from the perspectives of science and personal experience**.

1. Educate and train students in foundational knowledge to understand occupation, self, and science.
2. Provide opportunities and tools for reflection on the meaning and purpose of occupation.
3. Educate students to prescribe and apply occupation to enhance performance outcomes.
4. Provide students the opportunity to conduct basic and clinical research that is beneficial to the consumer and advances the profession of occupational therapy.

- **Understand and value the powerful nature of a collaborative therapeutic relationship and its impact on occupational performance**.

1. Educate students in the worth and the autonomy of the individual and caregivers.
2. Enable students to value the individual's choices in occupation leading toward improved health and quality of life.
3. Respect life experience and its influence on occupation.
4. Educate students to trust the individual's capability to grow and reach his/her optimal occupational performance goals.

- **Prepare students to lead and develop occupation-based practice in diverse settings including environmental management, rural health, and the community**.

1. Encourage students to value and understand how the environment enhances occupational performance.
2. Teach students the skills to promote home and community as a natural environment for occupation-based practice.
3. Facilitate professional collaboration among students, faculty and practitioners in the rural community for the benefit of the citizens of Idaho and the intermountain region.

Admission Requirements

Students can be admitted into the Master of Occupational Therapy (MOT) program by applying to, and meeting all criteria for, admission to the Graduate School. They must also meet the prescribed prerequisite course requirements. Students may also have the option of early pre-professional entry into the program through the established guidelines of the Bachelors of University Studies (BUS) program. The BUS is an interdisciplinary degree designed for students whose career and educational goals are not met by traditional degrees offered at Idaho State University.

During the first three years, the student develops a course of study that will meet the student's interests, university degree requirements and Occupational Therapy Program prerequisites admission requirements. The student can apply to the BUS program during his/her junior year. With successful completion of the first professional year in the OT program, the student will receive a Bachelor of University Studies and will continue directly into the MOT program over the next two years. The combination of the BUS degree with the MOT degree program creates a seamless entry into the occupational therapy profession, ensuring that all prerequisites in social, physical and biological sciences are completed in a timely manner. For further information on the BUS and Occupational Therapy program, contact the Department of Physical and Occupational Therapy at (208)282-4095.

1. Applicants must complete a bachelor's degree from a college or university accredited in the U.S. or its equivalent from a school in another country. This degree may be in progress during the application process but must be completed prior to beginning OT courses in the Fall semester.
2. All applicants applying to the OT Program must also apply for admission to ISU through the Graduate School. General admissions requirements are explained in the Admissions section of the Graduate Catalog. **PLEASE NOTE:** Some of

the requirements for admission into the OT Program are higher than the general requirements for admission to Graduate School.

3. Applicants must have a minimum of an earned grade point average (GPA) of at least 3.0 over all upper division course work to apply to the OT Program. A minimum of 25 upper division credits must be completed, or in progress, by January of the year of admission for applications to be considered. Applicants with advanced degrees may use the most recent upper division or graduate credits completed.

4. Applicants must take the Graduate Record Examination (GRE) or Miller Analogies Test (MAT).

   a) GRE must meet the following requirements to be competitive: A total combined score of at least 950 in the verbal and quantitative portions. Verbal must be at least 400. Minimum of 4.5 on the analytical portion.

   b) MAT must meet the following requirements to be competitive: A total score of 390.

   c) Applicants whose first language is not English need to meet the following TOEFL requirements for Classified admission: (1) Internet-based test (iBT): a total score of 80 with a score of at least 20 on each Section (graduate assistants who teach courses must score 23 or above on the Speaking Section) on the iBT; or (2) Computer-based test: a total score of 213 with a score of at least 21 on Section 1 (Listening Comprehension) on the computer test; or (3) Paper-based test: a total score of 550 with a score of at least 55 on Section l (Listening Comprehension) on the paper test, or a score of 84 on the MTELP, or a score of 6 on the IELTS.

   d) Applicants with scores lower than the requirements may not be considered.

   e) The scores of the GRE/MAT/TOEFL must be received by the Graduate School by the application deadline (December 15) for an application to be considered. The Idaho State University code for these three tests is: 4355.

5. Applicants must complete specific prerequisites courses with a GPA of 3.0 in each of the specified categories. Prerequisite course work in anatomy and physiology must be completed within the last five (5) years. Prerequisite course work that is ten (10) years or older may not be acceptable for admission unless approved by the Department Admissions Committee prior to application. An applicant with more than five (5) prerequisite courses in progress or planned for the spring/summer semesters may not be considered for admission. Please contact the Department of Physical and Occupational Therapy for specific information on the prerequisite course work.

6. Applicants must demonstrate knowledge and exposure to the occupational therapy profession. All of the required experience must be completed PRIOR to applying to the Idaho State University OT Program. All of the experience must be completed under the direct supervision of a practicing occupational therapist or health service care provider and must have occurred within the last FIVE years. A total of 20 hours of experience is required and must be completed in a minimum of two different occupational therapy practices.

   Half of the hours must be completed in a community mental health setting, development center, hospice, or school setting under the supervision of a health service care provider. These may not be the hours obtained in the same facility used for the acute care hours.

7. Each applicant must submit three letters of reference with the application. Two of the letters must be from Occupational Therapist who directly supervised your volunteer or aide experience(s). Please contact the Idaho State University OT Program for additional information.

8. Applicants meeting all of the above requirements will be given preference for admission into the program, and have been more successful in gaining entry. The admissions committee reviews all applicants on a competitive case-by-case basis during any admissions cycle.

Program Accreditation

The Idaho State University Master of Occupational Therapy Program received accreditation from the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA) in December 2000. ACOTE can be contacted at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220 or by telephone at (301) 652-AOTA. Graduates of the program will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT).

After successful completion of this exam, the individual will be an Occupational Therapist, Registered (OTR). In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. In addition, the OT program requires that all occupational therapy students complete Level II Fieldwork within 12 months following the completion of academic component of the program.

General Requirements

The curriculum is 3 years in duration and includes 4 clinical affiliations. There are 6 semesters and 2 full-time summer sessions encompassing a total of at least 83 credits. Please contact the Department of Physical and Occupational Therapy for additional information regarding clinical affiliations.

Fall I- Semester 1

BIOL g574	Human Anatomy	5 cr
BIOL g586	Human Systemic Physiology	5 cr
PTOT g512	Professional Communication	2 cr
PTOT g513	Occupational Therapy Profession	3 cr
		Total 15 cr

Spring I- Semester 2

PTOT g501	Clinical Kinesiology & Biomechanics	4 cr
PTOT g502	Clinical Neuroscience	5 cr
PTOT g521	Self-Exploration in OT	3 cr
PTOT g522	Occupational Performance	3 cr
PTOT g542	Occupational Performance Lab	1 cr
		Total 16 cr

Summer I - Semester 3

PTOT 514	Research Methodology	4 cr
PTOT 531	Clinical Affiliation I (6 weeks)	1 cr
		Total 5 cr

Fall II- Semester 4

PTOT 616	Professional Project	1 cr
PTOT 532	Clinical Affiliation II (2 weeks)	1 cr
PTOT 525	Psychosocial Function in OT	3 cr
PTOT 545	Psychosocial Function in OT Lab	1 cr
PTOT 524	Physical Function in OT	4 cr
PTOT 544	Physical Function in OT Lab	1 cr
		Total 11 cr

Spring II- Semester 5

PTOT 515	Service Delivery of OT	3 cr
PTOT 616	Professional Project	1 cr
PTOT 518	Practicum	1 cr
PTOT 523	Therapeutic Use of Self	2 cr
PTOT 526	Neurological Function in OT	5 cr
PTOT 546	Neurological Function in OT Lab	1 cr
		Total 13 cr

Summer II- Semester 6

PTOT 533	Clinical Affiliation III	7 cr

Fall III- Semester 7

PTOT 616	Professional Project	1 cr
PTOT 528	Occupation Children and Adolescents	4 cr
PTOT 548	Occupation Children and Adolescents Lab	1 cr
PTOT 519	Practicum	1 cr
PTOT 527	OT & Environmental Management	3 cr
PTOT 547	OT & Environmental Management Lab	1 cr
		Total 11 cr

Spring III- Semester 8

PTOT 616	Professional Project	1 cr
PTOT 534	Clinical Affiliation IV	7 cr
PTOT 648	Graduate Special Topics	2 cr
		Total 10 cr
		TOTAL 89 cr

Graduation Requirements

Students receiving the Master of Occupational Therapy (MOT) degree must satisfactorily complete all courses in the curriculum with a minimum of 3.0 GPA, prepare and present academic study papers on a regular basis, prepare and present a professional project or case study, successfully complete all Fieldwork I and II clinical affiliations, and satisfactorily pass both oral and written comprehensive examinations.

Once the student has completed the degree requirements, he/she is eligible to sit for the NBCOT Certification Examination. Students are required to complete Level II Fieldwork within 12 months of completing the academic component of the program. Students convicted of a felony may not be able to sit for the NBCOT certification examination or attain state licensure.

NOTE: Admitted students should be aware that some required external clinical rotation sites will require criminal background and drug checks. In addition, students who have a record of criminal activity may have difficulty procuring a license to practice in some states after completing the program.

Physical Therapy and Occupational Therapy Graduate Courses

PTOT g501 Clinical Kinesiology and Biomechanics 4 credits. Analysis of normal and pathological human movement in joints, posture, gait, and the vertebral column. Application of movements to therapeutic interventions is emphasized. PREREQ: BIOL g574.

PTOT g502 Clinical Neuroscience 5 credits. Study of structure and function of the human nervous system at the cellular and systemic levels. Specific application to clinical management of neurological problems and pathology. PREREQ: BIOL g574, BIOL g586.

PTOT g512 Professional Communication 2 credits. Introduction to standard forms of professional communication in physical and occupational therapy and among other health care professions. Medical record-keeping and interdisciplinary communication are emphasized.

PTOT g513 Occupational Therapy Profession 3 credits. Historical overview of occupational therapy in health care, education and psychosocial settings. Occupational therapy process, rural human service delivery system, professionalism, ethics, and legal issues will be examined.

PTOT 514 Research Methodology 4 credits. Application of principles of research design in the biological, psychological and social sciences. Clinical and laboratory research in occupational and physical therapy are emphasized. Preparation for professional project. PREREQ: STATISTICS, PTOT g513, PTOT g522, PTOT 613.

PTOT 515 Service Delivery of Occupational Therapy 3 credits. Application of theoretical concepts of management to the delivery of occupational therapy services. Development, implementation and outcome evaluation of community-based service delivery systems will be emphasized. PREREQ: PTOT g522, PTOT 532.

PTOT 518 Practicum 1-3 credits. Clinical experience in the on-campus clinic or in the community under the direction and supervision of faculty. Current issues in management and administration of practice within interdisciplinary teams are discussed. PREREQ: PTOT 532. Graded S/U.

PTOT 519 Practicum 1-3 credits. Advanced experience in the on-campus clinic or community practice under the direction and supervision of faculty. Current issues in management and administration of clinical practice within interdisciplinary teams are discussed. PREREQ: PTOT 533. Graded S/U.

PTOT g521 Self-exploration in Occupation 3 credits. Focus on self-exploration in occupation and purposeful activity. Self-evaluation in occupational performance areas, components, and context. The student will complete a self-development plan in occupation.

PTOT g522 Occupational Performance 3 credits. Person/occupation/environment interactions are examined from the perspective of multiple theories and models that analyze typical occupations and address performance dysfunctions. PREREQ: PTOT g513, PTOT g521. COREQ: PTOT g542.

PTOT 523 Therapeutic Use of Self in Occupation 2 credits. Survey of historical and philosophical perspective of the therapeutic relationship and its development and implementation with individuals and groups with psychosocial dysfunction. PREREQ: PTOT g521.

PTOT 524 Physical Function in Occupation Performance 4 credits. The study of theory and application of occupational performance addressing function. Overview of evaluation and treatment of physical and psychosocial function in rehabilitation and orthopedic management. PREREQ: PTOT g501, PTOT g502.

PTOT 525 Psychosocial Function in Occupation 3 credits. Theory, evaluation and intervention techniques in occupational therapy across the lifespan for persons with psychosocial dysfunction in different treatment settings. PREREQ: PTOT g522. COREQ: PTOT 545.

PTOT 526 Neurological Function in Occupation 5 credits. Occupational therapy management of clients with neurological trauma, degenerative disorders, central and peripheral neural and neuromuscular dysfunction. Overview of rehabilitation approach to evaluation and treatment. PREREQ: PTOT g502, PTOT 524. COREQ: PTOT 546.

PTOT 527 Occupation and Environmental Management 3 credits. The study and application of occupational therapy in managing environmental factors that restore function and decrease disability. PREREQ: PTOT g522, PTOT 526. COREQ: PTOT 547.

PTOT 528 Occupation with Children and Adolescents 4 credits. Study of occupational therapy evaluations and interventions for children and adolescents who have disabling conditions that cause occupational performance problems. PREREQ: PTOT 526. COREQ: PTOT 548.

PTOT 531 Clinical Affiliation I (Fieldwork I) 1 credit. Fieldwork opportunities to observe occupational performance of persons served by local institutional or community-based health, education, and human service organizations. PREREQ: PTOT g522, PTOT g542. Graded S/U.

PTOT 532 Clinical Affiliation II (Fieldwork I) 1 credit. Fieldwork experiences focusing on evaluation of occupational performance dysfunction and interventions with persons served by local institutional or community-based health, educational, and human service organizations. PREREQ: PTOT 531. Graded S/U.

PTOT 533 Clinical Affiliation III (Fieldwork II) 7 credits. An in-depth clinical fieldwork with clients having physical, psychosocial, neurological, and/or multisystem impairments/disabilities in a facility-based setting such as a hospital or rehabilitation center. PREREQ: PTOT 532. Graded S/U.

PTOT 534 Clinical Affiliation IV (Fieldwork II) 7 credits. An in-depth clinical fieldwork with clients having physical, psychosocial, neurological, educational or health impairments/disabilities in community-based settings. PREREQ: PTOT 533. Graded S/U.

PTOT g542 Occupational Performance Laboratory 1 credit. Introduction to and practice using occupation focused evaluation tools and methodologies used in analyzing, evaluating, and categorizing occupational performance. COREQ: PTOT g522.

PTOT 544 Physical Function in Occupation Laboratory 1 credit. Laboratory exercise designed to apply evaluation and treatment techniques used in physical and psychosocial occupational performance approach. COREQ: PTOT 524.

PTOT 545 Psychosocial Function in Occupation Laboratory 1 credit. Laboratory exercise designed to apply evaluation and treatment techniques in the management of psychosocial dysfunction to optimal function. The laboratory develops preclinical competency in psychosocial function across the lifespan. COREQ: PTOT 525.

PTOT 546 Neurological Function in Occupation Laboratory 1 credit. Designed to apply evaluation and treatment techniques to promote adaptation and optimal function. The laboratory serves to develop preclinical competency in the management of neurological disorders. COREQ: PTOT 526.

PTOT 547 Occupation and Environmental Management Laboratory 1 credit. Application of environmental modifications and adaptations within work, self care and recreational environments. Development, implementation and evaluation of environmental modifications to improve occupational performance. COREQ: PTOT 527.

PTOT 548 Occupation with Children and Adolescents Laboratory 1 credit. Laboratory exercise designed to apply evaluation and treatment techniques for children and adolescents specific to occupational performance dysfunction, adaptation and optimal function. COREQ: PTOT 528.

PTOT 606 Clinical Therapeutic Exercise 3 credits. Theoretical and evidence-based application of exercise for various pathological conditions. Aerobic conditioning, muscular strengthening, flexibility, balance, coordination, power and agility are discussed, demonstrated and evaluated. Specific exercise prescription, modes of exercise, and application for desired outcomes are emphasized. PREREQ: BIOL 574 and 586.

PTOT 608 Applied Pharmacology for Physical and Occupational Therapists 3 credits. Study of the major drug groups, therapeutic implications and side effects. Musculoskeletal, cardiovascular, connective tissue and nervous system disorders are emphasized. PREREQ: BIOL g574, BIOL g586, PTOT g502

PTOT 613 Physical Therapy Profession 2 credits. Survey of current status of the physical therapy profession in health care systems. Professionalism, ethics, legal issues, validation of practice. Future projections and historical perspective.

PTOT 616 Professional Project 1-2 credits. Individual in-depth study of treatment, administrative or education problem in physical or occupational therapy. Preparation and public presentation of a publishable is required. Repeatable to 6 credits. PREREQ: PTOT 514. Graded S/U.

PTOT 617 Research Practicum 1-2 credits. Faculty supervised clinical, basic or applied research project which may include review of literature preparation, proposal development, data collection and manuscript preparation. PREREQ: PTOT 514. Graded S/U.

PTOT 618 Practicum I 1-2 credits. Supervised clinical experience in physical therapy (may be repeated up to four credits). PREREQ: PTOT 621, PTOT 641. Graded S/U.

PTOT 619 Practicum II 1-2 credits. Supervised clinical experience in physical therapy (may be repeated up to four credits). PREREQ: PTOT 618. Graded S/U.

PTOT 620 Clinical Procedures 2 credits. Study and practice of theory and application of basic techniques of patient evaluation, handling, and treatment in physical therapy. COREQ: PTOT 501.

PTOT 621 Manual Evaluation and Treatment 2 credits. Study and practice of theory and application of basic manual techniques of patient evaluation, handling and treatment in physical therapy. PTOT 620.

PTOT 622 Musculo-Skeletal System Management I 4 credits. Physical therapy evaluation, treatment, and management of patients with muscle, skeletal, and connective tissue problems. Overview of orthopedic pathology. PREREQ: BIOL 574, BIOL 586, PTOT 621, PTOT 601, PTOT 621. COREQ: PTOT 608.

PTOT 623 Physical Agents 3 credits. Study and practice of theory and application of the therapeutic uses of physical agents and electromagnetic energy in physical therapy. PREREQ: PTOT 620, PTOT 640.

PTOT 624 Cardiac and Pulmonary Systems Management 5 credits. Physical therapy management of persons with dysfunction of the cardiac and/or pulmonary systems and related pathologies. Management by other health professional team members. PREREQ: BIOL 586, PTOT 605.

PTOT 626 Neurological Systems Management 5 credits. Physical therapy management of patients with central and peripheral neural and neuromuscular dysfunction. Survey of management by other health professionals. PREREQ: PTOT 502, PTOT 605.

PTOT 631 Clinical Affiliation I 3 credits. Application of physical therapy manual evaluation and treatment skills in acute and rehabilitation settings. PREREQ: BIOL 574, BIOL 586, PTOT 601, PTOT 621. Graded S/U.

PTOT 632 Clinical Affiliation II 3 credits. Clinical management practicum related to orthopedics, sports medicine, and/or cardiopulmonary problems. PREREQ: PTOT 622, PTOT 623, PTOT 624, PTOT 631. Graded S/U.

PTOT 640 Clinical Procedures Lab 1 credit. Laboratory exercises designed to practice and enhance overall skills in the initial evaluation and treatment of patients. COREQ: PTOT 620.

PTOT 641 Manual Evaluation and Treatment Lab 1 credit. Laboratory exercises designed to introduce basic theoretic and applied concepts and skills of patient handling, evaluation and modalities. COREQ: PTOT 621.

PTOT 642 Musculo-Skeletal System Management Lab 1 credit. Designed to develop preclinical competency in the evaluation, treatment, and management of disorders of the musculoskeletal system. Emphasis on the trunk and lower extremities. COREQ: PTOT 622.

PTOT 643 Physical Agents Laboratory 1 credit. Designed to develop clinical competence in the use of physical agents in the treatment of patients with specific pathologies. PREREQ: PTOT 620, PTOT 640. COREQ: PTOT 623.

PTOT 646 Neurological Systems Management Lab 1 credit. Designed to develop preclinical competency in the evaluation, treatment, and management of the patient with neurological disorders including stroke, spinal cord injury, degenerative disease. COREQ: PTOT 626.

PTOT 648 Graduate Special Topics 1-3 credits. Individual or group critical analysis and study of a specific area of physical therapy patient management, administration, or research. PREREQ: 2ND-YEAR STUDENTS, AND/OR PERMISSION OF INSTRUCTOR.

PTOT 681 Theories and Resources to Guide Clinical Decision Making in Physical Therapy 3 credits. Study and application of applying evidence in physical therapy practice. The *Guide to PT Practice*, Physical Therapy differential diagnosis, and legal and ethical considerations will be addressed.

PTOT 682 Promoting Behavioral Change in Physical Therapist Practice 2 credits. Study of the theories of learning, compliance, and behavior modification as related to the application of prevention and wellness in physical therapy practice. PREREQ: PTOT 681.

PTOT 693 Contemporary Musculoskeletal System Management for Physical Therapists 2 credits. Applying evidence and elements of accepted practice to PT management of patients across the lifespan with musculoskeletal diagnoses. PREREQ: PTOT 682.

PTOT 694 Contemporary Cardiopulmonary System Management for Physical Therapists 2 credits. Applying evidence and elements of accepted practice to PT management of patients across the lifespan with cardiac and/or pulmonary diagnoses. PREREQ: PTOT 693.

PTOT 695 Contemporary Neurological System Management for Physical Therapists 2 credits. Applying evidence and elements of accepted practice to PT management of patients across the lifespan with neurological diagnoses. PREREQ: PTOT 694.

PTOT 696 Patient Case Seminar 2 credits. Selection and development of a patient case with which the student has worked to demonstrate application of evidence and the *Guide to Physical Therapist Practice* to Physical Therapy practice. PREREQ: PTOT 695. Graded S/U.

PTOT 701 Contemporary Multiple System Management for Physical Therapists 2 credits. Applying evidence and accepted clinical practice to PT management of patients across the lifespan

with diagnoses affecting multiple systems. PREREQ: PTOT 696.

PTOT 705 Clinical Case Management 3 credits. Advisor guided development and completion of a patient case study demonstrating the application of evidence for PT examination, diagnoses, medical management, treatment and discharge. Oral presentation required. PREREQ: PTOT 701. Graded S/U.

PTOT 715 Physical Therapy Resource Management 3 credits. Application of business and health care administration principles to the practice of physical therapy; resource management strategies with an emphasis on community service delivery. PREREQ: PTOT 612, PTOT 613, PTOT 621, PTOT 632.

PTOT 725 Multi-Systems Management 4 credits. Physical therapy management of persons with problems affecting multiple systems; burns, wounds, amputations, neoplasms, metabolic disorders. PREREQ: PTOT 621, PTOT 622, PTOT 623, PTOT 624.

PTOT 727 Geriatric Management 1 credit. Examination, evaluation and treatment of the elderly population with emphasis on the management of normal and pathological conditions. PREREQ: PTOT 626, PTOT 646. COREQ: PTOT 728.

PTOT 728 Lifespan Development 4 credits. Normal and abnormal development of neuromuscular, musculoskeletal, cardiopulmonary systems; cognitive/perceptual and psychosocial behavior associated with life through adolescence. Evaluation, program planning and treatment strategies are introduced. PREREQ: BIOL 574, BIOL 586.

PTOT 733 Clinical Affiliation III 5 credits. Clinical management practicum related to patients with orthopedic, neurological, and multisystem problems. PREREQ: PTOT 615, PTOT 626/PTOT 646, AND PTOT 632. Graded S/U.

PTOT 734 Clinical Affiliation IV 5 credits. Clinical management practicum related to patients with orthopedic, neurological, cardiopulmonary, pediatric, and multisystem problems. PREREQ: PTOT 633. Graded S/U.

PTOT 735 Clinical Externship 5 credits. Clinical management experiences related to patient care, administration, or research in a variety of practice environments. PREREQ: PTOT 734. Graded S/U.

Department of Physician Assistant Studies

Chair and Program Director: Schroeder
Medical Director: D'Souza
Associate Professor: Phelps
Assistant Professors: Bunde, Bunnage, Howlett, Martin, Miles, Talford, Whitaker

Goals

Graduates of the Idaho State University PA Program will, using appropriate evidence-based principles, achieve the following objectives:

1. History: Elicit an appropriate complete, interval or acute history from any patient in any setting.
2. Physical Examination: Perform complete and focused physical examination on a patient of any age, gender, or condition in any setting.
3. Diagnostic Studies: Identify, order, perform and interpret cost-effective diagnostic procedures, based on history and physical examination findings, and assist the physician with other diagnostic procedures as directed.
4. Clinical Knowledge: Explain the etiology, diagnosis, and management options of health problems within the scope of PA practice.
5. Differential Diagnosis: Develop an evidence-based differential diagnosis and diagnostic impression considering the subjective and objective data obtained.
6. Therapeutics: Identify, perform, and order cost effective pharmacologic and non-pharmacologic therapeutic modalities and assist the physician with other therapeutic modalities.
7. Emergency Skills: Recognize and manage life-threatening conditions jointly with, and in the absence of, the physician.
8. Health Promotion/Disease Prevention: Recognize, develop and implement effective strategies incorporating health promotion/disease prevention into clinical practice.
9. Patient Education: Develop and implement effective patient education strategies for any patient in any setting.
10. Research: Apply evidence-based medical research methodologies to clinical practice.
11. Cultural Competence: Demonstrate an understanding that cultural dimensions of health and illness are essential to effective patient care.
12. Ethics: Act consistent with the Code of Ethics of the PA Profession.

Master of Physician Assistant Studies (MPAS)

Physician Assistants (PAs) are academically and clinically prepared to provide healthcare services, including the diagnosis and treatment of disease, with the direction and supervision of a doctor of medicine or osteopathy. The physician-PA team relationship is fundamental to the PA profession and enhances the delivery of high quality health care. PAs make clinical decisions and provide a broad range of diagnostic, therapeutic, preventive, and health maintenance services. The clinical role of PAs includes primary and specialty care in all medical and surgical practice settings. PA practice is centered on patient care and may include educational, research, and administrative activities.

The role of the PA demands intelligence, sound judgment, intellectual honesty, appropriate interpersonal skills, and the capacity to react to emergencies in a calm and reasoned manner. An attitude of respect for self and others, adherence to the concepts of privilege and confidentiality in communicating with patients, and a commitment to the patient's welfare are essential attributes of the graduate PA.

The Program

The Physician Assistant (PA) Program at Idaho State University awards the Master of Physician Assistant Studies (MPAS) degree and a PA certificate upon successful completion of its 24-month graduate curriculum. A new class of students is enrolled each fall semester. The program is fully accredited by the Accreditation Review Commission on the Education of Physician Assistants, Inc. (ARC-PA). Graduates of this program are eligible to take the NCCPA's Physician Assistant National Certifying Exam (PANCE).

The Mission

The mission of the Idaho State University master's-level Physician Assistant program is to:

Curriculum - Provide a quality graduate medical education that emphasizes critical thinking and problem solving, is technologically enhanced, research oriented, and evidence-based, with strength in both the basic and clinical medical sciences.

Students - Seek a culturally, ethnically, and socially diverse student body that will demonstrate the finest attributes of professional health care practitioners, including intellectual curiosity, insight, maturity, ethical behavior, critical thinking, empathy, strong interpersonal skills, a service orientation, and a commitment to evidence-based practice, research and life-long learning.

Faculty - Employ, develop and maintain outstanding faculty who are appropriate in expertise and number to the needs of the program, represent the diversity of the nation, are student-centered and committed to the educational needs of the students as well as excellence in teaching, scholarly research, service, and continuing clinical competence.

Affiliations - Establish and maintain, for the educational benefit of program students, clinical, education, and other relationships with the medical community and other individuals and organizations that seek to enhance health care to rural and other medically underserved populations of the State, region, and beyond.

Service - Nurture in students a sensitivity to the needs of others and a desire and willingness to provide service of the highest quality, in the most caring manner, to all people, especially to those individuals and groups that are medically underserved, regardless of biological, social, political, economic, religious, or other status.

Admission Requirements

1. A baccalaureate degree (received prior to matriculation in the PA Program)
2. A completed CASPA (Central Application Service for Physician Assistants) application (see CASPA) Deadline: December 1
3. The student must apply to, and meet all criteria for, admission to the Graduate School, including GRE scores. Deadline: December 1
4. TOEFL scores for students whose native language is not English. A minimum score of 550 is required. Deadline: December 1
5. All applicants must undergo a personal interview as part of the admission process.

Required Prerequisite Courses

To be considered for admission, the applicant must have a minimum cumulative grade point average of 3.0 in upper-division course work, and a minimum 3.0 for the following required prerequisite courses.

All prerequisite courses must be completed at a regionally accredited institute of higher learning in the United States.

Courses 10 years or older are not accepted as prerequisite course work.

Exceptions are at the discretion of the Program.

1. Microbiology;
2. Biochemistry;
3. Human anatomy (or as part of a two semester combined anatomy and physiology course);
4. Human physiology (or as part of a two semester combined anatomy and physiology course);
5. Abnormal psychology, or developmental psychology throughout the life span;
6. Statistics (math or social science);
7. Computer literacy: All applicants are expected to possess Computer Literacy (either through course work or experience) that includes basic understanding of the operation of a Windows PC, word processing, file management, spreadsheets, and the Internet.

Highly Recommended Courses

- Upper level biology courses such as advanced anatomy, advanced human physiology, immunology, genetics, endocrinology.
- Other health-related courses from department such as psychology, sociology, anthropology, health education, gender studies.
- Proficiency in a foreign language.

Additional considerations for admission include:

- Maturity;
- Work and health care experience;
- Evidence of the ability to achieve academic success in a rigorous academic program;
- Interpersonal skills and the ability to relate effectively with patients, peers and at a professional level;
- Evidence of a desire to practice primary care in Idaho, particularly among the medically underserved.

Application Process

EARLY ADMISSIONS

The Admissions Committee will consider applications as soon as a completed CASPA (see below) application and a completed Graduate School application have been received. If all criteria are satisfied, applicants may be accepted before the application deadline. Admission decisions will take place in an ongoing, rolling manner.

Required Applications

The Idaho State University Department of Physician Assistant Studies requires **two applications**. The two applications are the CASPA (Central Application Service for Physician Assistants) and the Idaho State University Graduate School Application. **The deadline for both of these applications is December 1.**

CASPA Application

The Idaho State University PA Program participates in the Central Application Service for Physician Assistants (CASPA). Applicants must have official transcripts sent to CASPA. Letters of Recommendation must also be sent to CASPA. CASPA requires a fee to be paid at the time of application.

Note: The CASPA application is a separate application from the Idaho State University Graduate School application. Go to www.caspaonline.org for the application and more information about the application process and fees.

Idaho State University Graduate School Application

Idaho State University requires applicants to apply to the Graduate School. Applicants must have GRE scores AND official transcripts

sent to the Graduate School. The Graduate School requires a fee to be paid at the time of application.

Note: The Graduate School application is a separate application from the CASPA application. Go to www.isu.edu/graduate for the application and more information about the application process.

General Requirements

The graduate curriculum is 24 months in length, divided into 12 months of didactic and 12 months of clinical education. Each class progresses through the curriculum as a cohort. There is no part-time option.

The didactic curriculum is comprised of foundation courses in the fall semester, followed by modules in the spring semester and summer session that provide an immersion experience in the diagnosis and treatment of diseases commonly encountered in primary care medicine.

Students are required to attend and participate in all program courses, clinical experiences, and other academic activities. Physical examination instruction requires mastery of the examination of the entire human body in all age groups.

A complete list of technical standards covering essential capacities for observation, communication, sensory and motor function, intellectual, conceptual, integrative and quantitative abilities, behavioral and social attributes, and other student performance requirements is available from the program.

Course Sequence

Didactic Year

Fall Semester

BIOL g529	Regional Anatomy and Histology	4 cr
BIOL g563	Human Pathophysiology	4 cr
BIOL g564	Lectures in Human Physiology	4 cr
PAS 601	Intro to Physician Assistant	2 cr
PAS 602	Research Methods	2 cr
PAS 603	Clinical Assessment	3 cr
PAS 604	Pharmacology	
	Total Credits	20 cr

Spring Semester

PAS 630	Allergy/Immunology Module	1 cr
PAS 631	Infectious Disease Module	2 cr
PAS 633	Endrocrinology Module	1 cr
PAS 634	Renal Module	1 cr
PAS 635	Pulmonary Module	2 cr
PAS 636	Cardiology Module	2 cr
PAS 637	Gastroenterology Module	1 cr
PAS 638	ENT Module	1 cr
PAS 640	Rheumatology Module	1 cr
PAS 641	Orthopedics Module	1 cr
PAS 642	Psychiatry Module	1 cr
PAS 645	Ophthalmology Module	1 cr
	Total Credits	16 cr

Summer Semester

PAS 639	Dermatology Module	1 cr
PAS 641	Orthopedics Module	1 cr
PAS 643	Genitourinary Module	3 cr
PAS 646	Neurology Module	2 cr
PAS 650	Obstetrics/Perinatology Module	1 cr
PAS 651	Pediatrics Module	2 cr
PAS 652	Geriatrics Module	1 cr
PAS 653	Surgery Module	2 cr
PAS 654	Emergency Medicine Module	2 cr
PAS 656	Alternative/Occupational Medicine Module	1 cr
PAS 657	Comprehensive Evaluation	1 cr
	Total Credits	16 cr

Clinical Year

Fall, Spring, Summer Semesters

PAS 661	Clinical Rotation I	4cr
PAS 662	Clinical Rotation II	4cr
PAS 663	Clinical Rotation III	4cr
PAS 664	Clinical Rotation IV	4cr
PAS 665	Clinical Rotation V	4cr
PAS 666	Clinical Rotation VI	4cr
PAS 667	Clinical Rotation VII	4cr
PAS 668	Clinical Rotation VIII	4cr
PAS 671	Capstone Assessment I	1cr
PAS 672	Capstone Assessment II	2cr
PAS 673	Capstone Assessment III	1cr

Physician Assistant Studies Graduate Courses

PAS g489 Individual Problems in Physician Assistant Studies 1-3 credits. Assigned on the basis of interest, preparation, and faculty availability. Participation in this course in no way influences opportunity to be accepted into the PA Program. May be repeated for up to 3 credits. PREREQ: APPROVAL OF PA DIRECTOR.

PAS 601 Introduction to Physician Assistant 2 credits. Provides an introduction to the physician assistant profession, health promotion/disease prevention, medical ethics, medical imaging, laboratory medicine, and medical decision-making.

PAS 602 Research Methods 2 credits. Emphasizes techniques in research design, data measurement and interpretation, and evidence-based medicine (EBM), including critical analysis of the medical literature, meta-analysis of clinical research, and application of EBM to patient care.

PAS 603 Clinical Assessment 3 credits. Provides an introduction to medical interviewing and techniques for performing and recording a complete medical history and physical examination.

PAS 604 Pharmacology 1 credit. An introduction to foundational concepts of therapeutic pharmacology, with emphasis on pharmacokinetics and pharmacodynamics.

PAS 630 - 656 Module Course Description. Credit varies for each module. Lectures, laboratory practicum, problem-based learning, small group discussions, research methods, evidence-based medicine, and service learning are integrated to provide an immersion experience in the diagnosis and treatment of diseases commonly encountered in primary care medicine. May be graded S/U .

Modules have the following content areas which are tailored to the specific module:

Case-Based Learning
Clinical Anatomy
Clinical Medicine
Clinical Physiology
Diagnostic Procedures
Ethics and Law
Health Promotion/Disease Prevention
Laboratory Medicine
PA Role and Issues
Pathophysiology
Physical Diagnosis
Research/Evidence-Based Medicine
Service Learning
Therapeutics

PAS 657 Comprehensive Evaluation 1 credit. An end-of-didactic-year comprehensive evaluation of the physician assistant student's knowledge, skills, abilities, and professional behavior. The student must receive a grade of "satisfactory" in order to progress to the clinical year of the program.

PAS 661 Clinical Rotation I 4 credits. Supervised clinical practicum in primary care or specialty care in medical practice settings. PREREQ: Successful completion of all PAS Didactic Year Requirements. Graded S/U.

PAS 662 Clinical Rotation II 4 credits. Supervised clinical practicum in primary care or specialty care in medical practice settings. PREREQ: PAS 661. Graded S/U.

PAS 663 Clinical Rotation III 4 credits. Supervised clinical practicum in primary care and/or specialty care in medical practice settings. PREREQ: PAS 662. Graded S/U.

PAS 664 Clinical Rotation IV 4 credits. Supervised clinical practicum in primary care and/or specialty care in medical practice settings. PREREQ: PAS 663. Graded S/U.

PAS 665 Clinical Rotation V 4 credits. Supervised clinical practicum in primary care and/or specialty care in medical practice settings. PREREQ: PAS 664. Graded S/U.

PAS 666 Clinical Rotation VI 4 credits. Supervised clinical practicum in primary care and/or specialty care in medical practice settings. PREREQ: PAS 665. Graded S/U.

PAS 667 Clinical Rotation VII 4 credits. Supervised clinical practicum in primary care and/or specialty care in medical practice settings. PREREQ: PAS 666. Graded S/U.

PAS 668 Clinical Rotation VIII 4 credits. Supervised clinical practicum in primary care and/or specialty care in medical practice settings. PREREQ: PAS 667. Graded S/U.

PAS 671 Capstone Assessment I 1 credit. There are three Capstone Assessment Courses in the second year of the PA Program. Together they represent a comprehensive assessment of the students. Capstone Assessment I course is the first one in the series and students are required to study for and pass multiple objective examinations. Graded S/U.

PAS 672 Capstone Assessment II 2 credits. There are three Capstone Assessment Courses in the second year of the PA Program. Together they represent a comprehensive assessment of the students. The Capstone Assessment II course is the second one in the series and students are required to study for and pass multiple objective examinations, additionally they are required to complete and present a medical case study, under the direction of the PA Program faculty. Graded S/U.

PAS 673 Capstone Assessment III 1 credit. There are three Capstone Assessment Courses in the second year of the PA Program. Together they represent a comprehensive assessment of the students. The Capstone Assessment III course is the third one in the series and students are required to study for and pass multiple objective examinations. Graded S/U.

PAS 689 Graduate Special Topics 1-4 credits. Special topics in specific areas of physician assistant studies which may include didactic and/or clinical studies. May be repeated up to 8 credits.

Family Practice Residency Program

The Idaho State University Family Practice Residency is a postgraduate training program for physicians who have an M.D. or D.O. degree. The program is affiliated with the medical schools of the University of Washington and the University of Utah and is accredited by the Accreditation Council for Graduate Medical Education. The Pocatello Family Medicine Clinic, located on the Idaho State University campus, is the outpatient training site; hospital rotations are scheduled at Portneuf Medical Center.

Accepting six residents per year, the program trains Family Physicians to practice in rural Idaho. The curriculum includes family medicine, obstetrics/gynecology, surgery, internal medicine, pediatrics, geriatrics, emergency medicine, community medicine, behavioral science, rural medicine, orthopedics, and other subspecialities.

For more information, please contact:

Family Practice Residency Program
465 Memorial Drive
Idaho State University
921 S. 8th Avenue, Stop 8357
Pocatello, Idaho 83209-8357
(208) 282-4504
Internet: www.fmed.isu.edu
Email: fammed@fmed.isu.edu

Curriculum Overview

First Year

4 weeks	Community Medicine
4 weeks	Psychology
12 weeks	Internal Medicine
8 weeks	Pediatrics (Inpatient)
12 weeks	Obstetrics
8 weeks	General Surgery
4 weeks	Emergency Medicine

Second Year

8 weeks	Internal Medicine
8 weeks	Pediatrics
4 weeks	Cardiology
4 weeks	Pulmonary/ICU
4 weeks	Medicine Subspecialty
4 weeks	Rural Rotations
4 weeks	Emergency Medicine
4 weeks	Electives
4 weeks	Obstetrics
4 weeks	Orthopedic/Sports Medicine
4 weeks	Family Medicine Center Chief

Third Year

8 weeks	Internal Medicine
4 weeks	ENT (Longitudinal)
2 weeks	Urology
4 weeks	Ophthalmology (longitudinal)
4 weeks	Dermatology (longitudinal)
4 weeks	Orthopedics/Sports Medicine/Rheumatology
6 weeks	Family Medicine Center Chief
4 weeks	Rural Rotations
4 weeks	Gynecology
12 weeks	Electives


EUGENE O LEONARD
HALL
PHARMACY

College of Pharmacy

Paul S. Cady, Ph.D., Professor, Interim Dean

Degree Programs

The College of Pharmacy offers two graduate degrees: the Master of Science (M.S.) in Pharmaceutical Sciences and the Doctor of Philosophy (Ph.D.) in Pharmaceutical Sciences. The College also offers a professional doctorate degree, Doctor of Pharmacy (Pharm.D.). The Pharm.D. is described in the College of Pharmacy section of the Idaho State University Undergraduate Catalog.

Department of Pharmacy Practice and Administrative Sciences

Chair and Associate Professor: Owens
Assistant Chair and Associate Professor: Oliphant
Professors: Adamcik, Culbertson, Erramouspe, Force, Lott,R. Mason, Rhodes,
Associate Professors: Cleveland, Gould, Heyneman, Hunt, Liday, Madaras-Kelly
Assistant Professor: Carr
Clinical Professor: Jue
Clinical Associate Professor: Hefflinger
Clinical Assistant Professors: Borzadek, Carr, Casperson, Davis, Eroschenko, Hachey, Ladd, Murdock, Pettinger, Pugmire, Steed, Wadsworth
Visiting Clinical Assistant Professor: Jantz
Adjunct Faculty: Hoagland
Emeritus: Galizia, Hurley, Sharp

Department of Biomedical and Pharmaceutical Sciences

Chair and Professor Cady
Assistant Chair and Professor Bhushan
Professors: Daniels, Diedrich, Dodson, Lai
Associate Professors: Bigelow, Eley, Wilson
Assistant Professor: Selvage

Goals

- To train and prepare students to succeed in their chosen career path in the variety of areas in pharmaceutical sciences.

Objectives

- To rigorously train students in the department focus areas;
- To train students to be effective communicators of their knowledge and scientific findings;
- To expose students to multidisciplinary approaches to problem-solving so that they can use them to solve scientific problems;
- To educate students to be competent practitioners of the scientific method;
- To expose students to a variety of professional strategies so that, upon finishing their training, they become adaptable and successful in achieving their long-range goals.

Doctor of Philosophy

Programs of study leading to the Doctor of Philosophy (Ph.D.) degree are offered through the Department of Biomedical and Pharmaceutical Sciences (emphasis areas of Biopharmaceutical Analysis, Drug Delivery, Medicinal Chemistry, or Pharmacology) and through the Department of Pharmacy Practice and Administrative Sciences (emphasis in Pharmacy Administration). The Ph.D. degree is a research degree and will be conferred upon the completion and report of a substantial body of original work.

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition to the general requirements of the Graduate School, the student must comply with the following:

1. Baccalaureate degree in biology, chemistry, psychology, other scientific field, or a professional degree in pharmacy.
2. GPA of not less than 3.0 for all upper division courses.
3. Achieve at least the 50th percentile in one of the Graduate Record Examination aptitude section scores (Verbal, Quantitative, or Analytical).
4. Three letters of recommendation from individuals familiar with the applicant's academic ability and potential for graduate study.

Meeting minimum requirements does not guarantee admission. Students not meeting the minimum admission requirements for the Ph.D. program may reapply to continue on for the Ph.D. degree following successful completion of the M.S. in Pharmaceutical Sciences.

General Requirements

Each beginning graduate student will have a graduate advisor assigned from the graduate faculty upon entry into the program. The student's advisor will assist the student in preparing an appropriate program of study of course work. While there is no fixed credit requirement for the Ph.D. in Pharmaceutical Sciences, the overall program of study will include at least 72 semester hours of graduate course work. The student is expected to have selected a major advisor from the graduate faculty no later than the end of his/her second semester in residence.

A grade below B is unsatisfactory and will not be counted toward fulfilling the minimum requirements for the degree. Upon recommendation of the student's advisor, and with the approval of the Director of the Graduate Program, a student may be required to withdraw at any time for failure to maintain satisfactory progress toward the degree.

When course work is essentially complete, candidates for the Ph.D. degree complete a series of written and oral comprehensive examinations that may include the defense of a written research proposal. Upon completion of all proposed research, the student's findings will be reported in the form of a dissertation to be prepared in accordance with Department and Graduate School guidelines. While the dissertation must be defended to the graduate faculty of the College, acceptability only

requires the affirmative vote of a majority of the student's committee members.

Doctor of Philosophy in Pharmaceutical Sciences (Biopharmaceutical Analysis, Drug Delivery, Medicinal Chemistry, or Pharmacology Emphasis)

Admission Requirements

Official report of Graduate Record Examination scores. Applicants should achieve at least a 50th percentile on one of the three aptitude sections (Verbal, Quantitative, Analytical). Achievement of two or more scores at the 50th percentile is highly preferred. Applicants may be accepted as Classified (w/PR) students with lower GRE scores.

International students must have a demonstrated proficiency in the English language. Students from countries where English is not the first language must demonstrate proficiency in the English language. International students should refer to the "Admission of International Students" section of the Graduate Catalog.

Three letters of recommendation and a personal statement of interest must accompany the application. The personal statement of interest should clearly identify which area of emphasis in the graduate program the applicant intends to follow (e.g., pharmacology, medicinal chemistry, etc.), and members of the department faculty with whom the applicant would prefer to complete his/her degree. Applications without a personal statement following these guidelines will be rejected.

Applications for the graduate program in Pharmaceutical Sciences (Emphasis in Biopharmaceutical Analysis, Drug Delivery, Medicinal Chemistry, or Pharmacology) are reviewed twice yearly near the end of the fall and spring semesters. Deadline for the receipt of applications is April 1 for admission in the fall semester, and October 1 for admission in the spring semester. Incomplete applications and applications received after these deadlines will not be considered.

General Requirements

Candidates must complete the following courses:

PSCI 601	Graduate Seminar in Pharmaceutical Sciences	4 cr
PSCI 602	Research Design and Analysis for the Pharmaceutical Sciences	3 cr
PSCI 603	Scientific Writing	3 cr
PSCI 606	Selected Techniques in the Laboratory	2 cr
PSCI 607	Research Foundations in the Pharmaceutical Sciences	3 cr
PSCI 698	Dissertation Research	18 cr* min.
PSCI 850	Dissertation	1-2 cr* min.
Electives in Pharmaceutical Sciences		9 cr

**Candidates must complete a minimum of 20 credits in combination of PSCI 698 and PSCI 699 toward completion of degree requirements after admission to candidacy.*

A minimum of 72 credits including a minimum of 20 credit hours in dissertation research (PSCI 698) and dissertation (PSCI 850 are required. For all degree candidates, at least one half of total graduate credit hours required by the student's Graduate Program Committee must be 600 level. Minimum graduate credit requirements usually do not fulfill Departmental degree requirements. Specific details are provided in the Department of Pharmaceutical Sciences Graduate Guidelines.

All students in the graduate program, whether seeking the Doctor of Philosophy or the Master of Science, are expected to demonstrate proficiency in written and spoken English. Students may be required to successfully complete classes in speech and in technical writing at the request of the graduate program director and the graduate faculty of the Department of Biomedical and Pharmaceutical Sciences.

Joint Pharm.D.-M.S. in Pharmaceutical Sciences or Pharm.D.-Ph.D. in Pharmaceutical Sciences (Biopharmaceutical Analysis, Drug Delivery, Medicinal Chemistry, or Pharmacology Emphasis)

Admission Requirements

Professional students currently enrolled in the College of Pharmacy may be granted early admission to a graduate program administered by the College. In order that a student be eligible for early admission to a graduate program in the College, the following criteria must be met:

1. Completion of at least 136 academic credits or a B.S. degree must be certified to the Graduate Dean by the Registrar. Such certification must include all University general education requirements, and meet all graduate student admission requirements.
2. Formal application for admission to the College graduate program, with acceptance as a Classified (w/PR) student by the appropriate department faculty.
3. A non-B.S. degree-holding student may be admitted to the Graduate School as Classified (w/PR). Following the award of the Pharm.D. degree, the student may petition to change to classified status. Students should consult the Graduate Catalog for course requirements for the graduate degrees offered by the College.
4. Students must meet all the requirements of the Pharm.D. program; see Undergraduate Catalog.
5. Students must meet all the department requirements for the M.S. or Ph.D. degree described in the M.S. or Ph.D. section.
6. A joint-degree student cannot take more than 19 credits/semester while in the Pharm.D. program, of which no more than 3 credits can be graduate credits. After completing the Pharm.D. requirements, the joint-degree student reverts to the Graduate School requirements, not to exceed 16 credits/semester.

Doctor of Philosophy in Pharmaceutical Sciences (Social and Administrative Sciences Emphasis)

Candidates must complete the following courses:

Statistics and Research Methods (14 credits)

BIOL 605	Biometry	4 cr
Multivariate Analysis		4 cr
PADM 605	Research Methods	3 cr
One additional methods course (e.g., 3 cr SOC 508, PSYC 632)		3 cr

Pharmacy Administration Major Courses (28 credits)

PADM 601	Graduate Seminar in Pharmacy Administration	4 cr
PADM 610	Social and Behavior Aspects of Pharmacy Practice	3 cr
PADM 632	Medical Economics	3 cr
PADM 634	Advanced Pharmacy Administration I	3 cr
PADM 635	Advanced Pharmacy Administration II	3 cr
Major area elective courses		12 cr

Minor Area Courses (12 credits)*

Minor area elective courses	12 cr

Research Activities (19 credits minimum)**

PADM 650	Thesis Research**	3 cr
PSCI 698	Dissertation Research	18 cr
PSCI 850	Dissertation Preparation	1 cr
		Total 73-76 cr

**A student entering the Ph.D. program with an M.S. degree in a related area may petition the Advisory Committee to waive the elective 12 credits required in a minor area of study.*

***All students must have research experience prior to beginning the dissertation. If a student has not completed an M.S. thesis, then s/he must complete a minimum of 3 credits of graduate research (PADM 650) and complete a research project resulting in a paper of publishable quality. If a student has completed an M.S. thesis, s/he may petition the Advisory Committee to accept it as fulfillment of this requirement.*

Master of Science in Pharmaceutical Sciences

The M.S. program offers the student a choice of four emphases:

1. Emphasis in Medicinal Chemistry leading to the degree of M.S. in Pharmaceutical Sciences (Medicinal Chemistry).
2. Emphasis in Pharmacology leading to the degree of M.S. in Pharmaceutical Sciences (Pharmacology).
3. Emphasis in Drug Delivery leading to the degree of M.S. in Pharmaceutical Sciences (Drug Delivery).
4. Emphasis in Social and Administrative Sciences leading to the degree of M.S. in Pharmaceutical Sciences (Social and Administrative Sciences).

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School. In addition, a student must possess a baccalaureate degree in biology, chemistry, psychology, other scientific field, or a professional degree in pharmacy (B.S. or Pharm. D.) from an accredited institution, and have a grade point average of 3.0 or better on all upper-division courses. Students with a grade point average between 2.75 and 3.0 will receive consideration for admission on a Classified (w/PR) basis.

All applicants are required to provide three letters of recommendation from professors from whom they have taken courses or under whose direction they have worked. It is highly recommended that the Graduate Record Examination be taken prior to the start of the semester in which a student begins graduate study. The GRE must be taken during the first semester in residence if it has not been taken previously.

General Requirements

All classified graduate students must register for the appropriate graduate seminar (601) each semester in which they are registered for graduate credit. A maximum of two credits in graduate seminar (601) may be applied toward the degree.

Early Entry Into the Graduate Program For Pharmacy Students Only

Professional students currently enrolled in the College of Pharmacy may be granted early admission to a graduate program administered by the College following completion of the second professional (P2) year in the Pharm.D. curriculum.

In order that a student be eligible for early admission to a graduate program in the College, the following criteria must be met:

1. Completion of at least 136 academic credits must be certified to the Graduate Dean by the Registrar. Such certification must include all University general education requirements, and all College of Pharmacy pre-pharmacy, first (P1) and second (P2) professional year course requirements in the Pharm.D. curriculum.
2. Minimum Graduate Record Examination scores.
3. Formal application for admission to the College graduate program, with acceptance as a Classified (w/PR) student by the appropriate department faculty.

After meeting the above three criteria, a student may be admitted to the Graduate School as Classified (w/PR). Following the award of the Pharm.D. degree, the student may petition to change to classified status. Students should consult the Graduate School Catalog for course requirements for the graduate degrees offered by the College.

Master of Science in Pharmaceutical Sciences (Medicinal Chemistry, Pharmacology, or Drug Delivery Emphasis)

Admission Requirements

The student must apply to, and meet all criteria for, admission to the Graduate School.

International students must have a demonstrated proficiency in the English language. Students from countries where English is not the first language must demonstrate proficiency in the English language. International students should refer to the "Admission of International Students" section of the Graduate Catalog.

Three letters of recommendation and a personal statement of interests must accompany the application. The personal statement of interest should clearly identify which area of emphasis in the graduate program the applicant intends to follow (e.g., pharmacology, medicinal chemistry, drug delivery), and members of the departmental faculty with whom the applicant would prefer to complete their degree. Applications without a personal statement following these guidelines will be rejected.

Applicants for the graduate program in Pharmaceutical Sciences (Emphasis in Medicinal Chemistry, Pharmacology, or Drug Delivery) are reviewed twice yearly near the end of the fall and spring semesters. Deadlines for the receipt of applications is April 1 for admission in the fall semester, and October 1 for admission in the spring semester. Incomplete applications and applications received after these deadlines will not be considered.

Applicants should select either the thesis or non-thesis option. The thesis option is intended for students seeking to enter a research career, and requires completion of an original research project. The non-thesis option is intended for students seeking careers in pharmaceutical sciences that do not require extensive laboratory experience. Applicants are strongly encouraged to contact the Department of Biomedical and Pharmaceutical Sciences for advice on choosing which option best meets their career goals.

Thesis Option:

Applicants must complete the following courses:

PSCI 601	Graduate Seminar	2 cr
PSCI 602	Research Design and Analysis for the Pharmaceutical Sciences	3 cr
PSCI 603	Scientific Writing	3 cr
PSCI 607	Research Foundations	3 cr
PSCI 650	Thesis Research	6 cr min.
Electives in Pharmaceutical Sciences		6 cr

A minimum of 30 credits, including at least 6 credit hours in thesis research (PSCI 650), is required by the Graduate School. For all degree applicants, at least one half of total graduate credit hours required by the student's Graduate Program Committee must be at the 600-level. Minimum Graduate School credit requirements may not fulfill Departmental degree requirements.

Non-Thesis Option:

Applicants must complete the following courses:

PSCI 601	Graduate Seminar	2 cr
PSCI 602	Research Design and Analysis for the Pharmaceutical Sciences	3 cr
PSCI 603	Scientific Writing	3 cr
PSCI 604	Research Practicum	3 cr
PSCI 607	Research Foundations	3 cr
PSCI 648	Master's Paper	3 cr
Electives in Pharmaceutical Sciences		9 cr

A minimum of 36 credits is required. For all degree applicants, at least one half of total graduate credit hours required by the student's Graduate Program Committee must be at the 600-level. Minimum Graduate School credit requirements may not fulfill Departmental degree requirements.

All students in the graduate program, whether seeking the Doctor of Philosophy or the Master of Science, are expected to demonstrate proficiency in written and spoken English. Students may be required to successfully complete classes in speech and in technical writing at the request of the graduate program director and the graduate faculty of the Department of Pharmaceutical Sciences.

Master of Science in Pharmaceutical Sciences (Social and Administrative Sciences Emphasis)

Applicants may elect either a thesis or non-thesis option and must complete the following courses:

M.S. Degree Option:

		NON-THESIS	THESIS
STATISTICS AND RESEARCH METHODS			
BIOL 605	Biometry	4 cr	
	OR		
PPRA 518	Clinical Research Design and Analysis	4 cr	
PADM 605	Research Methods	3 cr	
PHARMACY ADMINISTRATION MAJOR COURSES			
PADM 601	Graduate Seminar in Pharmacy Administration	2 cr	
PADM 610	Social and Behavioral Aspects of Pharmacy Practice	3 cr	
	OR		
PADM 632	Medical Economics	3 cr	
PADM 634	Advanced Pharmacy Administration I	3 cr	
	OR		
PADM 635	Advanced Pharmacy Administration II	3 cr	
Major area elective courses		15 cr	
12 cr			
RESEARCH ACTIVITY			
PADM 650	Thesis Research	6 cr	
PADM 651	Master's Paper	3 cr	
	TOTAL	33 cr	
34 cr			

Joint Pharm.D.-Graduate Degree Program (Social and Administrative Sciences Emphasis)

Applicants must complete the following courses while enrolled in the P3 and P4 years of the Pharm.D. curriculum. (The courses listed below substitute for PSCI 532 Clinical Research Design and Analysis, and 6 credits of professional electives required in the Pharm.D. curriculum). In addition, the following courses taken in the P3 year will constitute a minor area in Clinical Pharmacy as required in the graduate program: PPRA 534 and PPRA 535 Therapeutics I and II, PSCI 529 Clinical Pharmacokinetics, and PSCI 568 Toxicology; PPRA 569 will substitute for 3 credits of PADM 650 Thesis Research.

Third Professional Year Course Substitutions:

BIOL 605	Biometry	4 cr
PADM 605	Research Methods in Pharmacy Administration	3 cr
Pharmacy Administration Major Area Graduate Course		3 cr

Fourth Professional Year Elective Clerkship:

PPRA 569	Research Specialty Clerkship	4 cr

Additional Graduate Program Requirements:

M.S. (thesis option):

PADM 601	Graduate Seminar	2 cr
Major Area Courses		12 cr
PADM 650	Thesis Research	3 cr
		Total 17 cr

Ph.D.:

PADM 601	Graduate Seminar	4 cr
Multivariate Analysis		4 cr
Research Methods Elective		3 cr
Major Area Courses		21 cr
PSCI 698	Dissertation Research	18 cr
PSCI 850	Dissertation Prep	1 cr
		Total 51 cr

Pharmaceutical Sciences Graduate Courses

PSCI g541 Diabetes for Health Sciences 2 credits. A discussion of Diabetes: types, development, complications, treatment, monitoring, and patient-related issues. Topics include basic science and the patient elements. Discussions will be based on student interest and back ground. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 601 Graduate Seminar 1 credit. Discussion of current research and theories in Pharmaceutical Sciences. May be repeated.

PSCI 602 Research Design and Analysis for Pharmaceutical Sciences 3 credits. Principles of research design and statistical analysis applicable to the pharmaceutical or biomedical sciences. Emphasis on evaluation of biomedical literature and on development of research plans. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 603 Scientific Writing 3 credits. Basic techniques in scientific writing including: philosophy of science and logic in writing; how to write scientific papers, thesis/dissertation, grant proposals, and reviews; use of computers and software.

PSCI 604 Research Practicum 3 credits. The student will receive practical laboratory training in pharmaceutical sciences under the guidance of faculty. May be repeated. PREREQ: ENROLLMENT IN THE NON-THESIS OPTION, AND PERMISSION OF THE INSTRUCTOR. Graded S/U.

PSCI 606 Selected Techniques in the Laboratory 2 credits. Practical experience in the use of instrumentation and techniques in the student's area of specialization. Each student shall select

three faculty laboratories in the Pharmaceutical Sciences for specific technical training. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 607 Research Foundations 3 credits. A discussion of the nature and critical analysis of experimentation, principles of the scientific method, and literature in the Pharmaceutical Sciences.

PSCI 609 Advanced Drug Delivery 3 credits. Critical assessment of novel drug carrier systems regarding biological, drug-related, and carrier-related factors. Study of targeted drug delivery and controlled release devices with emphasis on bioerodible polymers, matrix and reservoir systems.

PSCI 610 Analytical Techniques in Pharmaceutics and Drug Delivery 3 credits. Theory and practice of analytical techniques in pharmaceutics and drug delivery research. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 611 Current Topics in Pharmaceutics and Drug Delivery 1 credit. Discussion of current research topics in pharmaceutics and drug delivery. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 620 Drug Discovery 2 credits. An overview of the process of drug discovery and the regulatory process of drug development, infrastructure of FDA and the process of clinical trials for approval of drugs, biologics, and medical devices. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 621 Biological Actions of Chemicals 3 credits. Introduction to basic principles of pharmacology, including the molecular basis for drug action; entry, distribution, metabolism and elimination of chemicals, genetic influences in chemical actions, and tolerance. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 622 Principles of Toxicology 3 credits. Introduction to basic concepts of toxicology, including mutagenesis, carcinogenesis, teratology, risk assessment, regulatory toxicology, toxicology of solvents, pesticides, metals and radioactive materials and design of toxicological studies. PREREQ: PSCI 621 OR PERMISSION OF INSTRUCTOR.

PSCI 623 Pharmacology of the Pulmonary and the Renal Systems 2 credits. Provides a detailed examination of the pharmacology of pulmonary and renal systems, focusing on mechanisms of action of major drug classes used in treatment of disorders via coordination with pharmacology sections of the professional pharmacotherapy module series. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 624 Pharmacology of the Cardiovscular System 3-4 credits. Provides a detailed examination of the pharmacology of the cardiovascular system, focusing on mechanisms of action of major drug classes used in treatment of cardiovascular disorders via coordination with pharmacology sections of the professional pharmacotherapy module series. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 625 Pharmacology of the Gastrointestinal and the Hepatic Systems 2 credits. Provides a detailed examination of the pharmacology of GI and hepatic systems, focusing on mechanisms of action of major drug classes used in treatment of disorders via coordination with phyrmacology sections of the professional pharmacotherapy module series. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 626 Pharmacology of the Immune System and Infectious Diseases 3 credits. Provides a detailed examination of the pharmacology of the immune system, focusing on mechanisms of action of major drug classes used in treatment of infectious diseases via coordination with pharmacology sections of the professional pharmacotherapy module series. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 627 Endocrine Pharmacology 2 credits. Provides a detailed examination of the pharmacology of endocrine systems, focusing on mechanisms of action of major drug classes used in treatment of disorders via coordination with pharmacology sections of the professional pharmacotherapy module series. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 630 Psychopharmacology 3 credits. This course will cover the mechanisms of action of psychoactive drugs, including drugs used in the treatment of psychopathological disorders and drugs of abuse. Also covered will be the learned basis of drug effects. Students will critique contemporary readings in the application of psychotherapeutic agents and processes of addiction. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 631 Cancer Biology 3 credits. Study of the difference between normal and cancerous cells growth control, cell cycle, carcinogenesis, growth factor and oncogenes, cellular signaling, angiogenesis, telomerases, tumor invasion and metastasis, vitamins, diet and tobacco. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 632 Anti-cancer Drugs 3 credits. Cell cycle drug design and development, mechanisms of antimetabolites, alkylating agents, topoisomerase inhibitors, natural compounds, hormones and novel agents. Relationship between receptors and response to chemotherapy, drug resistance, drug delivery. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 633 Experimental Oncology 2 credits. Cell culture, anticancer drug screening, protein, RNA and DNA analysis, methods in signal transduction and oncogene expression. Immunohistology, cell cycle analysis, receptor binding, receptor screening of tumors. Laboratory work included. Limit 5 students.

PSCI 634 Current Topics in Oncology 1 credit. Study of current topics in cancer research. Emphasis on novel approaches to understand and treat cancer. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 636 Concepts and Tools in Pharmacogenomics 2 credits. The role of genetic factors in the development and evaluation of drugs, basic principles of microarray analysis introduction to proteomics. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 635 Special Topics in Oncology 2 credits. An introduction to cancer biology and cancer terminology. An overview of fundamentals of pharmacology as applied to cancer therapy. Mechanisms of action and resistance to chemotherapeutic drugs will be emphasized. A discussion of the importance of early detection. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 640 Elements of Nanoscience and Nanotechnology 3 credits. An introduction to the properties of nanomaterials. Applications of nanomaterials in biomedical, pharmaceutical, environmental, and bioengineering systems and their impact on society. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 648 Master's Paper 3 credits. The student will be required to complete an original literature review of a topical area in the pharmaceutical sciences. PREREQ: ENROLLMENT IN THE NON-THESIS OPTION, AND PERMISSION OF THE INSTRUCTOR. Graded S/U.

PSCI 650 Thesis Research 1-10 credits. Graded S/U.

PSCI 652 Advanced Biopharmaceutics and Pharmacokinetics 3 credits. Physicochemical principles involved in the kinetics of drug absorption, distribution, biotransformation, elimination, and therapeutic response. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 653 Principles of Biopharmaceutical Analysis 3 credits. A treatment of the principles of modern methods for the qualitative and quantitative determination of drugs in biological materials.

PSCI 655 Advanced Biopharmaceutical Analysis 3 credits. A continuation of PSCI 653, this course covers the chromatographic techniques of analysis in detail including liquid chromatography, gas chromatography, thin layer capillary zone electrophoresis, and mass spectrometry, chromatography.

PSCI 660 Molecular Pharmacology 3 credits. Advanced study in the transduction of biological signals, molecular basis for the action of hormones, neurotransmitters and growth factors on neurotransmission, metabolism, gene regulation and cell growth. PREREQ: PSCI g567 AND PERMISSION OF INSTRUCTOR.

PSCI 661 Drug Metabolism 3 credits. Advanced study in drug metabolism, cytochrome P450 oxidative system, toxic actions of drugs, mutagenicity, carcinogenicity, and *in vitro* systems for the study of metabolism. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 662 Neuropharmacology 3 credits. The molecular basis of drug action in the central nervous system including nerve excitation, molecular properties of ion channels, neuropharmacological methods, pharmacology of ethanol and the mechanisms

in tolerance and physical dependence. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 682 Independent Problems in Pharmaceutical Sciences 1-4 credits. Advanced students are assigned special studies in areas of pharmaceutical sciences on the basis of interest and previous preparation. May be repeated. PREREQ: PERMISSION OF INSTRUCTOR.

PSCI 698 Dissertation Research variable credit. Research toward completion of the dissertation in the pharmaceutical, social, behavioral or administrative pharmacy sciences. Graded S/U.

PSCI 850 Dissertation variable credit. Preparation of the written report of the dissertation research. Graded S/U.

Pharmacy Administration Graduate Courses

PADM g554 Pharmacy Management I 2 credits. Principles of organization, management and financial analysis as applied to the practice of pharmacy. PREREQ: PPRA 519.

PADM g556 Pharmacy Management II 2 credits. Problems of management, merchandising, and salesmanship, applied to community pharmacy. PREREQ: PHAR 454.

PADM 538 Independent Problems in Pharmacy Administration 1-4 credits. Independent study of various topics in pharmacy administration. May be repeated.

PADM 601 Graduate Seminar in Pharmacy Administration 1 credit. Discussion of current research and theories in pharmacy administration. May be repeated.

PADM 603 Advanced Pharmacy Law 3 credits. Requirements of federal laws influencing the practice of pharmacy, including selected recent cases. PREREQ: PPRA 519 OR PERMISSION OF INSTRUCTOR.

PADM 605 Research Methods in Pharmacy Administration 3 credits. Methods in research design and analysis utilized in pharmacy administration research. PREREQ: GRADUATE LEVEL STATISTICS COURSE.

PADM 610 Social and Behavioral Aspects of Pharmacy Practice 3 credits. Examination of sociological and psychological concepts and theories as applied to the practice of pharmacy. PREREQ: PERMISSION OF INSTRUCTOR.

PADM 612 Ethics for Health Professionals 3 credits. Examination of ethical issues that arise in the provision of health care. PREREQ: PERMISSION OF INSTRUCTOR.

PADM 624 Advanced Pharmacy Management I 3 credits. Principles of operation and management encountered in the drug distribution process. PREREQ: ONE YEAR OF ACCOUNTING OR PERMISSION OF INSTRUCTOR.

PADM 626 Advanced Pharmacy Management II 3 credits. Case studies of problems encountered in pharmacy management. PREREQ: PADM 624.

PADM 630 Advanced Drug Marketing 3 credits. Approaches and methods of marketing as applied to pharmacy and the drug distribution process.

PADM 632 Medical Economics 3 credits. Examination of the market forces encountered in the medical care system.

PADM 634 Advanced Pharmacy Administration I 3 credits. An integration of socio-behavioral and management principles into an advanced consideration of pharmacy administration.

PADM 635 Advanced Pharmacy Administration II 3 credits. A continuation of PADM 634, this course further explores issues in the discipline of pharmacy administration.

PADM 649 Research in Pharmacy Administration 1-2 credits. Research problems ancillary to the thesis project.PREREQ: GRADUATE STANDING AND PERMISSION OF INSTRUCTOR. Graded S/U.

PADM 650 Thesis Research 1-10 credits. Graded S/U.

PADM 651 Master's Paper 3 credits. Graded S/U.

PADM 691 Topical Seminar in Pharmacy Administration 2-4 credits. Examination of selected topics in pharmacy administration. May be repeated.

Pharmacy Practice Graduate Courses

PPRA g591 Topical Seminar in Pharmacy Practice 1-4 credits. Examination of selected topics in pharmacy practice and pharmacy administration. May be repeated. PREREQ: PERMISSION OF INSTRUCTOR.

PPRA g518 Clinical Research Design and Analysis 4 credits. The fundamentals of experimental design, implementation and data analysis pertinent to pharmaceutical clinical investigations.

PPRA 553 Professional Student Seminar 1 credit. Development of a relevant therapeutic topic including the review, analysis, and oral presentation of all appropriate medical and scientific literature. PREREQ: MUST BE FOURTH-YEAR PROFESSIONAL STUDENT.

PPRA 596 Clinical Pharmacy Residency 0 credits. Advance practical experience in clinical pharmacy practice. PREREQ: MUST HAVE A DOCTOR OF PHARMACY DEGREE.

Services Courses

PHAR 645 Pharmacotherapeutics for Advanced Practice Nurses 3 credits. A problem-based course emphasizing the fundamentals of drug action and the rational use of drugs to treat various organ system disease states. PREREQ: BIOL g563.


COLLEGE
OF
TECHNOLOGY

College of Technology

Marilyn Davis, Ed.D., Dean
Debbie Thompson, M.Ed., Associate Dean

Geomatics Technology

Professor: Wissa
Associate Professor: Bajracharya

Geomatics Graduate Courses

(No graduate degrees are offered)

GEMT g530 Principles and Applications 3 credits. Introduction to theory and use of GPS for mapping and survey quality application. Includes basic and advanced principles of GPS positioning, Differential GPS, types of GPS receivers, static, kinematics and RTK procedures, vector processing and adjustment using least squares concept, OPUS processing, coordinate creation and export results for use in specific application. PREREQ: CET/GEMT 224 OR PERMISSION OF INSTRUCTOR.

GEMT g532 Principles of Photogrammetry 3 credits. Introduction to vertical photo geometry and its scale, relief and tilt displacement, stereoscopic viewing, parallax measurement, mosaics, orientations, development of planimetric and topographic maps, flight planning, softcopy photogrammetry and introduction to aerial triangulation. PREREQ: CET/GEMT 224 OR PERMISSION OF INSTRUCTOR.

Department of Human Resource Training and Development

Chair and Professor Croker
Professor: Johnson
Associate Professor: Kolody, Scott

Master of Training and Development

The Master of Training and Development, aligned with State educational standards, provides the adult learner with opportunities to engage in the processes of inquiring, learning, and applying known competencies within the fields of Human Resource Development and Professional Technical Education.

The Master of Training and Development is designed to strengthen the student's understanding, knowledge, and skills in three major areas–Professional Core Requirements, Training Management Studies, and Integrative Field Research Studies–as they relate to Training and Development.

Admission Requirements

Individuals applying for admission to the Master of Training and Development program must meet the following admission requirements:

- Bachelor's degree from a college or university accredited in the United States or its equivalent from a school in another country.
- Grade point average of 3.0 or higher for all upper division credits taken at the undergraduate level.
- The student must apply to, and meet all criteria for, admission to the Graduate School.

General Requirements

Students must complete a minimum of 36 semester credit hours for the Master of Training and Development. All applicants completing a thesis will orally defend the thesis, but will not complete written comprehensive examinations. All applicants not completing a thesis will be required to orally defend the findings of their field research. In addition, the Department of Human Resource Training and Development requires applicants to have a knowledge of statistical procedures.

Students seeking Idaho certification in the area of their training must meet any requirements of the State Board of Education for certification.

Professional Studies Core

HRD 504	Evaluation in Corporate Training and Professional-Technical Education	3 cr
HRD 505	Learning Styles Fundamentals	3 cr
HRD 509	Professional Readings and Writing in HRTD	3 cr
HRD 632	Research Methods in HRD	3 cr

Training Management Studies

HRD 633	Program Planning and Development in HRTD	3 cr
HRD 634	Administration of HRTD	3 cr

An additional 12 semester hours must be taken from department courses or courses outside the department approved by student's major advisor.

Integrative Field Research Studies

HRD 650	Thesis	6 cr
	OR	
HRD 635	Practicum in Training Administration	3 cr
HRD 645	Field Research Project in Training Management	3 cr

Training and Development Graduate Courses

HRD g501 Foundations of Professional-Technical Education 3 credits. Acquaints the student with the various aspects of professional-technical (formerly vocational) education: history, legislation, philosophy and organization of professional-technical education.

HRD g502 Occupational Analysis and Course Construction 3 credits. Analysis of components of occupations to determine instructional content. Development of instructional materials based on performance objectives and competency identification.

HRD g503 Methods for Teaching Professional-Technical Education 3 credits. Teaching methods and techniques applicable to professional-technical education.

HRD g504 Evaluation in Corporate Training and Professional-Technical Education 3 credits. Designing and conducting evaluations at four levels in professional-technical education, and in business and industry training, including data analysis and preparation of evaluation reports.

HRD g505 Learning Styles Fundamentals 3 credits. Examination of the research related to learning styles and implications for curriculum and instruction. Includes presentation of an eight-step approach for teaching instructional content.

HRD g506 Grantwriting in Human Resource Training and Development 3 credits. Reasons for requesting a grant, goal setting, sample projects, identifying funding agencies, submitting a Request for proposal (RFP), elements of a good proposal, library resources, web sites, and other references for grant writing.

HRD g509 Professional Readings and Writing in HRTD 3 credits. Exposure to the professional literature and web sites of professional-technical education and corporate training, including practice in writing abstracts of journal articles using APA Style.

HRD g531 Workforce Leadership 3 credits. Supervising in a professional-technical education or corporate training setting. Study human relation factors: planning, organizing, evaluation, staff development, labor relations, and personnel policies/practices.

HRD g544 Career Guidance and Special Needs in Professional-Technical Education 3 credits. Examine career guidance concepts, specialist services, special needs legislation, abilities and inabilities (both mental and physical), job seeking skills, and information sources.

HRD g550 Principles of Adult Education 3 credits. Provides an understanding of adult education as a field of academic inquiry and professional practice. Examines current and past trends and practices of adult learning.

HRD g557 Facilitating Adult Learning 3 credits. Study of the needs and interests of adult learners in business and industry using Andragogy. Planning of conferences and workshops for adult learners.

HRD g561 Directed Studies 1-4 credits. Individual work under staff guidance. Field research on specific occupational advances in technology. PREREQ: PERMISSION OF INSTRUCTOR REQUIRED PRIOR TO REGISTRATION.

HRD g564 Instructional Facilities Management 3 credits. Organization, safety and management of professional-technical education training facilities. An in-depth study of laboratory requirements and total facility planning.

HRD g565 Practicum in Corporate Training 3 credits. Development of training competencies in an actual business and industry settings. Actual participation as a trainer is required. PREREQ: PERMISSION OF INSTRUCTOR. Graded S/U.

HRD g568 Teaching Cooperative Education and School-to-Work 3 credits. Coordinating cooperative programs and school-to-work programs, occupational and job analysis, utilizing professional-technical advisory committees, organizing and advising vocational student organizations.

HRD 597 Professional Education Development Topics. Variable credit. May be repeated. A course for practicing professionals aimed at the development and improvement of skills. May not be applied to graduate degrees. Must be graded S/U .

HRD 632 Research Methods in HRD 3 credits. Examination of methods for designing and conducting research in both educational and workplace settings. Introduction to procedures for summarizing and analyzing quantitative and qualitative data with proper style and format requirements for formal report writing. PREREQ: HRD g509 OR PERMISSION OF INSTRUCTOR.

HRD 633 Program Planning and Development in HRTD 3 credits. Preparing local plans for professional-technical education or training programs for business and industry. State, federal and private sector guidelines for program implementation, and effectiveness explored.

HRD 634 Administration of HRTD 3 credits. Examination of the executive functions of the professional-technical or training administrator. Attention to budgeting, reporting, facility and equipment management, negotiations, advisory committees, and community relations.

HRD 635 Practicum in Training Administration 3 credits. An individually designed internship under the supervision of the faculty and an experienced local professional-technical administrator or training manager. PREREQ: PERMISSION OF INSTRUCTOR REQUIRED PRIOR TO REGISTRATION.

HRD 637 Practicum 1-3 credits. An individually designed practicum under the supervision of the HRTD faculty and an experienced practitioner in the field of Human Resource Training and Development. May be repeated up to 6 credits. Graded S/U.

HRD 640 Seminar in Training Management 1-2 credits. Current topics in the management of human resource development presented by department faculty and visiting lecturers. Maximum of 2 credits applied to the degree. Graded S/U.

HRD 645 Field Research Project in Training Management 1-3 credits. An individual field research project must be completed; a written report and oral explanation of the report will be required. May be repeated up to 6 credits. Graded S/U. PREREQ: PERMISSION OF INSTRUCTOR REQUIRED PRIOR TO REGISTRATION.

HRD 650 Thesis 1-6 credits. Graded S/U. PREREQ: PERMISSION OF INSTRUCTOR REQUIRED PRIOR TO REGISTRATION.

HRD 660 Contemporary Issues in HRD 3 credits. Exploration of issues relating to the functions of HRTD - Individual Development, Career Development and Organizational Development. Emphasis on how these functions relate to the industrial/business environment.

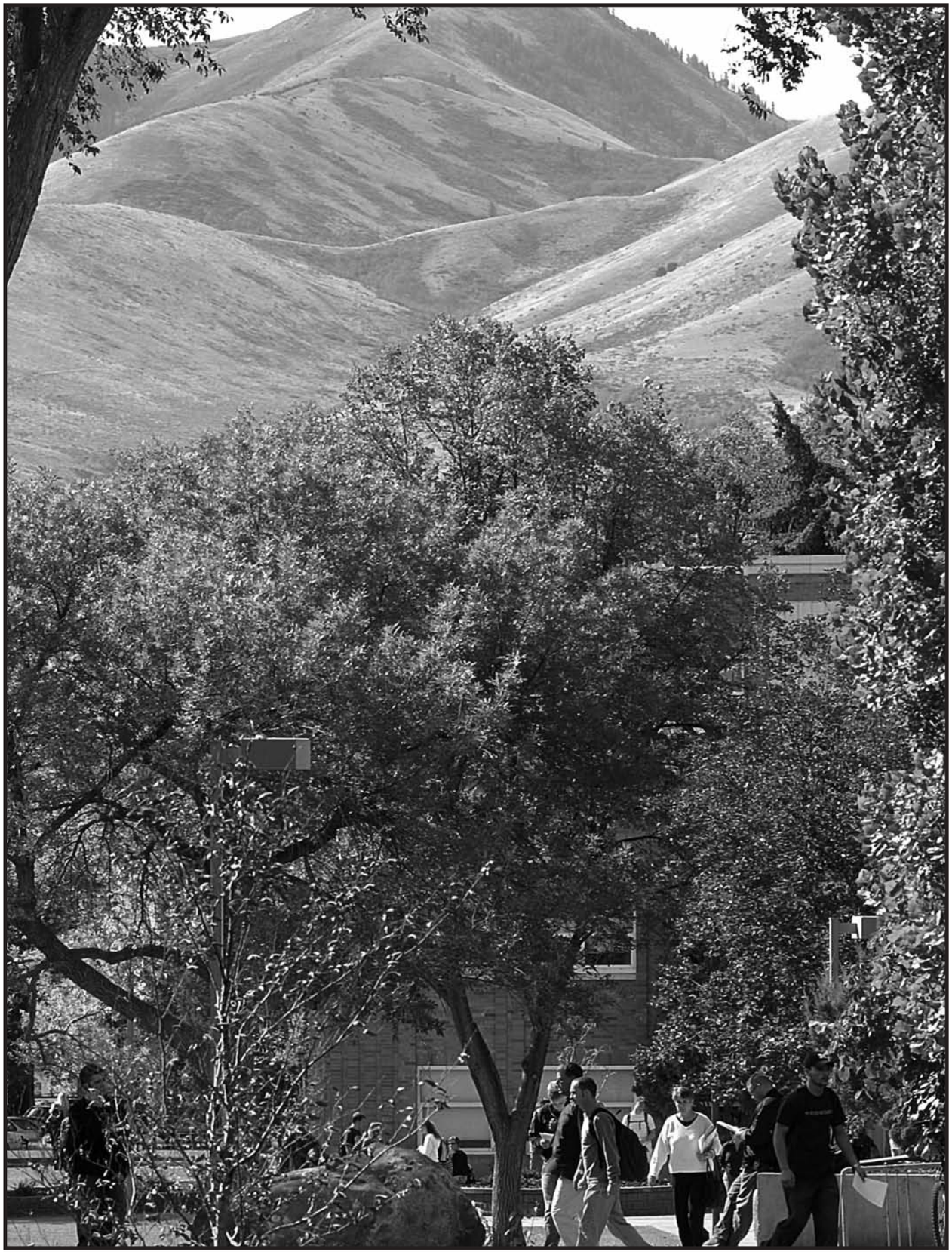
HRD 661 Management Issues in HRD 3 credits. Critical analysis and discussion of contemporary issues relating to management in HRD. Includes review of current research and theory.

HRD 662 Distance Learning Delivery Practices 3 credits. Exploration of the distance delivery medium including on-screen practices, media development, curriculum planning, instructional strategies, technical support. Includes review of research and theory relating to distance learning.

HRD 663 Instructional System Evaluation 3 credits. Critical analysis and discussion of the roles of evaluation in corporate training. Emphasis on theories of program and curriculum evaluation.

HRD 664 Topics in Human Resource Development 3 credits. Critical analysis of current topics in human resource development. Opportunities will be provided for students to study independently with specialists in topic areas.

HRD 680 Advanced Technical Competency 1-4 credits. Advanced occupational skills and knowledge obtained from modern practice in selected field. For experienced professionals seeking advanced techniques in specialized areas of PTE, and HRD. PREREQ: APPROVAL OF ADVISOR REQUIRED.



Informatics Research Institute

Director and University Professor of Informatics Schou
Associate Director and Professor Lohse
Professor: Cady
Associate Professors: Sammons, J. Strickland, Turley-Ames
Assistant Professor: Frost
Affiliate Professors: Leibrock, Longley, Murray, Stephenson
Affiliate Assistant Professors: Moulton, Slay, Willes

Mission

The Informatics Research Institute (IRI) is an academic unit providing coordination for several interdisciplinary degrees and research centers across campus. Informatics is an integrative discipline that arises from the synergistic application of computational, informational, organizational, cognitive, and other disciplines whose primary focus is in the acquisition, storage and use of information in a broad spectrum of domains. It includes the study and application of information technology in the arts, sciences, commerce, medicine, and society in general. The IRI has a mission in teaching, research, and service. Activities include:

- Developing interdisciplinary programs in informatics
- Developing interdisciplinary degree programs
- Developing and offering outreach programs
- Coordinating activities of related centers on campus
- Providing leadership in critical infrastructure protection
- Developing educational programs
- Developing infrastructures to support research in diverse fields
- Coordinating interdisciplinary academic concentrations

The IRI coordinates activities among the National Information Assurance Training and Education Center (NIATEC), Simplot Decision Support Center (SDSC), Center for Innovative Technology in Archaeological Informatics (CITI-AI), and the Center for Innovative Technology in Mathematics, Science, and Social Sciences Learning (CITI-MSSSL). The IRI charter includes development of interdisciplinary AA, AS, BA, BS, Masters and Doctoral programs, as well as concentrations in Information Assurance.

Archaeological Informatics

Associate Director and Professor of Anthropology Lohse

CITI-AI - Center for Innovative Technology in Archaeological Informatics

The CITI-AI leads research in the organization and analysis of archaeological information. It creates and maintains active partnerships within the archaeological community and serves as an interdisciplinary center of activity uniting basic informatics research and modeling within the Informatics Research Institute, Idaho State University, and its affiliated faculty.

Educational Informatics

CITI-MSSSTL - Center for Mathematics, Science, Social Sciences, and Technology Learning

The CITI-MSSSTL focus is on PK-16 learning in the current environment of accountability. The faculty of CITI-MSSSTL collaborates with other institutions to explore technology and informatics solutions to improve learning. Curriculum development, assessment, data management, and teacher training are but a few of the services offered by CITI-MSSSTL. The staff of CITI-MSSSTL are experienced in all aspects of instructional systems design and implementation. The center creates and maintains active partnerships with public schools and higher education institutions interested in improving the quality of learning within our educational systems.

Simplot Decision Support Center

SDSC - Simplot Decision Support Center

The Simplot Decision Center is a facility designed to increase group decision-making effectiveness and efficiency. It is a research and development effort of Idaho State University resulting from the generosity of the Simplot Corporation. The Simplot Decision Support Center is one of a few dedicated facilities in the nation and is available as a resource to both local and national organizations. It has led the national effort in developing information assurance and computer security training and education standards for the federal government.

Information Assurance

NIATEC - National Information Assurance Training and Education Center

The NIATEC Center is a consortium of academic, industry, and government organizations to improve the literacy, awareness, training, and education standards in information assurance. As the federally designated cornerstone for essential education and training components of a strong information assurance initiative, the mission is to establish an effective information assurance infrastructure. NIATEC is associated with the Idaho State University Center for Academic Excellence. It is a component in the national plan to establish a federal cyber-corps to defend against cyber-based disruption and attacks. Key to building such a cyber-corps is the implementation of robust graduate and undergraduate curricula in information assurance.

Information Assurance Degree Concentrations

The Informatics Research Institute coordinates the federally designated Center of

Academic Excellence in Computer Security Education. The Center of Academic Excellence includes formal concentrations in information assurance at the undergraduate and graduate level in cooperation with NIATEC and CITI-MSSSL. In addition, the IRI offers formal concentrations in information assurance for baccalaureate, masters, and doctoral programs. These concentrations may be above the regular degree requirements documented by the DHS/CNSS approved certificates offered by ISU.

Certificates for Concentrations:

- CNSS 4011 - National Training Standard for Information Systems Security (INFOSEC) Professionals
- CNSS 4012 - Senior Systems Manager
- CNSS 4013 - Systems Security Administration
- CNSS 4014 - Information Systems Security Officer
- CNSS 4015 - Systems Certification

General Requirements

Students with appropriate prerequisites may take courses within the information assurance program as part of a formal information assurance concentration in their degree program. With approval of their advisor and the faculty, they may pursue certificates in specialty areas. In addition to courses that support specialized certificates, the program offers courses in computer forensics and risk analysis. All courses require preparation of research papers on information assurance topics related to their major fields.

CNSS 4011 - Students in the CIS emphasis in the MBA program may take CIS 511, a minimum of 6 hours of 519 (Informatics Practicum) or 593 (Internship) and two additional courses in information assurance. Graduate courses increase focus on theory, history, software assurance, assured systems design, and networks. Students in other majors may have to take additional remedial courses or demonstrate appropriate experience.

All students seeking additional certifications must complete the requirements for CNSS 4011 and the following:

- CNSS 4012 - Students certifying for 4012 must complete CIS 511, 512, 513, 514, and 515.
- CNSS 4013 - Students certifying for 4013 must complete CIS 511, 513, and 585
- CNSS 4014 - Students certifying for 4014 must complete CIS 511, 513, and 514
- CNSS 4015 - Students certifying for 4015 must complete CIS 511, 514, and 515

Doctoral students wishing to build a concentration in Information Assurance should contact the director to discuss research and coursework opportunities customized to meet their academic program.

Graduate Faculty

NOTE: The date in parentheses is the date of first appointment at Idaho State University. Adjunct, Affiliate and Emeritus Faculty are listed in the Undergraduate Catalog.

Adamcik, Barbara A., Professor, Pharmacy Practice and Administrative Sciences; Associate Vice President for Academic Affairs. B.A., 1974, University of California, Los Angeles; M.A., 1981; Ph.D., 1984, University of Southern California. (1985)

Adkison, Jennifer, Assistant Professor, English and Philosophy. B.A., 1989, Baylor University; M.A., 1992, University of Missouri, Columbia; M.A., 1997, University of Texas, Houston; Ph.D., 2001, University of Nevada, Reno. (2000)

Adkison, Stephen R., Associate Professor, English and Philosophy; Associate Vice President for Academic Programming and Review. B.A., 1986, Montana State University; M.A., 1997; Ph.D., 2000, University of Nevada, Reno. (2000)

Adler, David G., Professor, Political Science. B.A., 1976, Michigan State University; Ph.D., 1982, University of Utah. (1985)

Aho, James A., Professor, Sociology, Social Work and Criminal Justice. B.A., 1965, University of Washington; M.A.; 1968, Ph.D., 1971, Washington State University. (1969)

Allen, Virginia B., Professor, Counseling. B.A., 1974, University of Montana; M.Ed., 1978, South Dakota State University; Ed.D., 1981, University of South Dakota. (1981)

Aly, Mohamed H., At-Large Graduate Faculty, Geosciences. B.Sc., 1992, Zagazig University, Egypt; M.Sc., 1997, Zagazig University, Egypt; Ph.D., 2006, Texas A&M University. (2006)

Ames, Daniel P., Associate Professor, Geosciences. B.S., 1996, Utah State University; M.S., 1998, Utah State University; Ph.D., 2002, Utah State University. (2004)

Anderson, Curtis W., Associate Professor, Biological Sciences. B.S., 1991, Southwest Missouri State University; M.S., 1994; Ph.D., 1996, Northern Arizona University. (1998)

Anderson, Scott E., Professor, Music. B.A., 1982, Whitworth College; M.Mus., 1984, Westminster Choir College; D.M.A., 1993, University of Missouri-Kansas City Conservatory of Music. (1992)

Anderson, Sean K., Professor, Political Science. B.A., 1975, Western Washington University; M.B.A., 1978, University of Washington; Ph.D., 1993, University of Oklahoma. (1993)

Apel, William A., At-Large Graduate Faculty, Biological Sciences. B.A., 1973; M.S., 1976; Ph.D., 1978, The Ohio State University.

Appleby, Karen M., Associate Professor, Sport Science and Physical Education. B.A., 1998, Hanover College; M.S., 1999; M.S., 2000; Ph.D., 2004, University of Tennessee. (2004)

Arvidson, Cathy R., Associate Professor, Nursing. B.S.N., 1978, Vanderbilt University; M.S.N., 1981, University of Florida; Ph.D., 1990, Texas Woman's University. (1992)

Ashton, Carol A., Associate Professor, School of Nursing; Associate Dean and Director. B.S., 1972; M.S., 1975, The Ohio State University; Ph.D., 1989, University of Utah. (2001)

Attebery, Brian L., Professor, English and Philosophy. A.B., 1974, College of Idaho; A.M., 1976; Ph.D., 1979, Brown University. (1982)

Attebery, Jennifer Eastman, Professor, English and Philosophy. B.A., 1973, College of Idaho; M.A., 1974; Ph.D., 1985, Indiana University, Bloomington. (1992)

Aytes, Kregg J., Professor, Computer Information Systems; Department Chair. B.S., 1984; Ph.D., 1993, University of Arizona. (1993)

Baergen, Ralph, Professor, English and Philosophy. B.A., 1983, University of Manitoba; M.A., 1989; Ph.D., 1990, Syracuse University. (1993)

Bain, Barbara A., Professor, Communication Sciences and Disorders, and Education of the Deaf. B.S., 1963, Kansas State University; M.A., 1965, University of Iowa; Ph.D., 1981, University of Washington. (1990)

Baxter, Colden, Assistant Professor, Biological Sciences. B.A., 1993, University of Oregon; M.S., 1997, University of Montana; Ph.D., 2002, Oregon State University. (2004)

Beachboard, John C., Associate Professor, Computer Information Systems. B.S., 1976, University of Arizona; M.S., 1990, Boston University; M.S., 1995; Ph.D., 1999, Syracuse University. (2001)

Beachboard, Martine R., Assistant Professor, Mass Communication. B.S., 1976, Northern Arizona University; B.A., 1990, University of Maryland; M.S., 1995, M.S., 1996, Syracuse University; Ph.D., 2008, Touro University International. (2002)

Beard, David V., Professor, Computer Information Systems. B.A., 1978, Hope College; M.S., 1983; Ph.D., 1985, University of Michigan. (1995)

Bearden, Shawn, Assistant Professor, Biological Sciences. B.S., 1994, University of Virginia; M.S., 1996, George Mason University; Ph.D., 2000, Florida State University. (2004)

Beardsley, Paul, At-Large Graduate Faculty, Biological Sciences. B.A., 1992, Colorado College; Ph.D., 2002, University of Washington. (2004)

Beckmann, Jon, At-Large Graduate Faculty, Biological Sciences. B.S., 1996, Kansas State University; Ph.D., 2002, University of Nevada, Reno. (2005)

Bennett, Byron L., Assistant Professor, Chemistry. B.A., 1989, Cedarville College; Ph.D., 1997, University of Wyoming. (2007)

Benson, C. Scott, Jr., Professor, Economics. A.B., 1972, University of California, Berkeley; M.A., 1979; Ph.D., 1988, University of California, Davis. (1986)

Berger, Joel, At-Large Graduate Faculty, Biological Sciences. B.A., 1974; M.S., 1975, California State University, Northridge; Ph.D., 1978, University of Colorado, Boulder. (2005)

Bhushan, Alok, Professor, Biomedical and Pharmaceutical Sciences. B.S., 1975; M.S., 1977, University of Delhi; Ph.D., 1982, Punjab Agricultural University. (1998)

Bigelow, James, Associate Professor, Biomedical and Pharmaceutical Sciences. B.S., 1979, University of Illinois, Urbana-Champagne; Ph.D., 1985, Indiana University, Bloomington. (2004)

Blanton, Cynthia A., Assistant Professor, Health and Nutrition Sciences. B.S., 1994, California State University; Northridge; Ph.D., 2000, University of California, Davis. (2007)

Bleich, Vernon, At-Large Graduate Faculty, Biological Sciences. B.S., 1970; M.A., 1973, California State University, Long Beach; Ph.D., 1993, University of Alaska, Fairbanks. (2005)

Boes, Richard F., Professor, Accounting. B.S., 1970; M.B.A., 1971, University

of Utah; Ph.D., 1978, Michigan State University. (1977)

Bond, Kori, Associate Professor, Music. B.S., B.A., 1992, Walla Walla College; M.Mus., 1994, Northern Illinois University; D.Mus., 1999, Indiana University, Bloomington. (1999)

Bosworth, Kenneth W., Professor, Computer Science (Engineering). B.S., 1977; M.S., 1980; Ph.D., 1984, Rensselaer Polytechnic Institute. (1992)

Bowen, Denise M., Professor, Dental Hygiene. M.S., 1976, Old Dominion University. (1976)

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